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*Sustainable Livelihoods for Park-adjacent Communities in Kenya*

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# 1

# Executive summary

This paper examines the impact of wildlife conservation policies on livelihoods and natural resource management (NRM) initiatives in two semi-arid locations in south-east Kenya. It aims to identify desirable and feasible criteria for wildlife conservation projects, to strengthen livelihoods, and reduce poverty among pastoralist and agro-pastoralist communities.

In the two case study locations, it was found that wildlife conservation had neither strengthened the livelihoods of the local pastoralists, agro-pastoralists and farmers, nor significantly conserved wildlife.

- In spite of the potential benefits, there is in general a negative impact on food security and the income of poor pastoralists, agro-pastoralists and farmers, and the income of better-off pastoralists, especially in times of stress.
- There is evidence that wildlife can curtail people's utilization of some of their livelihood assets leading to limited livelihood outcomes, particularly for the poor.
- Although local people view the effects of wildlife on their livelihoods as more negative than positive, emerging wildlife conservation projects may be changing this attitude as some recognize that wildlife can have an economic value.
- There is no clear evidence that local people have stopped illegal hunting and/or poaching.
- There is limited local institutional capacity to represent the interests of their members to government and private sector organizations.
- There is a lack of accountability among local institutions.
  Local Kenya Wildlife Service (KWS) employees see the `problem' of living with wildlife differently from local people and may be failing to understand their needs.
- There is evidence that KWS has neither the resources nor the institutional capacity to deliver its wildlife conservation interventions, resulting in a failing relationship between KWS and local people.
- There is little evidence that KWS has joined-up policies for wildlife conservation and local development.
- Dialogue between local institutions and other stakeholder groups is hampered by the formers' poor negotiation and leadership skills.
- As a result of anti-poaching laws and policy enforcement, wildlife populations have increased overall in Eselenkei. However, there has been a decline in certain species, particularly elephant, giraffe and large cats. In Kathekani, there is no evidence that wildlife numbers have been affected.

This suggests that, if wildlife conservation projects are to have a reasonable chance of success, they must pay careful attention to:

- areas where the potential for cash income generation from wildlife is high
- tailoring the intervention to the real needs on the ground
- networking among relevant institutions on organizational change and institutional capacity building
- the ability of citizens and of their organizations and institutions to participate in community wildlife conservation interventions
- the existence of inter-sectoral policy coordination for wildlife conservation and tourism and pastoralist development.

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# Context

Communities that live in the vicinity of national parks live with the wildlife that roam in and out of those parks. The advantages of living with wildlife are few; the inconveniences and dangers many. The promise of tourism revenues boosting the local economy is held up for the future, while, in the here and now, crops may be routinely trampled or eaten, and livestock weakened by exposure to tsetse Flies or killed by lions. This section looks at the recent history of wildlife conservation and its impact upon the livelihoods of local farmers and pastoralists.

Over the past four decades, differing approaches have provided the basis for interventions to conserve wildlife. From the 1950s to the 1980s, the dominant approach was to create or revitalize national parks and other protected areas as the basis for con-serving declining numbers of wildlife species. Termed 'fortress conservation' by Adams and Hulme (1998), these areas were established with the expectation that enhanced park management would improve wildlife conservation and assure sustainability. Nevertheless, the numbers of the species that attract tourists (elephant, giraffe, lion, etc.) continued to decline both within and outside designated areas. A key cause can be traced to the exclusion of important stakeholders, such as pastoralists and agro-pastoralists, who live in or near these grassland ecosystems, from customary sources of livelihood assets, particularly land and water. Many of these local people withheld their support for this type of initiative - and some went further, viewing wildlife as legitimate quarry for poaching and/or a threat to be eliminated. For example, Science (April 1998) reported that after a Maasai tribesman was gored to death by an elephant, fellow Maasai speared a Cape buffalo in plain view- of tourists. They then went on to spear a number of elephants, mainly to gain the attention of the Kenya Wildlife Service.

The failure of fortress conservation to achieve its objectives has resulted in the rise over the past decade of an alternative approach - community wildlife conservation. Conservation practitioners now link wildlife conservation with sustainable development, using participation as the new driving force to give beneficiaries (often local communities rather than individuals) a greater opportunity to voice their preferences, needs and concerns about conservation initiatives. This emphasis on `community' has spawned a broad spectrum of community wildlife conservation approaches and programmes, such as community-based conservation, community wildlife management, community-based natural resource management and community involvement in wildlife tourism. In general, they all subscribe to the basic idea that conservation goals will be achieved only if local people gain sufficient access to alternative benefits to off-set the costs of their reduced access to natural resources; in other words, ‘conservation as sustainable exploitation’ (Brown, 1998).

Where they do differ, however, is in their use of different combinations of approaches with different intent, emphasis and substance (Barrow and Murphree, 1998).
In addition, new theories of semi-arid rangeland ecology provide further evidence in favour of local people's participation and local-level management. According to Boyd et al. (1999), rangeland productivity is more constrained by climatic variability, especially drought, than by stocking rates and grazing pressures. This suggests that pastoralist stocking strategies are less damaging to rangeland resources and wildlife than was previously thought.

### 2.1 Wildlife tourism as a community wildlife conservation strategy

One strategy for diversifying rural economies and creating new enterprise opportunities is community involvement in wildlife tourism. Tourism has received considerable attention among conservation and development professionals and donors. It is favoured because of the potential high revenues it can generate from consumptive (hunting) and non-consumptive (viewing wildlife, wilderness, and scenery) use of natural resources. For example, in 1994, tourism in Kenya accounted for more than 40 per cent of GDP (Pearce, 1995). According to the proponents of this type of intervention, if a proportion of the revenue from wildlife tourism is redistributed back to local communities, either directly to individuals, usually in the form of employment, or via community livelihood initiatives, this should create a motor for sustainable development. In turn, local people will see the value in conserving wildlife.

Nevertheless, wildlife tourism as a strategy does have specific limitations. One is 'leakage': a variety of studies, covering 17 countries over 20 years, estimated that 11-90 per cent of total tourism expenditure leaks out of the country (Smith and Jenner, 1992, quoted in Ashley and Roe, 1997). The other is volatility of demand. For example, due to the Kenyan elections and an unfavourable press, Kenya suffered a 60 per cent fall off in tourism revenues between Autumn 1997 and Spring 1998 *(Science,* 1998). Other potential limitations, such as unequal distribution of revenues, creation of low-skilled employment, limited participation and control remaining with outsiders, intrusion and cultural disruption, can be attributed to most projects promoting new economic activities as well as to tourism.

### 2.2 Challenges to community wildlife conservation

In general, there has been little questioning of what exactly community conservation means, or whether community conservation projects can succeed in meeting their multiple, complex and potentially conflicting objectives of wildlife conservation and local development. Up until now, the large, mainly descriptive literature about these projects gives more or less optimistic descriptions of local-level `success', often early in a project's life. But as more in-depth analysis of community conservation projects becomes available, the indications are that their performance is disappointing. It appears

that they are neither sufficiently effective at promoting conservation, nor at encouraging development, as local impoverishment seemingly continues apace in mane pastoral areas.

Recent research suggests that many of these initiatives promoting new social and economic interactions are failing to meet their goals because 'they are founded upon unsubstantiated assumptions and fraught with contradictions' about pastoralists and the local conditions and settings (Neumann, 1997). More specifically, the following shortcomings can be identified.

- First, ‘local people’ are generally treated as a homogeneous entity, with little attention paid to their type of livelihood (such as herder and/or farmer), gender, age, interest, wealth. power and ethnicity.
- Second, rural communities are rarely portrayed as politically fractured and socially differentiated in complex ways. Often local politics revolves around competing claims of men versus women or the poor versus the well-to-do, within villages or even households.
- Third, local institutions are assumed to be capable of promoting democratic participation, as well as having the necessary management skills to implement agreed activities. In reality, the elite, both modern and traditional, often dominate at all levels, and community-based decision-making processes usually favour men.

These livelihood, political and institutional constraints are typified in the literature with regard to tourism revenue-sharing among pastoral populations living adjacent to protected areas. There are a number of examples where the revenue received by local people falls far short of expectations, due to vested economic interests of tour operators and/or failure of local leadership to share revenues equally (see Lewis and Alpert, 1997; Blench et al., 1998; and Sibanda and Omwega, 1996).

It is not surprising that the evaluation of community conservation efforts has proven problematic. It must be recognized that working with non-homogeneous pastoralist communities is extremely difficult, as any initiative will cut across a complex set of local cultural, historical, economic, property, power, generational, gender and household realities. As a result, there is little empirical work on a scale and depth significant enough to inform policy and/or practice.

3

# Eselenkei case study

Figure 1: Discussing wildlife issues with herdsmen, Eselenkei

The Eselenkei group ranch lies in Loitokitok Division of Kajiado District, a few miles north of the Amboseli National Park and is an important dispersal area of wildlife migrating out of Amboseli.

A group ranch is a piece of land communally owned by a group of people who are registered as the legal owners through membership of the ranch. Livestock movements are restricted within the boundaries of the ranch and outsiders are not allowed to enter with their stock. In the past, capital loans and other assistance have been provided to group ranches for infrastructural development such as water facilities and schools. Group ranches were originally established in Maasailand by the Kenyan government in the 1960s in order to: increase productivity by increasing cattle off-take: pre-empt landlessness: improve earning capacity: and reduce environmental degradation caused by supposed overgrazing of communal lands. However, few of subdivision of many group ranches (Southgate and Hulme, 1996a).

Eselenkei group ranch was formed in 1979 and has an area of 47 974 ha of semi-arid rangeland. It has approximately 11200 members, all men, who represent around 9500 mainly Kisonko Maasai people. It is run by the group ranch committee (GRC) of ten, who are responsible for the conduct of all business, including enforcing grazing regulations, grazing management, record keeping and accounts. There are three clans in,

the group ranch, Laiser, Illmolian, and Iltayok, who have an equal right of representation on the executive committee. The post of chairman rotates among the clans, with three members from each clan on the committee. Other sources suggest that group ranch leadership in Maasailand is generally problematic for a number of reasons.

- The influence of the elders, the historical leaders, is decreasing and middle-aged or younger men increasingly hold committee membership.
- The boundaries of the ranch remove the traditional mechanism for dissent, which was to move away (Grandin, in Bekure et al., 1991).
- Elections of office bearers, which are rarely held, are complicated by political interference, the need to support one's age-mate, and the use of `culturally approved factors rather than majority vote' (Ogutu, 1998; Southgate and Hulme, 1996b). There is poor understanding of the role and responsibilities of committee members, and there are frequent accusations of corruption.

The most extensive form of land use in Eselenkei is pastoralism, with the majority of group ranch members deriving their livelihoods from livestock. There are increasing levels of irrigated agriculture using water illegally drawn from the Kilimanjaro-Mashuru pipeline that follows the road along the northern edge of the group ranch. Younger members of the community have spearheaded this move to agro-pastoralism with permanent settlements along the road, and all roadside sites are now full. A move to subdivide the ranch into small individual plots began in 1996. Although the members are divided on the issue of subdivision, consent has been obtained from the District Lands Office. However, the process is on hold at the moment, mainly due to the high costs of surveying the land.

Wildlife species in Eselenkei include: wildebeest, eland, zebra, Thompson and Grants gazelle, impala, giraffe, hyena, lion, leopard, rhinoceros, buffalo, elephant, baboon and ostrich. Kenya Wildlife Service (KWS), the state-run custodian of all wildlife in Kenya, is working in partnership with Eselenkei group ranch, among others in the area. The basic principle behind the partnership agreement is to act as a compensatory mechanism for those living with wildlife through sharing the revenue from national park proceeds with them. The GRC administers this income. It is spent on school bursaries for secondary school children and support to local development projects such as school construction and borehole maintenance. A limited amount of local employment has been created in the form of 15 community wildlife scouts, part of whose job is to work alongside the KWS wardens to improve the control of problem animals. In addition, direct compensation to individuals for death of a person caused by wildlife is available, in theory. The relationship between KWS officials and local people is generally one of tension and resentment, particularly over the issue of compensation for wildlife damage.

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KWS developed an initial policy to share 25 per cent of park proceeds with people living around the parks in Kenya. According to Norton-Griffiths (1995) Maasat landowners received a `derisory' 1.6 per cent of gross tourist revenues in 1989.

## 3.1 Land subdivision

At present, only 11 of Kajiado's 55 group ranches are not yet subdivided. Eselenkei group ranch applied for subdivision in 1996, but the process has not yet gone ahead. The land is to be divided into equal parcels, each member (including widows) receiving 100 acres. Interviews in May 2000 suggest that this figure has now changed to 170 acres. The cost of surveying the land is high, KS 11.5 million, and each member is to contribute KS 9000.

The members of the group ranch cannot agree on the issue of subdivision - approximately half are in favour while half are against (although the group ranch chairman when interviewed claimed that 'all the members were willing', this was not borne out by other interviews). The younger and educated members, and those promoting cultivation as an alternative form of livelihood, are in favour of subdivision. This group argues that subdivision will give them greater control over the land and provide a disposable asset. The elders and wealthier members fear the consequences of subdivision for natural resource management, and in particular restrictions on cattle movement. The GRC itself is also apparently split on this issue, and some members have accused the group ranch chairman of delaying the issue, ostensibly with the general well-being of members at heart, but in fact because he owns a good number of cattle and would lose out if subdivision were to go ahead. It is difficult to ascertain the exact stage the process has reached: the GRC secretary claimed that the issue was not on the agenda, while the Eselenkei Chief said subdivision was very close, and delayed only by the Committee.

The following are some of the advantages of subdivision, as given by the respondents.

- The group ranch restricts the use of land for cultivation, and hence subdivision would give individual members greater freedom to use their parcel as they wished and to control the output of the land.
- At present, poorer members who have few or no livestock can draw no advantage from the land owned collectively by the group ranch. If it were subdivided, they could derive benefit from it. In this way, economic differentiation between members might be somewhat reduced. There was a general view that the poor would benefit more from subdivision than the wealthier group ranch members. Wealthier pastoralists use the most pasture and restrict the access of poorer members to watering points.
- Surplus land can be rented out (at approximately KS 5000 per annum for 100 acres).
- Land can be used as collateral for loans to improve livestock, cropping or other productive activities.
- Permanent settlement will be facilitated.
- School enrolment may increase as a result of reduced seasonal migration.
- People will invest more in protecting their land, which may have a positive impact on wildlife.

Conversely, the following disadvantages of subdivision were also articulated.

- Inequitable distribution of land parcels appears inevitable as the quality of land varies greatly: most respondents expressed an interest in a plot near the pipeline, the road, or water source (where a number of people have already settled). It is expected that, following land subdivision, the elders, the educated and the entrepreneurs will take the best plots for themselves.
- There is a concern that the land parcels will not be of equal size and that the powerful will have larger plots.
- Land degradation is expected as cattle movements are restricted.
- Boundary disputes may ensue.
- Some (including the senior warden at Amboseli National Park) expect that subdivision will have a negative impact on wildlife (although the wildlife conservation propaganda of recent years appears to have had a positive effect on wildlife numbers - see Chapter 7 - and this may continue).
- A plot of 100 acres is not enough to live off; 200 acres are needed.
- Although the land can be rented out to provide income, members from other subdivided group ranches have often sold their land, leading to landlessness and increased poverty.
- Women are not members of the group ranch and will not be able to hold title for land (with the exception of widows).
- Many women were concerned about loss of access to water points.
- Poor people have not been informed of the negative consequences of subdivision.

The experiences of other Maasailand group ranches that have already undergone subdivision tend to reinforce the expected negative effects outlined above. Graham (1989) describes the stratification of wealth, the risk of environmental degradation, the reduced ability to respond to drought, and the negative consequences for women experienced by other group ranches on subdivision. Southgate and Hulme (1996b) also highlight some of the gender implications of subdivision, for example: 'indiscriminate land sales by male land owners of subdivided land in other parts of the district have rendered several families landless.' They go on to note that `a number of authors have recognized an escalation in social differentiation as the process of land tenure change and commercialization have impacted unevenly on different groups.' It is interesting to note that land sold by Maasai achieves a considerably lower price than that sold by non-Maasai. In 1994, Maasai land sold for KS 38 950 per hectare, while Kikuyu-owned land in the same area sold at KS 68 861 per hectare.

Southgate and Hulme (1996b) also document a tendency to move towards more commercial livestock rearing following subdivision, rather than the focus on milk production in which the Maasai have historically engaged. This new intervention has negative implications for women, since it promotes *a cash* economy that is a monopoly of men; control of the milk products is traditionally one of the women's few spheres of influence. Complementary to commercial livestock are steer fattening initiatives by young men, which are equally failing to benefit women (Eselenkei Field Notes, 1999).

The Kajiado District land adjudication officer described the subdivision of Ngoma group ranch (which is adjacent to Eselenkei group ranch) as a move that led to increased productivity. It was noted, however, that subdivision also led to a range of problems including the unequal allocation of land, which has led to an appeal to the President (Eselenkei Field Notes, 1999). Plot size is also cited by Southgate and Hulme (1996b) as a cause of dispute in group ranch subdivision. In Kimana group ranch, which has been partially subdivided, there were originally 170 members who were to receive 142.5 acres each. Registration of members has recently soared, however, and there are now 1000 members, among whom the same area of land is to be subdivided. There is evidence to suggest that the parcels of land, possibly already too small to support sustainable agro-pastoralism, will be further reduced in size after subdivision. In the west of Kajiado District, 79 per cent of the land parcels originally allocated at the time of subdivision have been further divided within eight years (encompassing 34 per cent of the total group ranch area) (Southgate and Hulme, 1996a).

The erection of fences is common after subdivision, which restricts cattle movements and increases soil erosion and land degradation in general, exacerbated by the high stocking rates. For example, the Ministry of Livestock Production suggests a sustainable stocking rate of 6 ha per stock unit, compared to the current rate of 1.53 ha per stock unit in Kimana group ranch (Southgate and Hulme, 1996b). Wildlife numbers have been recorded as increasing after subdivision, but these are generally the smaller species, while populations of larger species such as elephant and buffalo have decreased, probably as a result of fencing and environmental deterioration. Following enclosure, poachers easily corner the large species (Eselenkei Field Notes, 1999).

### 3.2 The Porini Ecotourism Initiative

In 1997 the GRC entered into an agreement with a Kenya-based ecotourism company, Porini, to lease 40 acres on a 15-year lease at an agreed annual rent plus inflation. In addition, the committee will receive a gate charge and bed-night fee for each tourist entering the group ranch. The 40 acres are spread over four sites of ten acres each, on which have been constructed a lodge, a borehole and tree house, a mobile campsite, and a sundowner spot. The total area affected amounts to 7000 acres, which has been designated a conservation area. Two years into the lease, the annual rent is now KS 460 000. Porini have also donated (on a cost-sharing basis) KS 50 000 for a school building and KS 20 000 for a wind-pump. They have also paid for uniforms and identity cards for the KWS-employed game scouts. An additional 15 members drawn from the community are employed by Porini to maintain facilities at the campsites.

The issue of lease of the conservation area has caused considerable tension between group ranch members and the committee. It appears that the committee either was unaware, or failed to notify members, of the 7000 acres to which Porini was originally granted exclusive rights (most members understood that the 40 acres were the full extent of the lease). The conservation area is a key dry season grazing ground, and

as such is a vital part of the pastoralists' drought coping strategy. The fact that the lease agreement that was drawn up between the two parties does not mention what access group ranch members have over the conservation area has increased the tension. The Porini community liaison officer explained that there may be potential for increased injury and accidents in the conservation area, due to the expected numbers of wildlife. He pointed out that Porini will insure tourists visiting the sites, but the group ranch will have to insure its own members if they go into the conservation area. It appears that most group ranch members are unaware of this fact.

A Conservation Committee was elected in September 1999 to deal with the Porini Initiative on behalf of the group ranch. The annual fees were to be split 50:50 between these two committees. Gate and bed-night fees are to be put into community projects. Following concerns raised about the extent of the land being leased to Porini, a group made up of representatives of the GRC, the conservation committee and three women's representatives met to try to iron out the difficulties, but Porini staff insisted on continuing to liaise only with the GRC, with whom they made the original agreement. A field visit made in May 2000 revealed that the community could access grazing resources in the conservation area after prior arrangement with Porini management. Although the conservation committee enjoyed a better reputation than the GRC among the general membership, its `constitutional' position vis-a-vis the GRC was unclear, and it has subsequently been dissolved.

Some group ranch members are in favour of the Porini Initiative, the tension over the conservation area notwithstanding. They see opportunities for income generation for the group ranch as a whole, through the lease agreement, as well as on an individual basis (for example by selling handicrafts to tourists, as other group ranch tourism initiatives do). These members also hope for improvements in transport and road infrastructure, and increased employment opportunities.

Those who are not in favour of the Initiative are generally concerned about the conservation area and restricted access to grazing. For example, some of the elders, while positive about the Initiative in general, expressed grave concerns about grazing access to the conservation area and the implications for the livestock movements. As the Porini community liaison officer pointed out, the presence of permanent water (through the planned borehole at one of the ten-acre sites) is designed to attract wildlife on a permanent basis, rather than seasonally as now. This has further implications for livestock/wildlife competition over natural resources in the conservation area, assuming that cattle are allowed to graze there at times. There is also mistrust towards the GRC and a feeling that the acreage under agreement was changed in an underhand manner. This may in part reflect the wider lack of confidence in the committee on the part of members.

The implications of subdivision for the Porini Initiative do not appear to have been fully explored. The community liaison officer was relatively positive about the impact of subdivision on wildlife populations, suggesting, rather optimistically, that alternative models for common property resource management could be found. More realistically, the Loitokitok district officer suggested that subdivision could go ahead, omitting the area leased to Porini until the lease expires.

# 4

# Kathekani case study

Figure 2: Studying the tsetse fly trap in Kathekani, a few hundred metres from Tsavo East National Park

Kathekani Location, including the newly created :Mtito-Andei Location, covers an area of 869 km and borders the Tsavo East National Park The area was settled in the 1960s and 1970s, having been excluded from the Ngai Ndethya Game Reserve by the Government of Kenya. Many of the people migrated to it from more densely populated parts of Ukambani, and the present population is around 18,000 people. The majority are Kambas, with a few Kikuyus who have recently purchased land from earlier settlers. As the Location is adjacent to the Nairobi-Mombasa highway, many local Communities have had some exposure to development projects and working with NGOs. However, moving away from the road the population thins out and the villages are more isolated.

Agro-pastoralism is the major form of land use in Kathekani Location. which falls in a semi-arid zone. There is some irrigated agriculture along the Mtito-Andei river. Although livestock suffer from predation by wildlife and losses due to drought, disease and banditry, local people believe that the greatest threat is from trypanosomiasis. which is transmitted by tsetse flies coming from the Tsavo East National Park.

Indeed. before recent interventions by NGOs, villages close to the Tsavo East National Park had hardly any livestock. Wildlife species in the area include buffalo. elephant, lion, hyena, gazelle, dik-dik, monkey, porcupine, warthog and squirrel.

The land issue is very sensitive in Kathekani because technically the settlers/landowners are squatters on government land. Discussions on alternative land use are initially greeted with suspicion and fear due to this pervasive sense of insecurity. The community has been slow to assert itself against perceived injustices and failed service delivery for fear that government officials wilt turn on them and question their rights to occupy this land. A land titling process is underway, Which should go a long wav to assuage these fears in the future, and will open up space for discussions on alternative livelihood options that may include tourism-related activities that preserve the natural habitat and could therefore count on the blessing of the KWS.

Different institutions are actively promoting improved livelihoods. A local community group, the Mbung'o Central Committee, submitted a proposal (with the help of ITDG) to KWS for financial support under the Wildlife Development Scheme to implement a tsetse control scheme using 'NGU' tsetse traps. After two years of promising support for the project. KWS abruptly withdrew its support in 1997. The Mbungo Central Committee are bitter about the way KWS treated them and also feel that they have lost face within the community. as they have not been able to deliver a planned project. Resentment about the lack of compensation by KWS for wildlife damage is accompanied with rumours and suspicions about the future intentions of the organization. Very recently, however. there have been some positive developments as the Kenya Trypanosomiasis Research Institute (KETRP. which can influence KWS policy. has started to fund the tsetse fly control scheme.

There are a number of other self-help and community groups in the Location, including women's groups and farmers' groups. which are involved in a range of income-generating activities such as goat keeping. brickmaking. and reciprocal gardening. The scope of their activities, is constrained by limited capital, and in particular by weal: leadership skills and Ogutu. 1999).

1t present there are no low-wildlife tourism activities in kathekani. However, visiting KWS officials have recently raised the possibility of creating a conservation area or game reserve, and a businessman has shown interest in the area.

# 5

# Livelihood strategies

This section uses the sustainable livelihoods framework (Carney, 1998) to describe the livelihood strategies of the people of Eselenkei and Kathekani.

The sustainable livelihoods framework developed by DFID identifies five types of capital asset: human, natural, financial, social and physical. To a limited extent, these can be substituted for each other, and thus livelihood strategies involve the continuous management and modification of these substitutions, tradeoffs and draw-downs on different capital assets.

Human capital comprises the skills, knowledge, ability to labour, and good health that together enable people to pursue different livelihood strategies and achieve their livelihood objectives. At both the household and enterprise level, human capital is determined by the amount and quality of labour available. Crucially, human capital is needed in order to make use of any of the four other types of capital asset, as well as being valued for itself. For this reason, human capital has been regarded as the most important asset to be developed by poor women and men.

Social capital - the social resources to which people have access - is a determinant of their ability (essential for a sustainable livelihood) to manage relationships and transactions in commercial markets, in social institutions and civil society, and with agencies of government. These may be developed through networks and social contacts, membership of more formalized groups, and relationships of trust, reciprocity and exchange that facilitate cooperation, generate trust and reduce transaction costs. The endowment of the different types of capital asset that people have affects their ability to engage with external institutions, which themselves might be a product of social capital.

Physical capital comprises the basic infrastructure (shelter, water supply, transport, communications, etc.) and manufactured goods (such as tools and equipment) necessary to maintain livelihoods. Access to physical capital may be by means of payment of user charges, although some infrastructure may be a public good.

Natural capital constitutes the natural resource stocks from which resource flows, and from which services useful for livelihoods are derived. There is a wide variation in the resources that make up natural capital, from intangible public goods, such as the atmosphere and biodiversity, to divisible assets used directly for production (trees, land, etc.). Natural capital is clearly essential to those who derive all or part of their livelihoods from resource-based activities (farming, fishing, gathering in forests, mineral extraction, etc.). However, the key environmental services and food supplies provided by natural resources lend this type of capital particular importance for sustainable development.

Financial capital denotes the financial resources - cash, credit or other liquid assets

that people use to achieve their livelihood objectives. It can include regular flows (pensions, remittances, state transfers) as well as stocks (savings, jewellery, even livestock), which can contribute to consumption as well as production.

### 5.1 livelihoods in Eselenkei

The people of Eselenkei have a range of capital assets that they use to achieve the livelihood outcomes to which they aspire. These can be summarized as follows:

**Human:** access to training, information and extension messages, much of which is channelled through the group ranch structure. As a result of the domination of men via group ranch leadership, women's access to these resources is limited. However, two women's groups in the area have had links with NGOs that have provided training and support in the past. Education is a priority for the people of Eselenkei, and enrolment of both girls and boys at Lenkisem Primary School is at an historic high. One factor may be that children are not excluded from the school for reasons of dress.

**Social**: the socio-political context in Eselenkei is characterized by a number of axes of influence. The Maasai elders have historically held positions of authority, mitigated by the cultural tension between the senior elders, the junior elders and the *murran* (adolescent, 'warrior' age-set), but this is waning as a result of outside influences, and younger men, in particular the educated, are gaining in political and social significance. GRC membership enables the holder to wield considerable power (especially over the economic assets of the group ranch), although a certain degree of influence appears to be required in order to obtain such positions in the first place. Except for widows, women cannot be members of the group ranch, and consequently are never committee members. As a result of this and Maasai gender norms, women are unconnected to many social processes and wield little political influence. The two women's groups interviewed did not appear to have a great deal of influence outside the immediate sphere of their own activities.

**Natural:** the key natural resource is communally held pastureland, but land for cultivation is increasingly significant. Although Maasai historically disdained cultivation, with the influence of other ethnic groups who have migrated into the area in recent decades, mostly Kikuyu and Kamba, cultivation is increasingly being taken up by Maasai young men. If the proposed subdivision of the group ranch goes ahead, land for both pasture and cultivation will become an individual saleable asset, to which women are unlikely to have access.

**Physical**: access to water for irrigation, which is illegally drawn from the pipeline running through the group ranch, also forms a significant asset. Households pay a monthly flat rate for use of the water from the pipeline (which cost KS 1750 in 1999 and had risen to KS 2500 in 2000). However, the water is designated for domestic use,

and its use for irrigation is illegal. Those found irrigating their land with the water are disconnected. Connection costs KS 2500 and the user must provide their own pipes.

**Financial**: the main financial assets in Eselenkei are in the form of livestock, and to a lesser degree crops. A bull costs KS 10 000-20 000, and a steer KS 5000-10 000. According to the local chief, a household needs 200 cattle to live well, but can manage with 100. Of the sample interviewed during this research, the majority own between 40 and 150, while 10 per cent own over 400. In comparison, at neighbouring Kimana group ranch, more than 50 per cent of the membership owned 30-50 cattle, from a range of 5 to 300 (Southgate and Hulme, 1996b). Maasai women in general have little control over the sale of stock but, like many pastoral women, have control over some livestock products such as milk, which they are able to sell. One women's group is involved with a goat scheme, which - although still in its infancy - appears to be generating some profit for its members. Group ranch members with a water connection to the pipeline can sell the water at KS 10 per can. Some members have adult children in employment, who send remittances, while a few are employed as game scouts or in other capacities and thus receive a weekly wage. Income from the KWS revenue-sharing scheme is paid directly into secondary school bursaries for children of group ranch members. KWS has also paid for some school buildings. The Porini Initiative has also paid a sum to the group ranch for the lease of the land for its tourism venture.

## Livelihood strategies

The livelihood strategies adopted by the people of Eselenkei reflect these capital assets. Pastoral production continues to be the most significant form of land use in Eselenkei, as it is in the rest of Kajiado District, where over 75 per cent of the population derives part of its livelihood from livestock production (Southgate and Hulme, 1996a). However, as mentioned above, in recent decades cultivation has become an increasingly important part of livelihood strategies in the whole of Maasailand. From 1983 to 1987, the number of people engaged in cultivation in Kajiado District rose from just over 22 000 to 45 500. In 1987, livestock provided 34 per cent of total income in the District, while agriculture accounted for 38 per cent and off-farm income for 28 per cent. By 1992, these figures had changed to 24 per cent, 53 per cent and 23 per cent respectively. Although some of this increase is due to the subdivision of group ranches elsewhere in the District, the same trends are taking place in Eselenkei according to both the assistant chief of Lenkisem Sub-Location, and the group ranch chairman. However, in spite of the growth of agricultural production, cash crop earnings in Kajiado District as a whole still tend to be reinvested in livestock (Southgate and Hulme, 1996b).

Pastoral production strategies adopted in Eselenkei focus on milk production and building herd recovery capacity in response to drought, rather than emphasizing beef production. This is typical of most East African pastoralists, who continue to implement herd-maximizing strategies in spite of campaigns by government and other agencies to improve herd quality and increase marketable offtake.

The three key livelihood strategies in Eselenkei can therefore be categorized as follows:

- better-off pastoralists, aged 40+ with 400 livestock or more, approximately one tenth of the group ranch membership
- average pastoralists, the majority of members, generally over 40 years of age, with 40-150 livestock on average. Most have little influence or interest in the management of the group ranch. However, the majority of the GRC members belong to this group
- agro-pastoralists, at present still a small group, generally younger in their 20s or 30s, spearheading cultivation combined with entrepreneurial skills. Some are members of the GRC, or are close enough to wield some influence over them.

### Vulnerability context

These livelihood strategies are vulnerable to a number of factors outside their control. These include, in particular, natural features such as drought, which affects cropping returns as well as reducing pasture productivity. Cultivation is subject to destruction from wildlife, which also prey on livestock. Subdivision of the group ranch, if it takes place, will have a considerable impact on access to the key natural resource, land.

The population of Loitokitok Division has increased rapidly over the past two decades as a result of the influx of agriculturalists. This increase has affected Eselenkei group ranch in terms of immigrants and has reduced the resources available for live-stock (outside the group ranch) during prolonged drought. In 1979, the population density in Loitokitok Division was 7.5 persons per km'-. The projection for 1996 was 18, more than double in 17 years (Southgate and Hulme, 1996a).

### Policies, institutions and processes

There are few external structures that have a great effect on local livelihood strategies. Local government in Kajiado District has been described as having `minimal influence (Southgate and Hulme, 1996a). However, in the future the Porini private sector ecotourism initiative is likely to have a significant negative impact on drought-coping strategies for cattle owners in Eselenkei. At the same time, it is making a contribution to the group ranch finances, which is, however, unlikely to be distributed equitably among members. In theory, the GRC provides a structure that can support the livelihood strategies of its members and reduce their vulnerability to external trends and events. However, because of both its make-up and the current leadership crisis, the committee is unlikely to realize this potential.

With regard to legal and policy processes, the key issues affecting livelihood strategies in Eselenkei are subdivision; the illegal nature of irrigation, which on discovery brings the threat of disconnection from the pipeline; and the restrictions on wildlife hunting. As described above, wildlife prey on livestock, damage crops and compete for land; yet the people of Eselenkei are prohibited from killing them, and have little redress for compensation. In 1990, the government narrowed down compensation to

cover only loss of life, withdrawing payments for wildlife-related crop or livestock damage. Claiming compensation is a lengthy and difficult process and some who could legitimately claim do not bother to do so (Ogutu, 1998).

Cultural processes in Eselenkei have a significant impact on women, as they are excluded from access to many of the assets described above, in particular group ranch membership and leadership, decision making, and control of land and livestock assets. The leadership crisis in the GRC and the lack of confidence in, and accountability of, the leadership have the potential to influence negatively livelihood strategies and outcomes. This is both in terms of group ranch income not wisely and equitably distributed, and with regard to the specific impact of the Porini Initiative and the subdivision of the group ranch, over which the committee has decision-making power.

## 5.2 Livelihoods in Kathekani

In Kathekani, the following capital assets are used to achieve desired livelihood outcomes:

**Human:** there is a limited amount of training and other information available to members of self-help groups supported by NGOs. Access to NGOs, and thus to this type of support, is less among communities living further away from the main Nairobi-Mombasa highway. Extension messages from government agents are few, and again access is greatly limited away from the main roads.

**Social**: there are a number of farmers' and women's self-help groups in Kathekani. Committee members wield some influence, depending on the size and social significance of the group. As well as income-generating activities, the women's groups are involved in mutual self-help, such as assistance with hospital fees and seeds for cultivation. This provides a degree of social integration, in addition to the financial benefit.

**Natural**: land is the key natural asset in Kathekani. Those who do not own land can lease it for around KS 1000 per acre for the three month season (in 1998 the cost was KS 800). The general aridity of the location has led to contention for areas along rivers.

**Physical:** the main physical asset is access to water for irrigation. A nearby dam supplies water to the irrigation channel, managed by a committee. Residents downstream and those who lease land on a temporary basis tend to have the poorest and most insecure access to water from the channel. Water is also taken from the Kenya Railway pipeline, costing KS 120 per month. However, as at Eselenkei, using this water for irrigation is illegal and leads to disconnection. There is competition for water use between cultivators and the increasing number of people involved in brickmaking and other activities.

**Financial**: income is derived first from crops, second from livestock and third from wage employment. The main irrigated crops are horticultural crops, which are generally bought by agents serving the Nairobi and Mombasa markets. A carton of egg-plants sells at KS 40-150, okra at KS 110-130 per box and chillies at KS 55-130, depending on the buyer. Cattle, sheep, goats and chickens are also kept for subsistence consumption and to convert into cash income. Casual labouring, which is engaged in by both women and men, earns from KS 15 to KS 100 per day. Members of farmers' and women's self-help groups also benefit financially from successful income-generating activities, or mutual support as described above, although membership of the group is also at a cost. Goat rearing is a preferred activity among some of the women's groups as goats are accessible to women and are more resistant to wildlife-transmitted disease.

### Livelihood strategies

The livelihood strategies adopted by the people of Kathekani reflect these capital assets. Irrigated agriculture forms the priority strategy. Those without land, or those whose land temporarily lacks sufficient water, lease land from others for a season if they can afford it. Livestock are also kept to broaden the asset base. Wage labour is engaged in on a temporary basis, to cover shortfalls, or on a more regular basis (particularly for women) to supplement household income.

The key livelihood strategies in Kathekani can therefore by categorised as follows:

- farmers deriving the major part of their livelihood from irrigated agriculture, and
- agro-pastoralists deriving their livelihood from integrated livestock/crop activities.

### Vulnerability context

Livelihood outcomes in Kathekani are vulnerable to a number of external factors. Livestock disease and wildlife predation are considered major threats to production. One ranking exercise carried out during the field research yielded the following problems in order of priority: water; disease; food; and wildlife. Livestock-related problems included disease; tick control; and lack of government services. The tsetse fly, carried by wildlife, is one of the key causes of livestock disease. Land degradation exacerbates the problem of tsetse, as bushes that habour the fly invade highly degraded land. The prevalence of livestock diseases (and the cost of livestock medicines) leads to a desire to increase the amount of cultivation, according to some respondents. However, the creation of a cultivation-free buffer zone or game reserve in Kathekani, which has been mooted, would threaten the area under cultivation and increase the vulnerability of agro-pastoral and farming livelihoods in the area.

As a result of population pressure and the expanding agricultural sector, the price of land in Kathekani is increasing by close to KS 1000 per acre per annum. The cultivation of some new crop varieties is proving to be a drain on income and increases the

vulnerability of some households, due to the cost of the required agro-chemical inputs (as well as the cost of the original seed) coupled with the risk of drought. Households are also vulnerable to price and quality limitations set by the buyers and this, together with the high risks involved in cultivating improved varieties, is causing some producers to turn to locally consumed crops such as sukuma wiki and tomatoes. There is a threat of soil degradation and erosion (already found in northwest Kathekani) with expanding cultivation, increased demand for scarce water and the use of soil-exhausting crops.

### Policies, institutions and processes

As in Eselenkei, there is a lack of effective government services in Kathekani, and a number of respondents complained that government extension staff simply do not visit their area. In the private sector, the vegetable buyers, who act as agents for large corporations in Nairobi and Mombasa, exert considerable influence over the livelihood outcomes of the people of Kathekani. They impose quality controls and pricing in a manner that seems to the producers to be somewhat arbitrary, and over which the latter, who act as individuals and are not organized into a body of producers with any lobbying power, have no control.

A number of NGOs operate in Kathekani, many of which focus on supporting community-based organizations such as the farmers' self-help groups and the women's groups. They provide training, support and, in some cases, funds for the groups' activities, most of which focus on income generation.

Culturally there appear to be fewer overt restrictions on women's participation in social affairs in Kathekani than in Eselenkei, although in general women's access to the range of capital assets of their household is dependent on their husbands. As in Eselenkei, the high levels of male out-migration from Kathekani mean that some women (usually the poorer ones) have more responsibility for their immediate livelihood security. Membership of a women's group provides some mutual assistance and support, as described above. Some women mentioned their husbands' opposition to their membership of such groups, while others explained that their husbands became more supportive when they realized that the group made a contribution to food security and income at household level.

# 6

# Impacts of wildlife conservation activities

## 6.1 Livelihoods

In Eselenkei, wildlife conservation provides a number of income sources.

- KWS revenue sharing, which amounts to around KS 1 million per annum, is given direct into a school bursary fund. However, in 1995 the revenue was sufficient to sponsor only nine of the 12 people who applied for secondary sponsorship.
- A few community members have been recruited as KWS, wildlife scouts, and earn KS 2000 per month. However, in early 1999 they had not been paid for the previous seven months.
- Forty-nine cows are paid in compensation for loss of a life, but crop damage is no longer compensated.
- A rental fee of KS 350 000 (at an increase of 10 per cent) per annum is paid by Porini Initiative for the lease of the conservation area, and it has also donated money for a school building, hospital bills and the wildlife scouts' uniforms.
- There is potential income, particularly for women, from `cultural *bomas'* and the sale of beadwork, as in other group ranches with tourism activities. However, this income may not reach the women involved: of the income from such cultural *bomas,* `as much as 70 per cent is reportedly hived off by tourist guides, security guards and van drivers, and the remaining funds are contested for by local elite Maasai (usually on GRCs).' (Southgate and Hulme, 1996b).

Living with wildlife also produces a number of negative effects on food security and income for the people of Eselenkei. Wildlife prey on livestock, and at times injure people. They also compete with livestock for the natural resource base (in particular, through the probable alienation of the key drought pastures in the Porini Conservation Area). In addition, the benefits described above are usually not distributed equally between group ranch members and women in particular may be denied benefits (see, for example, Blench et al., 1998). One women's group interviewed had no knowledge of the benefits the ranch obtained from wildlife, although they had heard a little about the Porini Initiative. Expected benefits of the Porini Initiative, such as improved roads and other infrastructure, appear to be minimal in practice, thus far at least. One of the main boreholes on the ranch was discovered to have broken down several months previously and the researchers were told that there was insufficient money (either from revenue-sharing income or lease money) to repair it.

In Kathekani wildlife conservation initiatives have little positive impact. Cost-sharing partnerships with KWS have yet to be realized, while wildlife (in particular

stray buffalo, monkey and elephant) destroy crops and kill livestock. Tsetse flies, carried by the wildlife, bring trypanosomiasis to the cattle. There is no individual compensation for damage to crops or stock loss, and the expansion of cultivation in the area is further attracting wildlife. The people of Kathekani feel there is no effort on the part of the authorities (generally KWS) to improve the control of problem wildlife; yet they are not legally permitted to deal with the issue themselves. However, the tsetse traps made by some community groups with the assistance of ITDG have succeeded in trapping 1000 flies per month and are considered of positive benefit. In 2000 KETRI funded the extension of the work of the Mbung'o central committee and f, is monitoring the traps closely in order to be able to verify the spectacular results a achieved in tsetse fly reduction (KETRI originally wrote off the potential of the `low-tech' traps to have any impact). In another encouraging move, the KWS has allowed the traps to be set up within Tsavo East, which will allow villagers very close to the park to begin rebuilding their livestock holdings. It is as if the KWS is now encouraging pastoralism, perhaps in an attempt to temper the expansion of horticulture in the vicinity of the park, but further engagement with officials will be required to verify this. ITDG is now involved in institutional capacity building through a range of technology projects in Kathekani, and is in a position to act as a catalyst for dialogue between the KWS and local agro-pastoralists over future land use options.

If wildlife conservation measures are to increase, negative impacts on income and food security are likely to be exacerbated. At Eselenkei, grazing land for livestock is finite and the strategies for dealing with increased competition for resources, disease and predation are limited. The better-off pastoralists can mitigate this, to some extent, by renting grazing outside the group ranch. But this definitely reduces the profitability of their enterprise. Poor pastoralists may not have this option. Moreover, if the conservation area is not opened for grazing in drought years, traditional drought-coping strategies are weakened for all. Decreasing free grazing land outside the group ranch is compounding this problem. In Kathekani, a major threat of increased wildlife numbers may be an increase in trypanosomiasis in livestock. As above, poor pastoralists are likely to be the hardest hit, as they may not be able to afford to treat their animals or move them to areas of lower infection. The effects on the agro-pastoralists and farmers will mainly involve increased risk of crop damage. Again, poorer people have fewer resources to cope with problem wildlife.

In both locations, local people are responding to the problems that wildlife cause by using avoidance and tolerance strategies, ‘we cannot kill them - our hands are tied’ said a Kathekani farmer. For crops, these measures include: strong fencing; avoiding cultivation along the Kathekani river; guarding crops by making noise and scarecrows. Measures for protecting livestock include building strong enclosures; guarding stock; and grazing away from the park (in Kathekani). In Eselenkei, children go to school late to allow time for the wildlife to have moved off. The presence of wildlife is curtailing people's use of:

- human assets, as they have to invest extra labour (their own or hired) in guarding crops/wildlife, and
- natural assets, which cannot be used to the full.

This may be particularly true for poor people, whose portfolio of assets tends to be more limited in the first place.

Although hunting of wildlife is banned, it is clear from the findings of the field research that local people are still hunting for their own use, or for sale. Because of the illegal nature of this activity, it was not possible to gauge the magnitude of hunting, but some of the reasons for engaging in hunting were revealed: the *murran* hunt for fun, poorer families for household use, and some hunt out of anger. Poaching is a sensitive subject, but, in spite of this, a number of respondents mentioned the topic of their own accord. However, they gave conflicting information. Some thought that KWS's anti-poaching campaigns were successful, while others mentioned that poaching-to-order for the Nairobi market is an increasing threat to wildlife. A KWS senior warden admitted that Maasai *murran* hunt for subsistence and sale.

All the pastoralists, agro-pastoralists and farmers interviewed, both men and women, talked much more about the negative impact wildlife has on their livestock and crops than anything else. However, in Eselenkei where the density of wildlife is higher, and the potential for benefits more tangible, local people were more knowledgeable about the wildlife in their area and less resigned to living with wildlife. Some recognized that it could be a potential source of income (no one mentioned this in Kathekani).

These points lead to the following conclusions on the impact of wildlife conservation on income and food security.

- In spite of the potential benefits, there is in general a negative impact on food security and income of poor pastoralists, agro-pastoralists and farmers, and the income of better-off pastoralists, especially in times of stress.
- There is evidence that wildlife can curtail people's utilization of some of their livelihood assets, leading to limited livelihood outcomes, particularly for the poor.
- Although local people view the effect of wildlife on their livelihoods as more negative than positive, wildlife conservation projects may be changing attitudes, as some recognize that wildlife can have an economic value.
- There is no clear evidence that local people have stopped illegal hunting and/or poaching.

### 6.2 Local institutions

The key impact of wildlife conservation initiatives on local institutions in Eselenkei has been the heightening of tensions within the community, particularly between group ranch members and the various leadership factions (the GRC, the elders, young educated men, etc.). Far from building the capacity of the committee, conservation activities, in particular the Porini Initiative, have highlighted the people's lack of confidence in the committee's integrity and decision-making processes. In order for the Porini Initiative to progress (as some members had called for suspension of the project), the dispute about the size and location of the conservation area needs to be

resolved. However, it is not clear whether local partners (KWS, NGOs and others) have the necessary conflict-resolution skills to help them manage the unstable relationship between Porini and some members of Eselenkei community. If such initiatives are to succeed in Eselenkei in future, considerably more support needs to be given to building local institutional capacity. This view is supported by Blench et al., (1998), who note the need for extensive capacity-building support if joint ventures between community groups and wildlife agencies are to succeed.

Local organizations' goals and objectives for development are likely to be determined by those projects giving them money. The resulting blueprint of activities - secondary school bursaries, school construction, boreholes etc. - may or may not fit in with local people's priorities. In fact, in Eselenkei one of the main tangible benefits - approximately ten secondary school bursaries per year - was hardly appealing or relevant: `I hear they give bursaries, but where do I get the funds to enable them [my children] to reach secondary school. You see I have no cows to sell' was a common response to the question on this subject. The effectiveness of this arrangement is also questionable. The treasurer admitted: `the argument is that they will come back to assist society. I must say that this doesn't appear to be the case. These students (all male), once they get a job outside they don't come back.

In Kathekani inadequate local institutional capacity is highlighted by the community's powerlessness to raise their concerns about wildlife damage with the relevant authorities. The rejection by KWS of the Mbung'o Central Committee's proposal for building tsetse traps not only halted an activity that could mitigate one of the negative effects of wildlife, but also resulted in a loss of confidence and credibility on the part of the group. Fortunately this committee, with the help of ITDG, has subsequently produced some traps which have proved successful in trapping tsetse.

Accountability, the `institutionalised responsiveness to those who are affected by one's actions' (Carney, 1995) is a key issue for both case study sites. 'What we need to do is to stop politics' was a common response from many respondents. Moreover, not everyone has a voice in these organizations, especially women because of their lack of land rights and cultural biases; and the poorest because collective enterprises require higher-level skills (even though the base is low). Some younger men, on the other hand, are becoming influential and taking over. As this requires discarding the traditional ways of doing things and the belief that elders should have the final say, this type of conflict is increasing. Another crucial weakness is that few structures (formal and informal) are in place for leaders to communicate with their members, and vice versa.

This leads to the following conclusions on the impact of wildlife conservation on local institutions.

- There is limited local institutional capacity to represent the interests of their members to government and private sector organizations.
- There is a lack of accountability among local institutions.

## 6.3 Impact on dialogue between stakeholders

One of the key stakeholders in the wildlife conservation process in the case study areas is KWS. Local people in both Kathekani and Eselenkei have a very negative view of KWS, and dialogue between it and community groups appear very limited. KWS is generally considered to be supporting wildlife at the expense of people's livelihood assets and strategies, particularly since there is no compensation for wildlife predation or crop damage. There have been significant changes in senior management of KWS in recent years, which have led to changes in policy and practice, causing inconsistency and confusion on the ground. There is no representative on the board of trustees from the communities with whom KWS is attempting to work in partnership. The wildlife scouts in Eselenkei have experienced long interruptions in their payments, causing resentment among local communities.

This poor relationship between KWS and the local community is found elsewhere in Kenya: `a tense relationship has developed between KWS (which has assumed responsibility for wildlife in Kenya both within and outside National Park borders) and Kimana group ranch ...over compensation for wildlife damage and sharing the economic rewards from wildlife tourism'; and further: `the vast majority of members interviewed expressed animosity towards both wildlife, which is seen as a nuisance, and KWS, which is seen as being more concerned about Kimana's wildlife than its human population' (Southgate and Hulme, 1996b).

Some of the KWS officials interviewed recognized some of the problems of wildlife/livestock integration and the damage to crops caused by wildlife. They were also aware that subdivision would probably result in the erection of fences, restricting wildlife movements. One senior warden pointed out that KWS has paid for cattle dips to reduce wildlife-transmitted diseases. However, in general they showed a lack of sympathy with the perspective of local pastoralists and farmers, particularly when the latter take the law into their own hands and kill the animals that have harmed their stock or crops. One official suggested that there was no conflict between wildlife and local people, another thought that local people were exacerbating the problem. In addition, many KWS employees complained that `local people don't pull their weight, they do not come clean in reporting problems and are tricky.' On the other hand, NGO workers and other government agents were more sympathetic towards local peoples' concerns about wildlife.

A very revealing interview with a KWS senior warden calls into question whether the policy framework now in place can provide greater scope for local participation in wildlife management. He said that the lack of credible land-use planning and resources for a concomitant large investment in capacity building, infrastructure, water resources and so on, makes the transfer of responsibility of wildlife management to local people unachievable. Moreover, he suggested that local people need short term benefits before they will cooperate: ‘you can see the crux of the matter. Before these are in place, short-term economic gains - for example, horticulture and steer farming - are needed. Most people have no time to wait for the long-term gains’. Other line ministries and NGOs also criticized KWS for its lack of vision and consistent policies.

A district livestock officer articulated KWS's difficulty in devising joined-up policy: `KWS undermine themselves by not properly supporting livestock production, but can they if their mandate is to conserve wildlife? Are there conflicting objectives between supporting wildlife and livestock?'

The relationship between the group ranch and the Porini ecotourism company is likewise tense at present, because of the unresolved issues of the conservation area. Clarification on access to the conservation area and better dialogue between the two parties will be necessary before this relationship can improve.

The relationships between other stakeholders are also rather variable. In Kathekani a number of NGOs support community organizations (whose limited capacity is described in the section above). According to a representative from the Ministry of Agriculture in Kathekani, the NGOs tend to set their own agenda (rather than the community's) and lack the resources to provide adequate support. However, several of the community groups interviewed complained that government representatives failed to support them at all: 'Ministry people don't come by. We only know NGOs'.

Women, as a stakeholder group, tend to be marginalized in general in the development process, particularly in Eselenkei. The wildlife conservation activities in the case study areas have done nothing to mitigate this marginalization, and in some cases may have exacerbated it - for example through the inequitable distribution of benefits from the ecotourism initiative.

This leads to the following conclusions on the impact of wildlife conservation initiatives on dialogue between stakeholders.

- Local KWS employees see the `problem' of living with wildlife differently from local people and may be failing to understand their needs.
- There is evidence that KWS has neither the resources, nor the institutional capacity, to deliver its wildlife conservation interventions - resulting in a failing relationship between them and local people.
- There is little evidence that KWS has joined-up policies for wildlife conservation and local development.
- Dialogue between local institutions and other stakeholder groups is hampered by the former's limited capacity and leadership skills.

7

# Ecotourism potential

The potential for benefits from wildlife conservation in the study sites appears on first inspection to be quite high, for the following reasons.

- Both sites are dispersal areas for National Parks, which are extensively used by wildlife. Over 70 per cent of Kenya's wildlife is found outside the protected areas (Southgate and Hulme, 1996b).
- High returns associated with wildlife conservation; Boyd et al. (1999) note that in Laikipia 'the commercial returns per hectare for wildlife viewing are up to four times that for livestock alone'. However, the authors point out that at least 10 000 hectares, good access to the land and excellent viewing opportunities are required to obtain such returns.
- Tourism income in Kenya grew from KS27 million in 1972 to KS713 million in 1992, representing an average growth rate of over 20 per cent per annum (Southgate and Hulme, 1996a).
- Low tourism areas such as Kathekani and Eselenkei have good potential for wildlife viewing, but also can support bird shooting, game cropping and hunting.
- Little major infrastructure is required, although good coordination and management skills are necessary (Ogutu, 1998).

However, in spite of this potential, the benefits from wildlife conservation expected in the original research assumptions (increased income from wildlife and tourism, promotion of local capacity development and improved services and infrastructure) have not been observed in either of the study sites. This can be attributed to a number of factors.

- In Eselenkei, local people lack marketing and promotional skills in tourism, and have put these matters in the hands of outsiders.
- In Kathekani the price of land is high, and rising; the sale price of vegetables for the commercial market is strictly controlled by outside buyers; and the margins of agricultural producers are very tight. They therefore have little room for flexibility in their production strategies and little ability to take financial risks. At the same time, wildlife already present in the area destroy crops and prey on their livestock.
- In both case study sites, the increasing area under cultivation (and in Eselenkei the prospect of subdivision) threatens the movements and access to pasture of wildlife in the future. This supports the view of Boyd et al. (1999), who observe that `integrated wildlife and livestock management `fits' better with pastoralist than with agro-pastoralist livelihoods'.
- The group ranch chairman, among several others, observed that the benefits of wildlife conservation are currently insufficient to compensate for the

disadvantages of living with wildlife, and hence there is a lack of enthusiasm for wildlife initiatives. This is perhaps the most important contribution to the debate, as it reflects the outcome of the local people's own cost/benefit analysis.

- In spite of the undoubtedly high levels of income involved in wildlife tourism in Kenya, there is evidence from other cases that the financial benefit to local people is limited: wildlife tourism, `while a major economic activity at national level does not make a significant contribution to district economies, despite representing a considerable source of competition for land and water (Southgate and Hulme, 1996a).

Alternative livelihood scenarios that incorporate increased wildlife conservation activities for Eselenkei and Kathekani are briefly explored below.

### Eselenkei

If the group ranch were to undertake another agreement with a tourism company (or extend the area of operation of the current arrangement with Porini), the following consequences might ensue.

- There would be loss or alienation of more grazing land. This would make those pastoralists whose livelihood strategy is based largely on livestock production more vulnerable. However, this strategy is already under threat to a certain extent from increasing cultivation and the proposed subdivision.
- All group ranch members (but not the women) would benefit from improved financial assets through increased income. It is unlikely, however, that this income would be distributed equally.
- Those who take employment with wildlife conservation initiatives would have the opportunity to alter their livelihood strategy considerably and increase their financial assets through wage employment. However, this strategy would remain vulnerable to job insecurity, and the potential loss of other assets (such as livestock and crops) in the meantime, if their human assets such as family labour were not sufficient to secure them. Such employment opportunities would, moreover, be very few in relation to the local population.
- If numbers of wildlife were to increase as a result of this initiative, those whose livelihood strategies were centred on pastoral or agro-pastoral production, as opposed to wage employment (ie the majority), would increase their vulnerability to wildlife damage and wildlife-spread disease.

### Kathekani

If the people of Kathekani were to increase their interaction with KWS to obtain compensation for wildlife damage and increase the number of cost-sharing projects (for example through the tsetse control initiative, which KWS originally turned down), the following consequences might ensue.

- There would be an increase in financial assets through compensation and grants to community projects.
- Social and human assets might be increased through improved coordination and communication with KWS.
- Agro-pastoralists would reduce their vulnerability to trypanosomiasis, which is spread by wildlife, and hence their livelihoods would be more secure.
- The people of Kathekani would be unlikely to make major changes in their livelihood strategies, which are currently based on agro-pastoralism and farming. They would therefore continue to be vulnerable to crop damage and predation caused by wildlife. If wildlife numbers were to increase as a result of joint activities (for example if they were accompanied by propaganda on wildlife conservation) this vulnerability would increase.

If a conservation area or game reserve were to be created in Kathekani by KWS or by a private developer (as has been recently mooted), the following consequences might ensue.

- There would be loss or alienation of land for both grazing and cultivation, affecting the livelihood strategies of many agro-pastoralists and farmers in Kathekani. Those who lost their land might move to unaffected areas, intensifying land use, land degradation and population pressure in the remainder of the location.
- There would be an increase in financial assets through the income gained from KWS or the private developer (through revenue sharing, lease agreement or compensation/purchase payments for the land). As in Eselenkei, the distribution of these assets is unlikely to be equitable.
- Employment opportunities, although few, would enable some agro-pastoralists and farmers to change their livelihood strategy. Again, job insecurity and the threat to other assets, such as livestock and crops, might increase the vulnerability of this strategy.
- If numbers of wildlife were to increase as a result of this initiative, those whose livelihood strategies were centred on agro-pastoral production (the majority), as opposed to wage employment, would increase their vulnerability to wildlife damage and wildlife-spread disease.

It is clear from the above scenarios that if wildlife conservation is to succeed in areas such as Eselenkei and Kathekani, certain key factors will need to change. These include the level of economic and other benefits to individuals and communities, and the institutional capacity of KWS and other key stakeholders, in particular local institutions. Ogutu (1998) observes that low tourism activities are supposed to *complement* other livelihood sources. However, the above analysis suggests that low tourism activities in the case study areas in fact *compete* with existing livelihood strategies. These factors are explored in the next chapter.

8

# The way forward

Figure **3:** Project participants from Eselenkei and Kathekani arriving at an ecotoursim workshop 2001

## 8.1 Policy for community wildlife interventions

Based on the research findings and analysis above, a number of criteria for community wildlife interventions have been drawn tip. If such initiatives are to meet their potentially conflicting) ;oils of enhancing sustainable rural livelihoods while conserving wildlife, they must pad careful attention to:

- Areas where the potential for ash income generation from wildlife is high

The evidence suggests that poor people are making a substantial trade-off in their co-existence with wildlife. to low-volume tourism area,. such as the case study sites. there are very few immediate tangible benefits from wildlife to offset the costs of wildlife for individuals. Moreover. channelling meager benefits through community organizations in order (in theory) to reduce inequitable distribution of benefits is too diffuse an instrument for strengthening livelihoods. unless other, more innovative solutions can be found, which generate perhaps non-cash benefits but restrict the negative impact of wildlife, the findings of this research

suggest that low volume tourism areas may not in fact be appropriate for tourism activities. Conversely, the implications of this study are that wildlife conservation initiatives in high-potential areas where income is substantially higher may have a positive impact on local livelihoods. However, in such areas attention still needs to be paid to the institutional capacity and other considerations outlined below.

❑ *Tailoring the intervention to the real nature of the 'problem on the ground'.*

`Blueprint' benefits from revenue-sharing schemes are likely to be poorly matched to the individual and community needs they are supposed to address. An understanding of the realities of different stakeholders within a community is crucial for poverty alleviation projects. A sustainable livelihoods approach can help to identify different livelihood types, support systematic analysis of poverty, and allow for interventions to be designed and implemented in a way that promotes poverty alleviation. In particular, a sustainable livelihoods approach allows exploration of how non-financial assets may be affected by proposed initiatives, as well as providing analysis of whether alternative livelihood strategies in fact exist.

❑ *The need to work with government wildlife institutions on organizational change and institutional capacity building.*

If community conservation initiatives are to work, government wildlife managers need to be willing and accountable to the local communities with whom they are working. There is need to provide resources for, and work with, actors both within and outside these institutions to achieve change and a need to address their capacity-building requirements for genuine wildlife conservation partnerships with local people.

❑ *The ability of citizens and of their organizations and institutions to participate in community wildlife interventions.*

It is clear from the research findings that local leadership matters. Interventions to strengthen livelihoods cannot work in the absence of strong local leadership, ownership and commitment. Local capacity is also needed to impose accountability on local leaders to address poverty, gender and conflict-management issues. Resources for capacity building, including leadership and management training plus systematic follow-up, should be an integral part of the design and implementation of wildlife conservation initiatives.

❑ *The existence of inter-sectoral policy coordination for wildlife conservation, tourism and pastoral development.*

If wildlife conservation initiatives are to have a sustainable, positive impact, it is vital that the relevant sectors operate within a coordinated framework. Moreover, the government officials' general lack of awareness and/or unwillingness to make themselves accountable to the affected communities is hampering appropriate public sector responses for wildlife conservation and local development.

## 8.2 Proposed model for community-private-NGO ecotourism projects

Development of ecotourism projects provides opportunities for consensus building in socially fragmented park-adjacent communities by introducing innovative livelihood options that have the potential to improve food security and income while simultaneously conserving the environment. ITDG's continued involvement in the study areas in promoting a dialogue on ecotourism potential during 2001 has been based upon the deployment of advice in its key competence areas: ecological technologies for agriculture and pastoralism. Part of the explanation for the failure of ecotourism projects may be their failure simultaneously to understand, engage with and strength-en existing livelihoods. Ecotourism should be seen as a complement to existing livelihoods, offering the opportunities and incentives gradually to extend changes in agricultural and pastoral practices, which would reduce conflict over natural resources in a practical way. It was the belief of our team that practical ideas and initiatives must accompany a process of dialogue on the ground, bringing tangible short-term results in order to build confidence for longer-term initiatives.

The following model was devised specifically for the case of Eselenkei after detailed consultations with the local stakeholders. It is hoped that the model, which takes into account the cultural specificities of Eselenkei, could be adapted for wider application: it would certainly be relevant in the case of Kathekani, where it could be the basis for dialogue between potential local investors, KWS, donors and the community.

The problems of overlapping local jurisdictions, ethnic and clan rivalries, and conflicts over natural resources, will be tackled only by providing all the groups with a stake in future community-private-NGO ecotourism. Technically, financially and institutionally these will need to deal with the following points.

1. Building an executive institution to oversee community-private sector negotiations, decide on access to resources, work and/or approve community development plans and track expenditures.

   The major hurdles to this process include:

   - the current overlap of institutions (clan, group ranch, local administration, church, etc.)
   - the need to build organizational and management capacity at community level.

2. Clear planning, implementation and monitoring of the `distribution of benefits' in relation to community development plans. Benefits should be seen as much wider than income per se and may include structures, materials, training, support for income-generation projects, seed money for rotating credit and savings groups, etc. However they need:

   - to promote representation of women and the poor
   - separate development committees to represent each clan group.

3. Open financial management of accounts and publicised audits.

One approach to the above points could be to have a) an executive committee overseeing, b) a community development committee managing, and c) a financial committee that includes executive and CDC members overseeing; thus each committee balancing the others.

4. Technology development support for wider development initiatives including agriculture, irrigation, animal health, 'eco-farming' (snakes, ostriches, birds, etc.), water access and use, rangeland and pasture management.
5. Resource access arrangements (seasonal, spatial, wildlife, water, carrying capacity and 'policing' negotiations).
6. Funding arrangements for management of the conservation area (wardens, game scouts, roads, fencing, shelter, water points, etc.).
7. Funding arrangements for management of visitor sites and ecotourism aspects.

Over time, each of these steps could be consolidated within a code of practice to facilitate policy decisions toward the development of 'ethical ecotourism'; pro-poor, environmentally sustainable, and financially self-supporting.

Financing community and conservation area planning would need to be phased over time in a way that is clear to donors, private enterprise and the communities themselves. A theoretical example of how this could operate is provided below. The time (*x*-axis) and financial scales (*y*-axis) are indicative only, as are the values given. Porini indicated five years to break even in Eselenkei, but this was in their mind slower than could be expected.

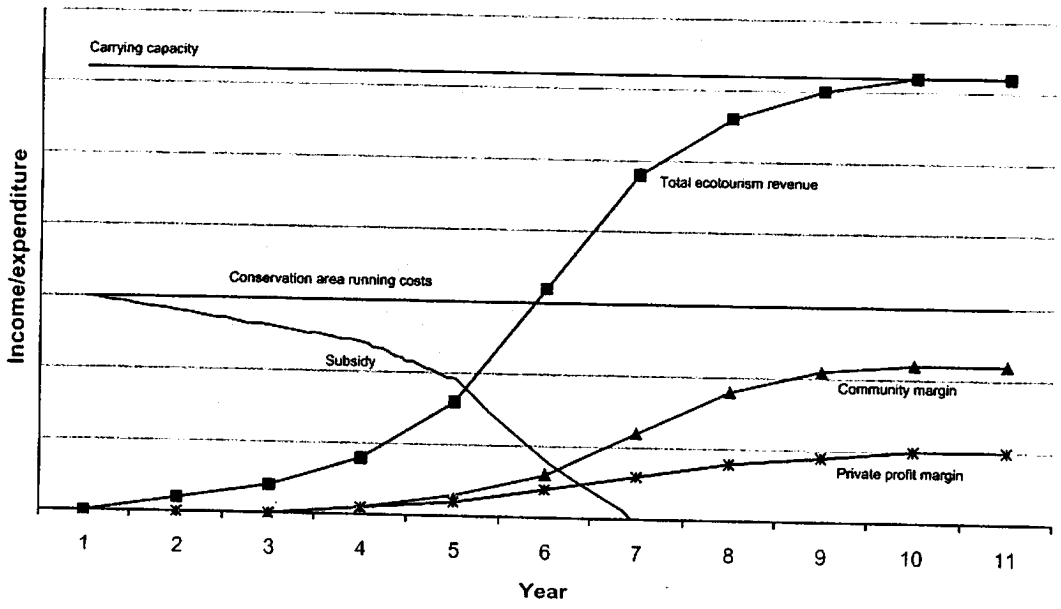


**Figure 4:** Financing ecotourism: subsidizing infrastructure and allocating returns

In effect, grant funding would subsidize initial (otherwise private) investment to set up the ecotourism site and put into place the necessary conservation area infrastructure. Subsidy would also allow early returns to the communities and a gradual increase over time for community margin, which they then reallocate to development investment (management costs, infrastructure, credit-savings schemes, materials, income-generation projects, etc.).

This mechanism provides a useful way of replacing initial project funding for technology and institutional development support that will be necessary to supplement the ecotourism package in the early years. As a result, ecotourism could provide a long-term and self-financing solution to both conservation area protection and community-level development.

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