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A Synthesis of two case studies where wildlife, tourism and pastoralism interact in Kenya

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1. Executive Summary

This project examined the impact of wildlife conservation initiatives in two semi-arid locations with low tourism potential in south-east Kenya. The purpose was to identify desirable and feasible criteria for wildlife conservation projects to strengthen livelihoods and reduce poverty among pastoralist and agro-pastoralist communities.

The research activities included: brief literature reviews; action research in the case study locations including semi-structured interviews of key informants, local people, members of organised groups, local government and NGO employees; field observation; and seminars. The sustainable rural livelihoods framework was used to describe and categorise local people and as a way of structuring the analysis.

The research found that the wildlife conservation interventions in the case study locations had neither strengthened livelihoods of the local pastoralists, agro-pastoralists and farmers, nor significantly conserved wildlife. In particular, the following conclusions were reached:

- 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 utilisation 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 recognise 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 organisations
- There is a lack of accountability among local institutions
- 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 the Kenya Wildlife Service (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
- 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 the large mammals and 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
- Need to work with government wildlife institutions on organisational change and institutional capacity building
- The ability of citizens and of their organisations and institutions to participate in community wildlife conservation interventions
- The existence of inter-sectoral policy coordination for wildlife conservation and tourism and pastoralist development

This research contributes to empirical evidence about wildlife conservation initiatives. It also adds to the growing body of experience in the implementation of the sustainable rural livelihoods framework.

2. Background

2.1 Introduction

This report presents the main findings and recommendations of an investigation into the impact of competing uses of rangelands in south-east Kenya, namely:

- conservation of wildlife and biodiversity
- use for local production
- private sector development of tourism

The findings are drawn from action research carried out in two areas of low natural resource endowment in Kathekani Location, Makueni District and the Eselenkei Group Ranch, Oloitokitok Division of Kajiado District during 1999.

2.2 Context

Over the last 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 conserving declining numbers of wildlife species. Recently termed 'fortress conservation' by Adams & Hulme (1998), these areas were established with the expectation that enhanced park management would improve wildlife conservation and assure sustainability. Nevertheless, the number of many charismatic species both within many of these designated areas, and outside them, continued to decline. 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 (Sibanda, & Omwega, 1996)[1].

The failure of fortress conservation to achieve its objectives has resulted in the institutionalisation over the last decade of a counter-narrative, community wildlife conservation. Conservation practitioners now link wildlife conservation with sustainable development using participation as the new driving force to give beneficiaries (often 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 only be achieved if local people gain sufficient access to alternative benefits to offset 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 & Murphree, 1998).

In addition, new theories of semi-arid rangeland ecology provide further evidence for local people's participation and local level management. The ecology of these areas is now conceptualised in terms of non-equilibrium dynamics. According to Boyd *et al.* (1999), rangeland productivity is more constrained by density-independent factors such as climatic variability, especially drought, than by density-dependent factors such as stocking rates and grazing pressures. This suggests that pastoralist stocking strategies are less damaging to rangeland resources and wildlife than previously thought.

2.3 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, or

[1] For example, Science (April 1998) reports 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.

$400 million a year (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 conservation projects, this should create a motor for sustainable development. In turn, local people will see the value in conserving wildlife.

Nevertheless, tourism as a strategy does have specific limitations, including 'leakage'[2] and volatility of demand[3]. Other potential dis-benefits such as unequal distribution of benefits, 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 tourism.

2.4 Challenges to the community conservation/wildlife tourism narrative

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 till 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 many pastoralist 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 their communities (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 (e.g. 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, elites, both modern and traditional, often dominate at all levels and community-based decision making usually favours 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 expectation, due to vested economic interests by tour operators and/or failure of local leadership to share benefits 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 recognised that working with non-homogeneous pastoralist communities is extremely difficult, as it cuts across a complex set of local cultural, historical, economic, property, power, generational, gender and household realities. As a result there is little empirical work of a scale and depth significant enough to inform policy and/or practice.

[2] A variety of studies covering 17 countries over 20 years, estimated that 11-90% of total tourism expenditure leaks out of the country (Smith and Jenner, 1992, quoted in Ashley and Roe, 1997)

[3] 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)

3. Project Purpose and Research Framework

The goal of the research was to contribute to the improvement of livelihoods of poor people through sustainably enhanced production and productivity of semi-arid production systems. The broad purpose of this study was to examine the impact of wildlife conservation approaches in two semi-arid locations with low tourism potential[4], and in doing so inform policy and practice in this field. This, it was hoped, would both increase our understanding of the role wildlife conservation approaches play in local pastoral/agro-pastoral communities, and also help to identify desirable and feasible criteria for conservation projects and interventions to reduce rural poverty.

This study has three underlying assumptions that we sought to confirm (or reject). These were that:

1. Local-level conflict exists between national park/protected area management and local people, resulting in the decline of many wildlife species and the gradual impoverishment of livelihood systems.
2. Wildlife conservation projects can be an important component of poverty alleviation for resource-poor people through benefits such as: increased income and meat from wildlife and tourism; promotion of local capacity development; and improved services and infrastructure.
3. Wildlife conservation is only effective if it is responsive to the complexities of social difference and the dynamics of the community in which men and women live and work.

As a result of the literature reviews that formed the initial stage of the project (described below), the following broad research question was formulated:

1. What is the impact of wildlife conservation initiatives offered to different types of local people in the case study locations?

This was supplemented by a second research question:

2. How do the various stakeholders contribute to this impact?

In order to encompass the potentially conflicting goals of wildlife conservation projects it was decided to analyse the impact of these interventions in a number of areas, namely: income and food security; local institutions; dialogue between local stakeholders (local people, the government and the NGO sector); and numbers and types of wildlife. For a wildlife conservation project to be judged as effective, improvements would be anticipated in all four areas.

[4] Low wildlife tourism potential is generally found in dispersal areas adjacent to national parks supporting low density wildlife. Both Eselenkei and Kathekani are suitable for low tourism being dispersal areas for the Amboseli and Tsavo East National Parks respectively.

4. Research Methodology

4.1 Literature review.

The starting point of the research was the findings of the recently published paper Wildlife, livestock and tourism: unholy trinity or creative synergy? by Blench *et al.* 1998, also funded by DFID/RNRRS: Semi Arid Production Systems. A UK Ph.D. student was contracted to undertake a brief literature search and write up abstracts in the following two areas:

- Options for integrating wildlife and habitat management into the livelihoods of population living in areas of low tourism and safari potential
- Economic stakeholder analysis evaluating the costs and benefits of integrating wildlife into sustainable rural livelihoods

At the same time a Kenyan consultant was contracted to undertake a basic review of the case study areas, examining local NGO base line surveys and monitoring and evaluation reports as well as other grey literature.

4.2 Seminar in Kenya

The research questions, proposed areas of research, research design and tools were presented at a seminar in Kenya in February 1999 for interested professionals including academics, government officials and NGO staff. The workshop was attended by fifteen people and generated a lively debate. It enabled the team to achieve the following objectives: a) undertake a peer review of the broad research questions, research methodology and research instruments; b) gain the understanding of and interest in the objectives of this research from Kenyan colleagues; c) identify colleagues working in similar fields of enquiry for subsequent collaboration/networking; d) identify members of an advisory panel for this research.

A UK seminar was also proposed for early January 1999. Unfortunately, some of the key invitees were unable to attend and the workshop was therefore cancelled.

4.3 Field research design

The research strategy was based on a case study of two selected areas (Eselenkei Group Ranch and Kathekani Location) to examine the research questions in more depth. The locations were selected by ITDG Kenya in areas where they have programmes of work, though not necessarily in natural resource management. In some cases the local people knew the field researchers.

It was clear from the initial stages of the research that the impact of wildlife conservation initiatives in these areas would manifest itself in complex ways. It was therefore necessary to research the process as well as the outcomes of these initiatives. However, time constraints prevented the use of longitudinal studies to monitor change over time. Instead researchers used semi-structured interviews with individuals and groups to capture their perceptions of change in the recent past and the present. The sustainable rural livelihoods framework (Carney 1998) was used to describe and categorise respondents in terms of their capital assets and as a way of structuring analysis. The research tools are described in more detail below.

4.4 The research tools

4.4.1 Sample selection

A cross section of key informants (NGO workers, contact farmers, Group Ranch secretary, local chiefs, and District Officers) were interviewed to gain a preliminary idea of main issues, stakeholder groups and key people within these groups. In the subsequent group and individual interviews, the Group Ranch secretary in Eselenkei and local chiefs in Kathekani acted both as guides and made the initial contact with the respondents. A number of impromptu, opportunistic interviews were also undertaken with people on the roadside, in their fields, watering their livestock and so on, in order to mitigate any bias due to the influence of the guides. ITDG colleagues arranged interviews with government and NGO officials.

A total of 51 individual and 16 group interviews were conducted. Of the 51 individuals, approximately two thirds were men and one third women. Two broad stakeholder groups were identified: a) 32 who derived the major part of their livelihood from the land (i.e. pastoralists, agro-pastoralists and farmers); and b) 19 wage/salary earners working in the government and NGO sectors. A more detailed breakdown of the sample is given in Appendix 1.

The groups interviewed were local self-help groups. Although the primary aim of the group interviews was to cross-check the information received in the individual interviews, they also provided a useful forum for eliciting women's opinions, particularly in Eselenkei, where individual interviews with women were difficult to obtain due to cultural norms and the team did not have sufficient time in the field to overcome this constraint.

4.4.2 Semi-structured interviews

The individual interviews were based around a checklist of both closed and open questions. Closed questions were use to gain baseline information of the capital assets of the respondent. The open questions explored people's perceptions of the following areas:

- Wildlife
- Livestock and grazing management
- Land ownership/sub-division
- Water
- Local institutions, traditional and modern
- Differences between the generations
- Gender
- Tourism
- Infrastructure
- Government services
- Politics

The group interviews focused on broad baseline information in order to probe the issues mentioned above.

4.4.3 Observation

The researchers were asked to observe and comment on any issues that struck them while they were conducting the interviews. This allowed them to record their own personal impressions of the people they were interviewing and their attitude towards the topics under discussion.

4.4.4 Procedures for setting up the field work

The Agriculture Programme Manager for ITDG Kenya managed the research in Kenya and appointed the consultant who undertook the initial study to be the local lead researcher. He, together with field officers, generally ITDG Kenya members of staff, undertook the interviews and data collection. The checklist of questions for the semi-structured interviews was developed and refined by the UK programme manager working alongside the lead researcher in the initial stages of setting up the study in Kenya in February 1999. Training was conducted and all the interviews were written up to set a benchmark for future field work.

Tragically ITDG's Kenya Regional Director was murdered in March 1999 and all field work ground to a halt as staff came to terms with their distress and/or were temporarily re-deployed to other work to cover contingencies. Field work began again in June and both case study sites were visited twice. Sadly, one of the key field officers for Kathekani became seriously ill and died in November 1999.

All completed interview notes were sent to the UK for analysis.

4.4.5 Data analysis

At the end of the field work, analysis was carried out in the UK on the data, using NUD*IST software. The baseline information on the respondents was coded to descriptive nodes relating to age, sex and livelihood assets. The text was coded to conceptual nodes reflecting, but not exactly reproducing, the checklist of issues for the semi-structured interviews. The data was structured after collection and hence the analysis is grounded in the data itself, reflecting the issues respondents raised most, which it is assumed are those of most importance to them.

5. The Case Studies: background information

5.1 Eselenkei

The Eselenkei Group Ranch lies in Oloitokitok Division of Kajiado District, a few miles north of the Amboseli National Park and is an important dispersal area for wildlife migrating out of Amboseli.

A Group Ranch is a piece of land communally owned by a group of people who are recorded and 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 these objectives have been realised, and this failure has led to the dissolution and sub-division of many of Maasailand's Group Ranches (Southgate and Hulme 1996a).

Eselenkei Group Ranch was formed in 1979 and consists of 74,974 ha of semi-arid rangelands (agro-ecological zones 5 and 6). It has approximately 1,200 members, all men, who represent around 9,500 mainly Kisonko Maasai people in total. It is run by the Group Ranch Committee 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. The leadership of Eselenkei Group Ranch is currently at the centre of a conflict about the use of resources, particularly with regard to the eco-tourism project discussed below in section 6.4. 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 Committee membership is increasingly held by middle-aged or younger men; the boundaries of the Ranch remove the traditional mechanism for dissent, which was to move away (Grandin, in Bekure et al 1991); and elections, 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 frequent accusations of corruption (Ogutu, Southgate and Hulme op. cit.). This view is supported by the findings of the field research, such as the fact that the Chairman of the Group Ranch has registered 7 members of his family, including young boys, as Group Ranch members, as opposed to the permitted 4 (which should be adults).

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-Masuru 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 sub-division, consent has been obtained from the Lands Office, but the process is on hold at the moment, mainly due to the high costs of surveying the land.[5]

Wildlife species noted in Eselenkei include: wildebeest, eland, zebra, Thompson and Grants gazelle, impala, giraffe, hyena, lion, leopard, rhinoceros, buffalo, elephant, baboons and ostrich. Kenya Wildlife Service (KWS), the state-run custodian of all wildlife in Kenya, is working in partnership with Eselenkei Group Ranch, amongst others in the area. The basic principle behind the partnership agreement is to increase the benefits for those living with wildlife through sharing the revenue from national park proceeds with them[6]. This income is administered by the Group Ranch Committee and spent on school bursaries for

[5] The issue of Group Ranch sub-division is discussed below in section 6.3.

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

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 fifteen 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 by wildlife is, in theory, available. The relationship between KWS officials and local people is generally one of tension and resentment, particularly over the issue of compensation for wildlife damage. This issue is explored more fully below in section 7.1.1.

Eselenkei Group Ranch also has some direct experience of low wildlife tourism through sporadic bird shooting activities with a very small number of visitors. A campsite run by a private developer has earned the Group Ranch KS 735,000 over the years. Tourism activities are now being scaled up through the arrangement made with Porini, a Nairobi-based eco-tourism company, for the leasing of a piece of land for tourism activities. This initiative is discussed in more detail below in section 6.4.

5.2 Kathekani

Kathekani Location, including the newly created Mtito-Andei Location, covers an area of 869 km^2 and borders the Tsavo East National Park. The area was settled between the 1960s and 1970s, having been degazetted from the Ngai Ndethya Game Reserve. Many of the people migrated here 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 as the Location falls mainly in agro-ecological zones 5 and 6. There is some irrigated agriculture along the Mtito-Andei River. Although livestock suffer from some predation by wildlife and losses due to drought, disease and banditry, local people believe that the greatest threat is from trypanosomiasis transmitted by tsetse flies coming from the Tsavo East National Park. Indeed, villages close to the Tsavo East National Park have hardly any livestock. Wildlife species in the area include: buffalo, elephant, lion, hyena, gazelle, dik-dik, monkey, porcupine, warthog, and squirrel.

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 Mbung'o Central Committee are bitter about the way KWS have 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 organisation. Very recently, however, there have been some positive developments as the Kenya Trypanosomiasis Research Institute, KETRI, which can influence KWS policy, has started to fund the tsetse control scheme.(see Section 7.1.1)

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, brick making, and reciprocal gardening. The scope of their activities is constrained by limited capital and in particular by weak leadership skills (Omwega and Ogutu 1999).

At 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.

5.3 Definition of approaches to wildlife conservation in the study locations

The people of Eselenkei and Kathekani are being offered a combination of strategies to persuade them to live with wildlife. These strategies can be categorised into two main approaches:

a) community wildlife conservation approach, where potential benefits are channeled to local people via their community institutions
b) wildlife conservation approach, with benefits channeled to individuals.

These approaches and strategies are presented in Table 1 below.

Table 1: Types of wildlife strategy and approach

Approach	Type of strategy	Eselenkei	Kathekani
Community wildlife conservation	Benefits to the community through revenue sharing from tourism receipts	✓	
	Cost-sharing partnerships with KWS for community development projects		✓
Wildlife conservation	Reduction in costs of living with wildlife through improved control of problem animals (KWS wardens and community scouts)	✓✓	✓ (KWS warden only)
	Individual compensation for wildlife damage	✓	✓

6. Livelihood strategies in Eselenkei and Kathekani

This section uses the Sustainable Livelihoods Framework[7] to describe the livelihood strategies of the people of Eselenkei and Kathekani. Following this, the sub-division of Eselenkei Group Ranch and the private sector eco-tourism initiative (Porini) are dealt with in sections in 6.3 and 6.4 respectively.

6.1 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 summarised as follows:

Human: access to training, information and extension messages, much of which is channeled through the Group Ranch structure. As a result of the domination of men in the Group Ranch leadership, women's access to these resources is limited. However, some of the women's groups in the area have had links with NGOs who have provided training and support in the past.

Social: the socio-political context in Eselenkei is characterised 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 moran), but this is waning as a result of outside influences and younger men, in particular the educated, are gaining in political and social significance. Group Ranch Committee 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, in particular the younger men. If the proposed sub-division 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 1,750 in 1999 and has risen to KS 2,500 in 2000). However, the water is designated for domestic use, and irrigation is illegal. Those found irrigating their land with the water are disconnected. Connection costs KS 2,500 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.[8] 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% own over 400. In comparison, at neighbouring Kimana Group Ranch, more than 50% 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 on 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.

[7] Carney 1998.

[8] A bull costs between KS 10-20,000, and a steer KS 5-10,000.

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% 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% of total income in the District, while agriculture accounted for 38% and off-farm income for 28%. By 1992, these figures had changed to 24%, 53% and 23% respectively (ibid.). Although some of this increase is due to the sub-division 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 emphasising beef production. This is typical of most East African pastoralists, who continue to implement herd maximising 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 categorised 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 Group Ranch Committee members come from 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 Group Ranch Committee or 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. Sub-division of the Group Ranch, if it takes place, will have a considerable impact on access to the key natural resource, land.

The population of Oloitokitok Division has increased rapidly over the last two decades, as a result of the influx of agriculturalists. In 1979, population density was 7.5 persons per square km. The projection for 1996 was 18, more than double in 17 years (Southgate and Hulme 1996a).

Transforming structures 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 eco-tourism initiative (described in section 6.4) 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 Group Ranch Committee provides a structure which can support the livelihood strategies of its members and reduce their vulnerability to the external trends and events. However, because of both its make-up and the current leadership crisis, the Committee is unlikely to realise this potential.

With regard to legal and policy processes, the key issues affecting livelihood strategies in Eselenkei are sub-division (which is dealt with separately in section 6.3); the illegal nature of irrigation, which brings the threat of disconnection from the pipeline on discovery; and the restrictions on wildlife hunting and poaching. 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[9].

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 Group Ranch Committee and the lack of confidence in and accountability of the leadership have the potential to influence negatively livelihood strategies and outcomes, 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 sub-division of the Group Ranch, over which they have decision-making power.

6.2 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 self-help farmers and women's groups in Kathekani, as described in section 5.2. 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 connectedness 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 1,000 per acre for the three month season (1998 cost was KS 800).
Physical: the main physical asset is access to water for irrigation. A nearby dam supplies water to the irrigation channel, managed by a committee. Those 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 main pipeline, costing KS 120/month. However, as at Eselenkei, using this water for irrigation is illegal. There is competition for water use between cultivators and the increasing number of people involved in brick making and other activities.
Financial: income is derived firstly from crops, second from livestock and third from wage employment. The main irrigated crops are vegetables which are generally bought by agents serving the Nairobi and Mombasa markets. A carton of eggplants 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 self-help and women's 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.[10] 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.

[9] 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).
[10] Examples of membership fees include: KS 10 per month; KS 20 per week (merry-go-round); KS 100 per month; KS 1,000 or one goat, plus KS 150 alternate months.

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

- Farmers deriving the major part of their livelihood from irrigated agriculture
- 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.[11] 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 harbour the fly invade highly degraded land. The prevalence of livestock disease (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 have 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 is in Kathekani is increasing by KS 1,000 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.

Transforming structures 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 which seems to the producers to be somewhat arbitrary, and over which the latter, who act as individuals and are not organised 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 organisations 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, and 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 in 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 described their husbands' opposition to their membership of such groups, while others explained that their husbands became more supportive when they realised that the group made a contribution to household income.

As in Eselenkei, current policy on wildlife conservation means that households are vulnerable to crop damage, tick infestation and wildlife predation on their livestock, without means of redress.

Using some of the capital assets described above, heads of households in Eselenkei and Kathekani can be broadly categorised as follows:

[11] 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.

Table 2: Categorisation of households according to capital assets

Type of capital asset	Eselenkei	Kathekani
Human	1. No access to training/ information/extension messages 2. Access to the above	1. No access to training/ information/extension messages 2. Access to the above
Social	1. Weak connectedness: basically operating alone 2. Influence: e.g. member of GR Committee, or ability to make decision affecting others	1. Weak connectedness: basically operating alone 2. Membership of a formalised group, with adherence to rules, norms etc. 3. Influence: member of Farmers Group Committee, or ability to make decisions affecting others
Natural	1. No access to land for pasture or cultivation 2. Access to land for pasture 3. Access to land for pasture and cultivation	1. No land 2. Some land: 1-5 acres 3. Substantial land: 5+ acres
Physical	1. No access to water for irrigation 2. Insecure/illegal access to pipeline water	1. No access to water for irrigation 2. Some access to water, downstream irrigation and/or insecure access 3. Secure access to water for irrigation
Financial	1. <40 livestock 4. 40-150 livestock 5. Crops and <150 livestock 6. Regular inflows of money (wages) 7. 400+ livestock	1. No available stocks or savings 2. Livestock or crops which are generally called down rather than accumulated 3. Regular inflows of money (wages) 4. Productive savings which can generally be left untouched

6.3 Land sub-division

At present, only eleven of Kajiado's 55 Group Ranches are not yet sub-divided. Eselenkei Group Ranch applied for sub-division in 1996 although the process has not yet gone ahead. The land is to be divided into equal parcels, each member (including widows) receiving 100 acres[12]. The cost of surveying the land is high, KS 11.5 million, and each member is to contribute KS 9,000.

The members of the Group Ranch are divided on the issue of sub-division - 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 engaged primarily in agriculture, are in favour of sub-division as it will give them greater control over the land and provide a disposable asset, while the elders and wealthier members fear the consequences for natural resource management and in particular restrictions on cattle movement. The Group Ranch Committee 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 wellbeing of members at heart, but in fact because he owns a good number of cattle and would lose out if sub-division were to go ahead. It is difficult to ascertain the exact stage the process has reached: the Group Ranch Committee Secretary claimed that the issue was not on the agenda, while the Eselenkei Chief said sub-division was very close and only delayed by the Committee.

[12] Interviews in May 2000 suggest this figure has now changed to 170 acres.

The following are some of the advantages of sub-division, as given by the respondents:

- the Group Ranch restricts the use of land for cultivation, and hence sub-division 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 sub-divided, 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 sub-division 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 5,000 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[13]
- people will invest more in protecting their land which may have a positive impact on wildlife

Conversely, the following disadvantages of sub-division 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 a water source (where a number of people have already settled). It is anticipated that 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 but that the powerful will have larger plots
- land degradation is anticipated as cattle movements are restricted
- boundary disputes may ensue
- some (including the Senior Warden at Amboseli National Park) anticipate that sub-division 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 below section 7.1 – 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 sub-divided 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 sub-division

The experiences of other Maasailand Group Ranches that have already undergone sub-division tend to reinforce the anticipated negative impacts 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 sub-division. Southgate and Hulme (1996b) also highlight some of the gender implications of sub-division, for example: 'indiscriminate land sales by male land owners of sub-divided land in other parts of the district have rendered several families landless.' They go on to note that 'a number of authors have recognised an escalation in social differentiation as the process of land tenure change and commercialisation have impacted unevenly on different groups.'[14]

Southgate and Hulme also document a tendency to move towards more commercial livestock rearing following sub-division, rather than the focus on milk production in which the Maasai have historically engaged. This has negative implications for women, as control of the milk products is one of their major

[13] This point was made by the local headteacher

[14] It is interesting to note that land sold by Maasai receives a considerably lower price than that sold by non-Maasai, according to Southgate and Hulme (1996b). In 1994, Maasai land sold for KS 38,950 per hectare, while Kikuyu-owned land in the same area sold at KS 68,861.

spheres of domestic influence, and steer fattening initiatives have generally failed to benefit them (Eselenkei Field Notes, 1999).

The Kajiado District Land Adjudication Officer described the sub-division of Ngoma Group Ranch which led to increased productivity but also 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 sub-division. In Kimana Group Ranch, which has been partially sub-divided, there were originally 170 members who were to receive 142.5 acres each. Registration of members has recently soared however, and there are now 1,000 members, among whom the same area of land is to be sub-divided. 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 sub-division. In the west of Kajiado District, 79% of the land parcels originally allocated at the time of sub-division have been further divided within 8 years (encompassing 34% of the total Group Ranch area) (Southgate and Hulme 1996a).

The erection of fences is common after sub-division, which restrict cattle movements and increase 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 sub-division, 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 (ibid.).

6.4 The Porini Initiative

In 1997 the Group Ranch Committee entered into an agreement with a Kenya-based eco-tourism company, Porini, to lease 40 acres on a fifteen-year lease at an agreed annual rent plus inflation. In addition, they will receive a bed night fee for each tourist entering the Group Ranch. The 40 acres are spread over 4 sites of 10 acres each, on which have been constructed a lodge, a borehole and tree house, a mobile campsite, and a sundowner spot. The total area covers 5,000 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.

The issue of the conservation area has caused considerable tension between Group Ranch members and the Committee. It appears that the Committee either were unaware, or failed to notify members, of the 7,000 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.[15]

A Conservation Committee was elected in September 1999 to deal with the Porini Initiative on behalf of the Group Ranch, and generally enjoys a better reputation than the Group Ranch Committee. The annual fees are to be split 50:50 between these two committees. Gate and bednight fees are to be put into community projects. Following concerns raised about the size of land being leased to Porini, a group made up of representatives of the Group Ranch Committee, 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 Group Ranch Committee with whom they made the original agreement. A recent field visit (May 2000) revealed that the conservation area had been reduced from 7,000 acres to 5,000, in response to the concerns raised by members.

[15] The Porini Community Liaison Officer (who is incidentally a member of the Group Ranch Committee) explained that there may be potential for increased injury and accidents in the conservation area, due to the anticipated 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.

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 leasing agreement, as well as on an individual basis (for example selling handicrafts to tourists, as other Group Ranch tourism initiatives do). They also hope for improvements in transport and road infrastructure, and increased employment opportunities.

Those 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 10 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 cattle are allowed to graze there at times. There is also mistrust towards the Group Ranch Committee 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 sub-division for the Porini Initiative do not appear to have been fully explored. The Community Liaison Officer was relatively positive about the impact of sub-division 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 sub-division could go ahead omitting the area leased to Porini until the lease expires.

7. Outputs

7.1 Output One: Research Findings

7.1.1 First Research Question: Impact of wildlife conservation initiatives in case study areas

This section considers the impact of wildlife conservation initiatives on the selected areas outlined in section 3, i.e. income and food security; local institutions; dialogue between local stakeholders; and numbers and types of wildlife. At the end of the section, the overall impact of the different wildlife conservation approaches discussed in section 5.3 above, is presented in tabular form.

a) Impact on income and food security

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

- KWS revenue sharing, which amounts to around KS 500,000 per annum, is given direct into a school bursary fund. However, in 1995, the revenue was only sufficient to sponsor 9 of the 12 schoolchildren
- A few community members have been recruited as KWS wildlife scouts and earn KS 2,000 per month. However, in early 1999 they had not been paid for the previous 7 months
- 49 cows are paid in compensation for loss of life, but crop damage is no longer compensated
- As outlined above, the Porini Initiative pays KS 460,000 per annum for the lease of the conservation area, and has also donated money for a school building 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% 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 Group Ranch Committees).' (Southgate and Hulme 1996b).

Living with wildlife also produces a number of negative impacts 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. Anticipated 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 realised, while wildlife destroy crops (in particular buffalo, monkey and elephant damage) and kill livestock, and tsetse flies, carried by the wildlife, bring trypanosomiasis to the cattle. There is no individual compensation for damage of 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 1,000 flies per month and are considered of positive benefit. This year KETRI has funded the extension of the work of the Mbung'o Central Committee and is monitoring the traps closely in order to be able to verify the spectacular results in tse-tse fly reduction achieved, (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 are now seeking encourage 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 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 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 for all are weakened. 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 impacts 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 wildlife cause 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 by 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 late to school to allow the wildlife to have moved off. The presence of wildlife is curtailing people's use of: a) human assets, as they have to invest extra labour (their own or hired) in guarding crops/wildlife; and b) 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 poaching 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: young boys hunt for fun, poorer families for household use, and some hunt out of anger. Poaching is a more 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 moran 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 recognised that they 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 utilisation 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 recognise that wildlife can have an economic value***

- ***There is no clear evidence that local people have stopped illegal hunting and/or poaching***

b) Impact on 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 Group Ranch Committee, 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 (some members have called for a 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 support agencies (KWS, NGOs and others) have the necessary conflict resolution skills to help them manage this process. 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.

Low quality local leadership with little capacity for designing and implementing reform has meant that local organisations' goals and objectives for development are more likely to be determined by those 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, the leadership of local institutions is again weak, a fact admitted by many respondents, and this lack of capacity is highlighted by the community's powerlessness to raise their concerns about wildlife damage to the relevant authorities. The rejection by KWS of the Mbung'o Central Committee's proposal for building tsetse traps not only halted an activity which could mitigate one of the negative effects of wildlife[16], but also resulted in a loss of confidence and credibility on the part of the group.

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 organisations, 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 organisations***

- ***There is a lack of accountability among local institutions***

c) 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 appears 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

[16] Although one community group, with the help of ITDG, have since produced some traps which have proved successful in trapping tsetse.

predation or crop damage. There have been significant changes in senior management of KWS in recent years, which have led to changes in both 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. It emerged in the May 2000 field visint that the Chairman of the Group Ranch Committee has been named as Honorary KWS Game Warden for Eselenkei, further reinforcing existing imbalances in power and authority. The proposed cost-sharing tse-tse trap scheme in Kathekani was turned down by KWS (after a long delay), again fostering resentment and hindering dialogue between the two groups.

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 recognised some of the problems of wildlife/livestock integration and the damage to crops caused by wildlife. They were also aware that sub-division 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 disease. 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 the lack of credible land use planing 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 co-operate: '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 of consistent polices. A District Livestock Officer articulated KWS' 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 eco-tourism company is likewise tense at present, because of the unresolved issue 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 organisations (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 marginalised in general in the development process, in particular in Eselenkei. The wildlife conservation activities in the case study areas have done nothing to

mitigate this marginalisation, and in some cases may have exacerbated it – for example through the inequitable distribution of benefits from the eco-tourism 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***

d) Impact on numbers and types of wildlife

As described above, there is a broad range of wildlife species found in Eselenkei and Kathekani, including: wildebeest, eland, zebra, Thompson and Grants gazelle, impala, giraffe, hyena, lion, leopard, rhinoceros, buffalo, elephant, baboons and ostrich in Eselenkei; and buffalo, elephant, lion, hyena, gazelle, dik-dik, monkey, porcupine, warthog, and squirrel in Kathekani.

The wildlife population in Kajiado District increased by 20% from 1978 to 1996, an increase attributed to the hunting ban imposed in 1978 (Southgate and Hulme 1996a). This is confirmed by respondents at Eselenkei, who concluded that wildlife numbers have risen over the last 20 years, following the anti-poaching campaigns, in particular wildebeest, zebra, and gazelle. However, at the same time certain species have declined in number, notably lion, leopard, rhino, buffalo and elephant, as a result of expanding cultivation. In Kathekani there is no evidence to suggest any significant variation in wildlife numbers overall.

The following conclusion can be drawn on the impact of wildlife conservation on numbers and types of wildlife:

- ***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 the large mammals and cats. In Kathekani, there is no evidence that wildlife numbers have been affected.***

e) Impact of different wildlife conservation approaches

The following tables summarise some of the key impacts of wildlife conservation initiatives according to the different approaches discussed in section 5.3 above:

Table 3: Impact of different wildlife conservation approaches in Eselenkei

Indicator/ Approach	Income and food security	Local institutions	Dialogue between local stakeholders	Numbers and types of wildlife
Community wildlife conservation				
KWS benefit sharing	No tangible positive impact from benefit sharing apart from a few individuals who gained employment as community scouts (unpaid for last 7 months)	No tangible impact - no evidence to show that working with KWS has strengthened Group Ranch committee	Potential negative impact as local community expect more from KWS, who don't/can't deliver	Qualitative data suggest overall rise in wildlife numbers, but decline in some particular species
Eco-tourism	Potential negative impact if drought coping pasture unavailable. A few individuals have gained employment as scouts. Possible potential for future employment	Potential negative impact as eco-tourism project creates tensions within Group Ranch Committee and with Group Ranch members	Potential negative impact, as relations between Group Ranch and tourist company are tense. Ability of local professionals to act as mediators very limited	Ibid.
Wildlife conservation				
Improved control of problem wildlife	Little evidence of improved control; expansion of cropping attracts wildlife leading to increased negative impact	No tangible impact – no evidence to show KWS working in partnership with Group Ranch Committee to control wildlife	Negative impact, little change in the culture of blaming each other	Ibid.
Individual compensation	Negative impact as system is not working	Negative impact as system is not working	Negative impact as system is not working	Ibid.

Table 4: Impact of different wildlife conservation approaches in Kathekani

Indicator/ Approach	Income and food security	Local institutions	Dialogue between local stakeholders	Numbers and types of wildlife
Community wildlife conservation				
KWS cost-sharing	Potential increased negative impact as trypanosomiasis risk may increase	Negative impact – loss of confidence internally by members of Mbung'o Central Committee and externally by local community	Negative impact – poor relationship between KWS and local community	No tangible evidence of either positive or negative impact on overall numbers of wildlife
Wildlife conservation				
Improved control of problem wildlife	Little evidence of improved control; expansion of cropping attracts wildlife leading to increased negative impact	No tangible impact – no evidence to show KWS working in partnership with local communities to control wildlife	Negative impact, little change in the culture of blaming each other	Ibid.
Individual compensation	Negative impact as system is not working	Negative impact as system is not working	Negative impact as system is not working	Ibid.

7.1.2 Second Research Question: Stakeholder contribution to this impact

The contribution of the various stakeholders to the impact of wildlife conservation initiatives is incorporated above in the previous section. However, some key points can be drawn out:

- KWS plays a major role in the negative impact of wildlife conservation initiatives in both Eselenkei and Kathekani (as Tables 3 and 4 show), largely through its poor relationship with local communities and inability to mitigate some of the negative consequences of living with wildlife which affect them. Through the revenue sharing scheme, KWS does make a positive contribution to the Group Ranch.
- The Porini Initiative, at present the only private tourism company operating in the case study areas, contributes to the impact of wildlife activities in a number of ways. Like KWS, it makes a positive contribution to Group Ranch revenue, but is in the process of alienating a large area of strategic drought reserve pasture from Group Ranch members.
- As a result of their poor leadership, local institutions in Kathekani and Eselenkei also contribute to the negative impact of wildlife initiatives. The role of the Group Ranch Committee in the negotiations over the Porini lease has already been mentioned in previous sections, as has the general weakness of community-based organisations in Kathekani to engage in productive dialogue with KWS and other policy makers.
- Local government officials appear to play a relatively minor role in wildlife conservation activities and hence make little contribution to their impact.
- Women as a stakeholder group, whilst clearly differentiated economically, tend in general to be marginalised from the benefits of conservation activities, as described above, and contribute little to their impact.
- Agro-pastoralists and farmers are involved in expanding the area under cultivation in both Kathekani and Eselenkei, which has an increasing impact on the numbers and movement of wildlife.
- If the pastoralists and agro-pastoralists of Eselenkei decide to continue with the process of sub-division, there will be a significant impact on wildlife in general and on the Porini Initiative in particular, in terms of wildlife's restricted access to and movement within the Group Ranch land.

7.1.3 The research assumptions and the potential for benefits from wildlife conservation

The assumptions underlying this research were presented above in section 3. The first and third assumptions are confirmed by the findings of the research. Local-level conflict does exist between wildlife managers and local people resulting in a gradual decline of some wildlife species and impoverishment of pastoralist livelihood systems. It is also clear from the research findings that community wildlife conservation can only be effective if it is responsive to the complexities of social difference and dynamics of the community in which men and women live and work.

The second assumption, that wildlife conservation projects can be an important component of poverty alleviation for resource-poor people, requires a more complex analysis. This type of qualitative research project does not yield data suitable for a standard cost-benefit analysis, but the potential for community benefits from wildlife conservation can be analysed according to a broader range of livelihood criteria and alternative livelihood scenarios explored.

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.[17]
- Boyd et al note that in Laikipia 'the commercial returns per hectare for wildlife viewing are up to four times that for livestock alone' (Boyd et al 1999). 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 K£27 million in 1972 to K£713 million in 1992, representing an average growth rate of over 20% per annum (Southgate and Hulme 1996a).

[17] Over 70% of Kenya's wildlife is found outside the protected areas (Southgate and Hulme 1996b).

- 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 co-ordination and management skills are necessary. (Ogutu 1998)

However, in spite of this potential, the benefits from wildlife conservation anticipated 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, people lack the basic marketing and promotional skills in tourism required (Ogutu 1998); in other words some of the required social and human assets are lacking.
- 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 sub-division) threatens the movements and access to pasture of wildlife in the future. This supports the view of Boyd et al (op. cit.), who observe that 'integrated wildlife and livestock management 'fits' better with pastoralist than with agro-pastoralist livelihoods'.
- The Group Ranch Chairman, amongst 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 increased cultivation and the proposed sub-division.
- 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 (i.e. the majority), would increase their vulnerability to wildlife damage and wildlife-spread disease.

Kathekani:
1) 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 co-ordination and communication with KWS
- Agro-pastoralists would reduce their vulnerability to trypanosomiasis 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.

2) If a conservation area or game reserve were to be created in Kathekani by KWS or 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 for 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 however.
- If numbers of wildlife were to increase as a result of this initiative, those whose livelihood strategies were centred on agro-pastoral production, as opposed to wage employment (the majority), would increase their vulnerability to wildlife damage and wildlife-spread disease.

It is clear from the above that if wildlife conservation is to succeed in areas such as Eselenkei and Kathekani, certain key factors will need to change, such as the level of economic and other benefits to individuals and communities,[18] and the institutional capacity of KWS and other key stakeholders, in particular local institutions. These factors are explored in the next section.

7.2 Output 2: Criteria for community wildlife interventions that strengthen local livelihoods and conserve wildlife

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

- ***Areas where the potential for cash income generation from wildlife is high.***
  The evidence suggests that poor people are making substantial trade-offs in their co-existence with wildlife. In low volume tourism areas, such as the case study sites, there are very few immediate tangible benefits from wildlife to offset the costs of wildlife for individuals. Moreover, channeling meager benefits through community organisations 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, attention still needs to be paid in such areas, to the institutional and other considerations outlined below.

[18] One writer observes that low tourism activities are supposed to *complement* other livelihood sources (Ogutu 1998). However, the above analysis suggests that low tourism activities in the case study areas in fact *compete* with existing livelihood strategies (author's emphasis).

- ***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 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 organisational 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 organisations 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 pastoralist community is hampering appropriate public sector responses for wildlife conservation and local development.

7.3 Output 3: Capacity building for collaborators in action research and analysis

This output has been achieved to a certain extent. The planning seminar held in Kenya provided a forum for discussion and constructive criticism from a range of outside professionals. The field researchers received training and gained considerable practical experience in qualitative interviewing techniques. However, as a consequence of the interruptions to the fieldwork described in section 4.4.4, there was less supervision and follow-up than originally planned.

7.4 Output 4: Results of project findings disseminated

A number of pathways have been identified for the dissemination of the research findings. First, in the very early stages of the project, the goals and objectives were presented at a DFID workshop on pastoralism. Second, a synopsis of the project was posted on the ITDG web site and ID21. Third, a methodology workshop was held in Kenya. Fourth, through informal networking interested people have been kept up to date with the project.

Dissemination activities have now been rescheduled for this Autumn (2000) and no underspend of the project budget is anticipated. The plan to feed back the research findings into the community and for major stakeholder consultations to be organised has been revitalised. Consultations are currently underway between Dr Stuart Coupe, Head of Policy Research ITDG, and Dr Asenath Omwega and Dr Zadoc Ogutu, senior programme managers at ITDG East Africa, for the planning of participatory workshops to be held in the project locations, with the participation of a range of stakeholders. The methodology for these

workshops will be given careful consideration, activities such as ranking exercises and scenario planning will be included. The workshops will be held in the second half of October.

Subsequently, the Working Paper, which is currently in preparation, will be finalised and published as one of ITDG's series in conjunction with ITDG Publications. Policy briefings based upon the Working Paper will be placed on ITDG's web site and ID21. Shorter articles for relevant publications such as Haramata, the Rural Extension Bulletin, Tourism Concern and VSO will be produced in the coming year.

8. Contribution of outputs

The findings from this research project will feed into strategic thinking on land use in ITDG's Rural Agriculture and Pastoralism Programme in East Africa and lay the basis for future project work on livelihoods which can accommodate wildlife conservation.

The dissemination pathways identified in the previous section will enable the research findings to contribute to the debate on wildlife and pastoralism, particularly in areas with low tourism potential. The findings make an especial contribution to the empirical data available, emphasising the impact of wildlife and the potential for conservation initiatives from the point of view of the pastoralists and agro-pastoralists concerned. Using the dissemination pathways outlined above, this information can feed into policy debate at national level in Kenya, and internationally through UK-based fora.

By using the sustainable livelihoods framework to first categorise and second, analyse the impact of wildlife initiatives in two case study areas, a key contribution of this project is to add to the growing body of experience in operationalising a relatively new, but core tool for DFID.

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Appendix 1.

Table 5: Interview sample details

Type of interview	Eselenkei	Kathekani
Individual: Men	24	13
Women	2	10
Group: Men	1	4
Women	3	8

Occupation	Eselenkei	Kathekani
Pastoralist, agro-pastoralist, farmer: Men	11	11
Women	0	10
Government officials: Men	10	1
Women	1	
NGO: Men	3	1
Women	1	