

Family Fortunes

Analysis of changing livelihoods in Maasailand



**Final report - Project ZC0275
DFID Livestock Production Programme**

**K. Cochrane, D. Nkedianye, E. Partoip, S. Sumare, S. Kiruswa,
D. Kaelo, L. Onetu, M. Nesele, M. Said, K. Homewood, P. Trench,
R. S. Reid and M. Herrero**

**Family Fortunes
Analysis of Changing Livelihoods in Maasailand**

K. Cochrane¹, D. Nkedianye¹, E. Partoip¹, S. Sumare¹, S. Kiruswa¹,
D. Kaelo¹, L. Onetu¹, M. Nesele¹, M. Said¹, K. Homewood^{1,2}, P. Trench^{1,2},
R. S. Reid¹ and M. Herrero^{1,3}

¹International Livestock Research Institute, P.O. Box 30709, Nairobi, Kenya

²Department of Anthropology, University College London,
Gower Street, London WC1E 6BT, UK

³School of GeoSciences, The University of Edinburgh,
West Mains Road, Edinburgh EH9 3JG, Scotland

© International Livestock Research Institute, Nairobi, Kenya
© Livestock Production Programme, DFID, United Kingdom

Disclaimer:

This document is an output of Project ZC0275 funded by the Livestock Production Programme of the Department for International Development (LPP – DFID) of the British Government. The views expressed in this document are the sole responsibility of the authors and may not represent the views of the donor.

Correct Citation:

Cochrane, K., Nkedianye, D., Partoip, E., Sumare, S., Kiruswa, S., Kaelo, D., Onetu, L., Nesele, M., Said, M., Homewood, K., Trench, P., Reid, R.S., and Herrero, M. 2005. *Family Fortunes: Analysis of Changing Livelihoods in Maasailand*. Final Project Report ZC0275. Livestock Production Programme. Department for International Development, United Kingdom. 261 pages

For more information:

Dr. Mario Herrero. International Livestock Research Institute, P.O. Box 30709, Nairobi, Kenya. m.herrero@cgiar.org

I. Structure of the report

In the first section we set out the aims and objectives of the project and the implementation of activities. Section two discusses the context of this work and how it complements existing studies of change in Maasailand. Section three describes the methodology used. The main analysis, in section four, discusses what the families told us about change, what drives it, its impacts at a household level, and their vision of the future. The annexes present a table that covers activities planned and implemented, a copy of the logical framework and the individual portraits of the families interviewed.

1. Background

1.1 Aims and Objectives

The Department International Development (DFID) of the British Government, funded this project to support activities and work in collaboration with the Belgian funded project 'Better policy and management Option for Pastoral Lands: Assessing Trade off between poverty alleviation and wildlife conservation (Reto–o-Reto)' being implemented by ILRI, UC Louvain, University of London, Colorado State University and others in 5 geographical areas of Maasailand: Kajiado, Mara, and Kitengela in Kenya and Longido and Simanjiro in Tanzania.

The main objective of this work was:

To identify the direction and drivers of change in Maasai livelihoods and analyse at household level those factors and institutions that the Maasai consider help or hinder their development and survival.

Specifically:

- To undertake a series of at least five case studies or *family portraits* among Maasai households around the Amboseli area (as defined in the ILRI study), selected on the basis of socio-economic status.
- To develop, with each family, a generic portrait, that could be used as a tool to initiate discussion among pastoralists, analysing complex patterns of change in livelihoods, the major factors driving those changes and identify means of addressing some of those factors that help or hinder development in pastoral communities.
- To adapt and define the *family portraits* tool within the East African pastoral context.
- To produce two documents (in addition to the portraits themselves) that could be circulated among fellow researchers and development organisations, as a contribution to further research and as basic information to facilitate dialogue with policy makers: a report on the main themes coming from the exercise; and a short document on the methodology.

1.2 Implementation of activities

To undertake a series of 5 family portraits in Amboseli

The portraits were developed between June and December 2004 by a team of male and female facilitators, who were responsible for the write up, translation and analysis with the family. The major change to the objectives was that we completed more portraits in more areas. Instead of doing 5 in Amboseli the team completed 9 portraits (3 in Amboseli, 2 in the Mara, 3 in Longido, and 1 in Simanjiro). This was in order to complement the cross-site socio-economic data that was also being collected, and to understand what was similar and different across sites. This was possible due to the strong synergies between this project and the Belgian-funded Reto-o-Reto project.

To develop a generic portrait with each family

Portraits are available in anonymous format. Families have agreed that they can be shared, and also think that they could be useful tool to initiate discussions amongst pastoralists in their communities and their institutions.

To adapt and define the tool within the East African context

The initial workshop discussed how to adapt the tool to the East African context. A new field guide was written. In January 2005 a presentation was made to ILRI staff and project partners of the process of doing a family portrait and some of the narratives that had come out of it. ILRI staff also met with the IIED/Reconcile project that were very interested in using the narratives to enhance their training course of Pastoralism which is currently being developed. The community facilitators who worked in the field were convinced that it is an excellent tool to use with the Maasai, who have a long oral tradition and history of storey telling.

Produce two documents a report on the main themes and a short document on methodology

This document includes the thematic analysis (see section). We would like to wait until verification has been done at community level (Family Portraits phase 2) before we circulate the results more widely and in different formats. With data that show the families are representative their stories hold much more weight. Again a publication on the methodology would be better when the community consultations are complete. This way it can be compared with work done in Mali between 2000 and 2002. We have kept a close record of the process and have a lot of feedback from the families about the method.

1.3 The project team

Katherine Cochrane	consultant, specialist in family portraits
David ole Nkedianye	sociologist, Maasai community facilitator
Everlyne Partoip	family portraits facilitator, editing and translation to Maa
Sylvia Sumare	family portraits facilitator, editing and translation to Maa
Steven Kiruswa	Maasai community facilitator, Longido
Dixon ole Kaello	Maasai community facilitator, Mara
Leonard Onetu	Maasai community facilitator, Kajiado/Amboseli
Moses ole Nesele	Maasai community facilitator, Simanjiro
Mohammed Said	ecologist and land use/biodiversity specialist
Katherine Homewood	Anthropologist
Pippa Trench	Anthropologist
Robin Reid	ecological systems analyst
Mario Herrero	agro-ecological systems analyst and project coordinator

2. CONTEXT

There have been a number of studies done on how Maasailand is changing and the impacts of these changes on Maasai livelihoods. Key changes include the alienation of the Maasai from their lands in colonial times; the increasing demarcation of land into agricultural, pastoral and wildlife areas; the increase in education and the monetary economy; and the diversification of livelihoods to include wage labour, wildlife tourism and agriculture (Thompson and Homewood, 2002; Galaty 1992; Graham, 1987).

Studies have also compared Tanzanian and Kenyan Maasailand (Coast, 2002). The countries are similar, sharing a common climate, similar natural resource base, rapidly growing population of small subsistence farmers, common cultural groupings and historical British colonial rule. However their particular political histories have resulted in some key differences. Kenya pursued policies that emphasised economic growth over equity, private sector development and receptivity to foreign private investment. On the other hand Tanzanian socialism resulted in self-reliance, a more equitable distribution of wealth, high levels of state intervention, reliance on exports of agricultural products, and forced villagisation (Coast, E, 2002).

Below we give a brief historical overview of changing land tenure and access to land, human wildlife interactions, and changing populations. These are some of the key issues that the families discuss in section 4.

2.1 *Changing access to land*

There have been substantial changes in land tenure across Maasailand. For a review see Herrero et al. (2003). In brief, the colonial period saw the decimation of the Maasai, the collapse of their control over East African rangelands, their restriction to a much smaller area with progressively more strictly defined internal boundaries. This was followed by continuing land loss to expatriate settlers and to non-Maa speaking immigrants in the post independence period (Homewood and Thompson, 2002). In Kenya setting up Group

Ranches in the mid 1960's paved the way for privatisation, subdivision and sale of Maasai ranches (Galaty, J 1992). Despite the efforts made to ensure that all Maasai got title to land when the group ranches were subdivided, the amount and quality of land was often distributed unequally (Galaty, J, 1992; Homewood and Thompson, 2002). In addition during the 1980's many Maasai (especially those that had not been to school or were not employed) were forced to sell their land to avoid defaulting on loans. In a study of two group ranches 30% of subdivided land had been sold. Sales were often made in secret to Kikuyu (Galaty, 1992), fuelling in-migration and expansion of farming. Despite these problems or one could argue, because of them, the 'vast majority of Maasai 'seek' (private) land out of insecurity, in order to get something now rather than have nothing later' (Galaty, 1992.p.38). Much work is now being done to try to assess the impacts of subdivision on the pastoral system, especially with regard to livestock mobility.

In Tanzania, the Maasai have lost land to conservation areas (now covering 27% of Tanzania's land mostly in pastoral areas), and state enterprises including ranching and agriculture. Since the 1980's economic liberalisation made land alienation easier and more profitable (Brockington, D. 1999). By the early 1990's insecurity over land tenure became so great that a presidential commission was set up. The commission reported that, ' the Land Commission received overwhelming evidence showing large scale encroachment of customary individual land and village lands by parastatals, district development corporations and state organs. ..Village and rural folks holding land under customary tenure have no security' (Shivji 1995 cited in Brockington, D 1999)

In Kenya, Maasai have legal rights to their land, but fragmentation and in-migration seem to be threatening the pastoral system. In Tanzania on the other hand people do not have the security of legal title to their land although at the moment land access appears to be marginally more open than in Kenya.

2.2 Wildlife

In the early 1900's the Maasai reserves were called 'game reserves' on the basis that they were not required for European settlement, and were occupied by people who did not kill game. As authorities became aware of the importance of revenues gained from wildlife in Kenya (from tourism and hunting) they feared that the Maasai would destroy the game through overstocking and overgrazing the reserve lands. This, along with their desire to see the Maasai settled, controlled and contributing to the cash economy, resulted in policies that provided water supply in order to try to get the Maasai to set up ranches. However, they soon realised that successful fenced ranches would threaten the space for wildlife and their migration routes and so game reserves dedicated to wildlife and tourism were created (Collet, 1987).

With time it became increasingly clear that conservation islands surrounded by wildlife deserts were not sustainable. This has led to conservation areas being integrated with the surrounding pastoral lands. Policies were designed to recognise the costs incurred by local communities of living with wildlife. Mechanisms were set up to share the revenue from wildlife tourism with communities, allow controlled resource use inside the conservation areas, and enhance rural livelihood strategies by involving local communities in wildlife related enterprises (Boyd et al, 1999).

The success of these policies has been mixed. In Amboseli – where the intensity of human - wildlife competition is much higher than elsewhere – there has been much conflict and the intended benefits for local communities have not materialised. Boyd et al (1999) argue that in the Mara, with a more sedentary population, and less intense competition over dry season grazing, the communities have realised more revenue from the reserve. Rutten et al. (1991) uses the case of the Eselegei group ranch to argue that community based tourism is neither a perfect nor foolproof way for communities to share in tourist revenue. Rutten et al. conclude that the process of negotiating with external companies and sharing the benefits within the Maasai community are complex and political, and communities need support from neutral parties.

2.3 Changing Populations

In Kajiado district between 1960 and 1980 cattle numbers remained the same, however between 1970 and 1980 human populations had increased by 76%, this coupled with severe land losses represents a new set of demographic pressures for the district (Holland, K, 1987). In Tanzania, tribe does not differentiate the census so it is not possible to give figures for changes in population. However, as Table 1 indicates, in Kenya in Narok and Kajiado districts the proportion of Maasai in the total population has declined significantly.

Table 1. Demographic evolution of the Maasai in Kenya

		Kenya	Kajiado	Narok
1962	Maasai as % of total administrative population	1.8%	78%	79%
	Total number	154,079	78,887	86,472
1979	Maasai as % of total administrative population	1.6%	63%	56%
	Total Number	241,395	93,560	118,091
1989	Maasai as % of total administrative population	1.8%	57%	47%
	Total number	377,089	146,268	188,303

Source: Kenya census data 1962-1989 cited in Coast, E (2002)

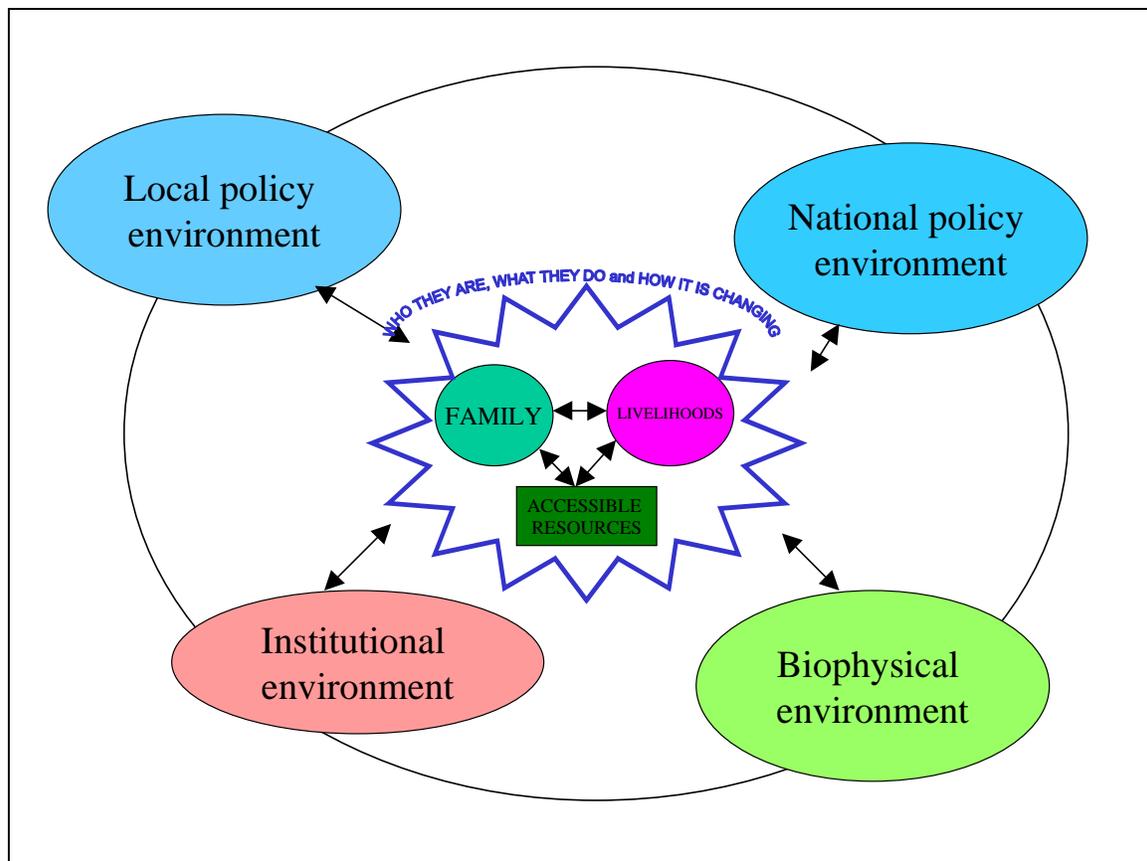
The Family Portrait work adds to this body of knowledge. It presents Maasai households' own experiences and analyses of these changes to their livelihoods and lifestyles. The stories are extracted from 9 'Family Portraits' of households in Southern Kenya and Northern Tanzania (Amboseli, Maasai Mara, Longido, Simanjiro). With so few cases we are not seeking to identify general trends or to establish causality, as there is a huge amount of work to this effect. The objective is to add a deeper understanding of the complexities of processes of change, who benefits and how, and who is not able to grasp opportunities and why not. The 'Family Portrait' methodology means the analysis is developed with the family. As a result, the increased understanding and awareness is owned by family as well as being available to the facilitators. This can be the first step towards communities making more informed decisions at a local level.

3. METHODOLOGY

'Family Portraits' is a participatory action research approach. Families selected by their communities according to specific criteria (see below) take ownership of a process of telling and recording their 'story'. Working with a small team of facilitators (male and female), families build up a picture of the household, their history, their livelihood system, the institutions they interact with and the relationships they have. They then go on to analyse how the family, livelihoods and institutions are changing, what is driving these changes and how they have been able to respond.

The diagram below gives a framework for developing a portrait. The initial work with the family focuses on who they are, what they do and how it is changing. This is grouped under the three pillars of family, livelihoods and accessible resources. The analysis is then enlarged to encompass the policy environment, the institutional environment and the biophysical environment – all of which impact on the family¹.

Figure 1: Framework for family portraits



¹ This is done partly with the family but also in the community feedbacks which are planned for 2005

3.1 Selection of families

The selection of the family was done by the community according to certain criteria. This way the community gained a sense of ownership of the process, and when it comes to doing a community level analysis of some of the issues highlighted in the portraits (planned for 2005) they will understand what has been done. In each area families were selected in order to cover the following household types:

- Households that were medium wealthy, poor, and very poor according to their communities. In Longido this was done on the basis of a community wealth ranking.
- Households that were close to protected wildlife areas. This was chosen to deepen understanding of human-wildlife interactions to feed into the Belgian funded Reto-o-Reto project mentioned above.
- Households whose head was around 60-70 years old and households whose head was around 40 years old.
- Households that covered any very significant differences in land tenure in the area. For example in Amboseli 2 were on undivided group ranch land north of the park at a place called Ingitto, whereas the third was on subdivided land near Namelok. Again in the Mara one family lived on subdivided land and another on Group ranch land.

All families have to be prepared to discuss their livelihoods in depth and be interested in recording their own story.

3.2 Working with the families

A team of 3 facilitators, including one woman, worked with each family for four days. When possible the team stayed with the family and got involved in daily activities, which was essential in building trust and allowing the family members time to talk. The team had developed a field guide in advance (based on the framework above) which lists the issues to discuss with the family. This is not a questionnaire and issues were often covered in a different order to the guide. Working with the family involved conversations, visual tools (including maps of natural resources, livelihood rankings and seasonal activity calendars), participant observation, and group work (often separated by gender). The team took notes as family members talked, and at the end of the day they consulted the field guide to plan for the following day. The fact that the team were all Maasai was very important in building up trust and easing communication. The female facilitators also played a vital role in eliciting women's accurate and in depth knowledge of the household and their particular histories. Following the main visit the portrait was written up by the team and translated into Maa. Any gaps in information or inconsistencies were followed up with the family. A final version was produced in both English and Maa.



Accompanying family members on daily tasks

3.3 Family Feedbacks

The aim of the family feedback sessions was to verify that the information in the portraits was correct, and to deepen the analysis of changing livelihoods. A copy of the portrait in Maa was given to the family to read and check (all the families had at least one literate person). The team then facilitates a session in which the women and men (or everyone together if the family is small) analysed their livelihood system. The groups were asked to symbolise the building blocks of their system (family, livestock, natural resources, etc) and then show how they are interrelated. Then they added the external actors that influence their lives and identify the key drivers of change. The facilitators then asked the family to identify the problems that they face and the strategies they use to overcome these problems. This list of problems and strategies can, if the family agrees, form the basis of a community consultation. These consultations aim to assess how representative the family is of the wider community, and to debate the key issues that they face.



Figure 2. Family livelihood diagram done by women in Tanzania. See following page for diagrammatic explanation.

Church
 Salvation and peace of mind
 Access to government authorities, white people, and outsiders who provide information on issues like HIV/AIDS, cultivation and childcare

School
 Will provide the future doctors and vets of Tanzania. Enables them to read instructions on drugs and better treat their animals. Education leads to jobs from which income is invested in the herd.

Forest
 Provides fuel, construction, and fencing materials, as well as pastures for animals

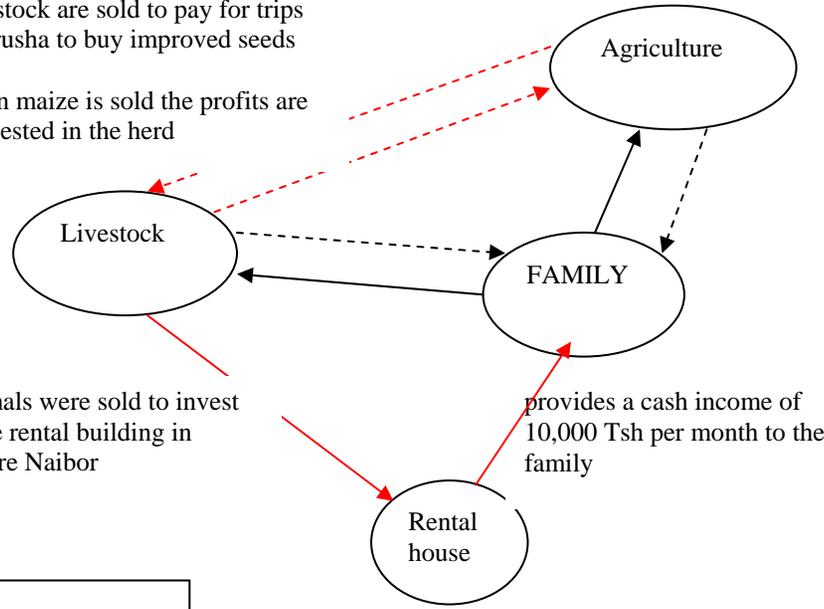
River
 Drinking water for people and animals

Livestock are sold to pay for trips to Arusha to buy improved seeds

When maize is sold the profits are reinvested in the herd

Animals were sold to invest in the rental building in Engare Naibor

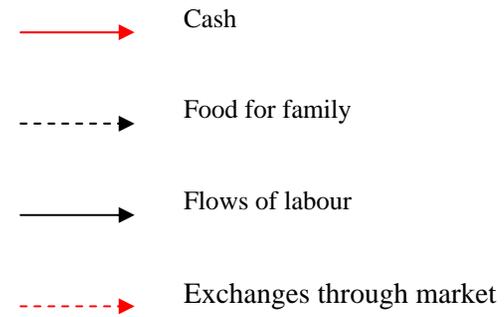
provides a cash income of 10,000 Tsh per month to the family



Market
 They sell agricultural produce and very occasionally livestock. They buy clothes, food, livestock drugs, ag. inputs.

 They also get information from government representatives who convene meetings on market days

 Organisations do animations on issues such as HIV/AIDS and livestock disease.



- Key Drivers of change for the family**
1. Agricultural Expansion
 2. Education and the church
 3. The rental house
 4. The market

Marked with white paper on diagram in photo

4. RESULTS

4.1 Introducing the families

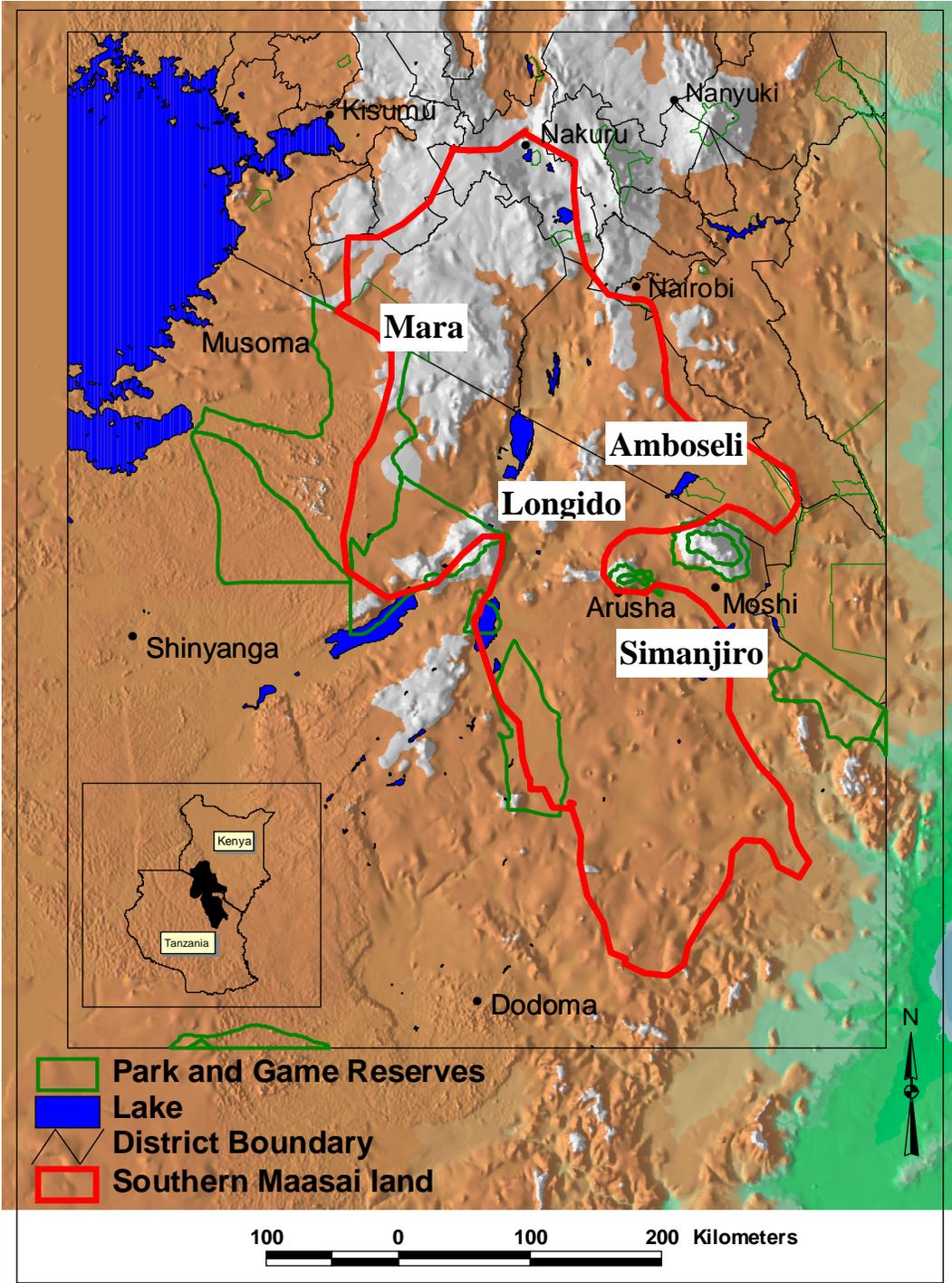


Figure 3: Map of Maasailand showing areas where families live

Saragi Ole Noomeek is 57 year old and lives with his five wives and **31 of his children** in Inkiito near Amboseli National Park. They are pastoralists and own 160 cattle and 265 small stock. They also get contributions from three of their sons, one who is salaried, one who works with tourists in Mombassa and one who treks animals. They are registered with the group ranch and hope to own land when subdivision happens. They are investing heavily in education with 10 children in school. Their priority is to educate their sons (only two girls are in school).

Sairiamu Ole Parsae is 47 years old and has two wives and ten children. They live in Inkiito near Amboseli National Park. They live off their livestock owning 168 cattle and 250 small stock. He built up his herd through cattle trading. Sairiamu also receives rent from agricultural land he leases out in Namelok, and periodic remittances from his brothers who work in Malindi. Three of the children (**two boys and a girl**) are in school, one in a private boarding school. Sairiamu is well informed and expects to be allocated land when the group ranch is subdivided.

Katatei Ole Ntirraba lives with one of his two wives and six of his 11 children. They live in Namelok to the east of Amboseli National Park. The family lost their entire herd between 1984 and 1997. They went into farming but when land was subdivided they lost the irrigated land they had been farming for more arid land elsewhere. They now have 7 heads of cattle and 15 small stock. Katatei suffers from chronic ill health and his wives have taken initiatives to take up farming and set up stalls selling beads to tourists. They managed to send 7 children to primary school including 4 girls. The family now receives periodic remittances from one son who is employed.

Meliyo Maanja is 42; he has one wife and five children. They live in Sinya to the south of Amboseli national park, East of Longido. They live with Meliyo's mother. The family survives from their livestock (8 heads of cattle and 7 small stock) and the small livestock trade that Meliyo does. They hope to rebuild their herd, or start small veterinary drug business if they get access to credit.

Kipara Lesidai is 51 years old, and has three wives and 20 children. They live to the west of Longido. The family are active members of the Baptist church. They depend on farming and livestock for their livelihoods and also get income from a rental property in the nearby town. They have focused on agriculture since their herd was decimated in the 1984 drought. 11 of his children have been to school including 3 girls. 3 girls have been kept out of school to help with the herding.

Saitoti Ole Nina is 53 years old, and has two wives and 14 children of which four are at school. They live to the East of Longido. The family depends on cultivation for their survival, 'owning' 15 acres of land. They do not own any cattle and only 4 goats. Two of their sons earn income, Manu in Nairobi, and Joseph operates a mill machine locally. Saitotoi's wife also sells firewood to earn money for her family.

Kanyinke Ole Kasoe is 46 years old, and has five wives and 15 children. The family owns a large herd which they depend on for their livelihood. They live in the Koiyaki Group Ranch. They also undertake livestock trading, sale of artefacts in a cultural boma and the proceeds from camps. They currently reside within the Mara Game Reserve but as they are registered members of the group ranch they expect to obtain 150 acres of land. Kasoe plans to sell cattle to buy more land.

Wuantai Ole Kariankei is 72 years old and has one wife and has three children. They live near Lemek in the Maasai Mara. Wuantai has been plagued by ill health and misfortune that has impacted on their livelihoods. They depend on livestock, owning 70 cattle, a salary from the wildlife association and dividends from Simiren owning land in a conservation area. When the group ranch was subdivided Wuantai received poor quality land on the hillsides a long way from their home. Their major asset is Simiren's education which has been funded by local groups and a foreign benefactor. He is now at university.

Mohono Ole Sarika has five wives and twenty-nine children of which only two are at school. They live in Simanjiro. The family has cultivated about 24 acres since 1998 when they lost over 300 heads to ECF. They still own about 400 cattle. They have also received significant, but unreliable income from the gemstone business.

4.2. Changing livelihoods of 9 families in Maasailand

The ways in which families are obtaining their livelihoods are changing fundamentally in Maasailand. This section examines how change has occurred in 9 families, the drivers of change and the impacts of change at a household level. It is clear that the links between the drivers of change and impacts on livelihoods are dynamic and complex. Impacts of one change can become the driver of another. For example, the pressures of land tenure and land use changes can lead to more sedentarised lifestyles. However, sedentarisation can also be a driver of change as it enables more children to be educated (which is in itself a driver leading to diversification of livelihoods through employment opportunities). At the same time, for a different family, sedentarisation could make them increasingly vulnerable to the effects of major droughts.

The key drivers of change identified by the families include: severe shocks or boosts that cause irreversible changes to livelihood systems, increased education, changing land tenure, and interaction with certain institutions. The impacts of these changes include reduced livestock mobility, reduced livestock production, diversification of livelihoods and changing roles and values within the household.

The drivers of change and their impacts

4.2.1. Climatic and other significant shocks to livelihoods

Shocks have caused rapid and irreversible change to livelihoods of some families, and prompted diversification to minimise risks and vulnerability in others. For Katatei, things changed irrevocably during the 1984-5 drought. He lost all his cattle but one, along with the social status of owning livestock and providing for his household. His first wife, Hannah, went to her maternal family to gain access to some land they could cultivate, which provided the bulk of their food for some time. In this time he rebuilt the herd slowly, they now own 7 cows and 9 sheep and goats. On subdivision they lost the good quality land to be allocated arid land away from water. They were unable to continue farming. The family hopes to build the herd further in the future reducing dependence on cultivation. His second wife left to work in a cultural boma selling handicrafts to tourists. These changes also caused a shift in decision making in the household, Hannah who accessed land in a time of crisis is much more central to decision making and the second wife who invests her own income into livestock has more control over those animals.

Other families responded to shocks in different ways. For Meliyo, an outbreak of ECF in 1996 made him turn to cattle trading in an attempt to sustain his family. The drought of 1984-5 made Sairiamu think seriously about other ways to make a living. He started to utilise land he owned in the Namelok swamps but moved his household and livestock to Ingitto to the north of Amboseli Park to avoid livestock diseases.

Severe human health problems have also profound impacts on livelihoods. Kariankei suffers chronic asthma and has had numerous treatments for TB and respiratory infections. Having had a herd of 50 heads in 1980, they were forced to sell their very last cow to pay for medical treatment in 1987. However social structures in the area meant that the *Ilmakesen* clan provided a *engelare* (contribution) of 40 sheep and 4 goats to help them through the times of hardship.

4.2.2 Boosts to livelihoods

Other events have boosted either the families livelihoods directly or their future prospects and security. Families have benefited directly in a variety of ways: the division of the families herd following the death of the father is often key to enabling the sons to set up on their own. Sairiamu felt he got a favourable share of sheep and cattle when his father died. This has changed in recent years as many of the older sons now earn cash income which they invest in animals that are kept with the families herd. In this way they are already building up part of their own herd before they have separated from the extended family. Another family established the core of their herds through cattle raiding, and a third, as mentioned above, received a boost from his clan in the form of an *englare* at a time of hardship.

4.2.3. Changing land tenure: the role of power and political connection

Changing land tenure, mostly in the form of privatising Group Ranch land in Kenya has had profound impacts on livelihood options. The families in Kenya are at different stages in the transition towards private land ownership. In Lemek in the Mara, and Namelok in Amboseli, the process has resulted in a lot of private ownership and control of land, and diminishing communal influence on land access. The northern part of Olgulului in Amboseli has not yet been subdivided, and communal decision-making on resource use and access is still strong. Similarly, in Tanzania, access to land and designation of pastoral areas is still negotiated communally.

All families are concerned about the future. Those that are on private land are concerned about how they will be able to expand land ownership in the future and the effects on livestock mobility of selling land to immigrants. The families still on Group Ranch land in Kenya are keen for subdivision to happen. The families on Olgulului Group Ranch are witnessing in-migration to their group ranches and much land grabbing in other areas. They are therefore concerned that if subdivision is delayed their land allocation will decrease and they might end up with nothing. With such uncertainty about the future, families want to gain title to as much land as possible. Political connection seemed to play a large role in access to good quality land.

None of the families have had the political connections which have enabled them to access hugely disproportionate resources. They are all concerned that politically powerful people, sometimes outsiders, will grab high potential agricultural land or land in wildlife areas in order to get income from tourism. Those who have connections on group ranch committees say that they are better informed and know how to get the maximum number of family members registered. Sairiamu whose brother was on the GR committee at the time received 5 acres of prime land in the Namelok swamp. He maintains that other members of the group ranch have the same entitlements but it may take them longer to access information. Those who had bad relations with members of the committee felt they were either disadvantaged or actively discriminated against. Kariankei felt he was actively discriminated against because of poor relations with the GR committee and received land in inaccessible and uninhabitable hills. Katatei, who is poor and not well connected, was

allocated land outside the fertile swampland in Namelok where they had previously been farming. He has since given up farming and depends on remittances from his sons.

The Kenyan experience has not gone unnoticed in Tanzania. In Meliyo's family they felt that as there was not enough land, it was better to share what was available on a communal basis. Both Meliyo and Kipara have witnessed the massive inequalities in Kenya, and do not want to see them exported to Tanzania. Meliyo also recognised that sharing land under a communal system ensures a flexibility to exploit pastures over a wider area. The problem in Tanzania, especially for Kipara who lives in an area of expanding agriculture, is the encroachment of agricultural land on pastoral areas, which creates conflicts and restricts livestock mobility.

Conclusion – uncertainty means people want subdivision to take place, but experience of families shows how people with connections benefit and those without don't. Those who have experienced subdivision see outsiders buying best land, and increased costs of livestock mobility.

4.2.4. Institutions

The key institutions mentioned by the families were the market, primary school, health centres, the government in general and the church.

Markets: The markets are key for accessing information on livestock prices, veterinary drugs, livestock diseases and other issues such as HIV/AIDS. Families sell and buy livestock, agricultural produce (Kipara), and buy foodstuffs. Communities often organise transport to and from local and major markets. Markets also create contact with outsiders who bring in new ideas and change along with the products they sell. Families have also pointed out the negative sides to markets as they create more demand for cash (to buy goods) and on market days the cattle are often left unattended by the Moran (Meliyo)

Primary Schools: Families have started to see the benefits of education as some of their children access paid employment (Kariankei, Saragi, Katatei). Schooling is increasingly valued as an investment in the future. Primary schools vary – there are day schools and boarding schools. Families with children at days schools are concerned that if they have to move with children, either they have to be taken out of school or find lodgings nearby. Sairiamu sends one child to private boarding school whereas Meliyo uses the Tanzanian government funded boarding school for his child.

Health facilities: Health facilities are provided by Church related organisations and the government. Some smaller facilities located closer to the communities are provided by the church (Saragi, Sairiamu, Kariankei) and others by the government.

The Government: When families were assessing institutions they found that what they termed 'government' was difficult to rank. In theory the government is an important actor in local development but families felt it was not fulfilling its role. Kariankei's family were disappointed that the government had abandoned projects in the area (health, education, public works), Katatei's family have not visited the administration office since it moved from Namelok to Mbirikani, similarly Saragi's family note that the assistant chief who is supposed to live in Inkiito community is in Mbirikani and the chief is further away in

Endonet. In Tanzania the family of Meliyo credited the government with providing education for all, but were critical of policies that enforced sedentarisation of pastoralists.

The Church: The Church has provided valuable social services such as schools and health centres (Saragi, Sairiamu, Wuantai), a forum for information (Kipara) and acted as a catalyst for cultural change (Katatei, Kipara). Interaction with the church has had a huge impact on Katatei, and Kipara's families. In Kipara's family his wives became Christians and persuaded him to convert. One of their sons teaches at the church nursery and attends bible school. Kipara's family feels the church brings new ideas and people to the area which leads to development. Again in Katatei's family it is his wife and son who promote Christianity in the family. His wife is keen on new ideas coming from the church changing some cultural practices that she thinks will lead to more people getting jobs. Katatei himself rarely attends church and, if he does, he goes to a Catholic church where he says, 'things are done soberly'. He is uneasy that the church consumes a lot of the time required for livestock. He says that 'a combination of school, church and jobs have been disastrous for cattle'.

4.2.5 Human Capital – Education

Attitudes towards education and how many children they send to school are changing in Maasai households. None of the household heads have had any formal education nor are they literate. Daughters from some families have been to primary school for a few years (Kipara, Katatei and Meliyo)², but schooling for girls has not yet become a priority for most of these families, as in the future they will move to live with their husbands. All families have started to invest much more heavily in formal education for some of their sons, and all families have at least one child at school.

For a Maasai household, education is not automatically a positive driver of change, it is a long term and very risky investment. The potential returns will not be evident for many years if they materialise at all. Many educated people do not find secure employment. In the case of girls, they will marry into another family which will benefit. Parents are unsure about what level of education is necessary for their children to find paid employment. In addition to the outlays for schooling (books, uniforms etc.) there are much greater opportunity costs in educating a child. The family will lose labour for herding, and reciprocal labour sharing between neighbours could weaken if they do not contribute to a common pool of labour. Family heads are also concerned that it may lead to fragmentation as traditional values are eroded (Saragi). These are all real risks to the survival of a family, 'we are here because of the animals, we have friends because of the animals, when we have no food to offer we will have no friends. *'Meenya ilkimojik oorook esikar'* meaning empty hands cannot be pleasurable. In this context, sacrificing all of this for education does not make economic or social sense. Families need food, milk and bride wealth – the elders ask when will education provide this? The economic cost of schooling is well illustrated by Katatei's family – Joseph had to drop out of school after class 6 because the family could not afford to support him. He left to seek work, and after 3 years, in 2001, he got a relatively stable job as a nightwatchman.

Frederick (Kariankei's son's) experience also backs this up. He has been supported by a German man whom he met at a Maasai Safari lodge and through the Koiyki Lemek

² Interesting that Meliyo and Katatei are two of the poorest families in the group

Wildlife Trust. He is now at university. Despite having the costs of his education paid for, the loss of his labour and uncertainty about his future were of huge concern to his father.

Despite these concerns, it appears that, with more diverse livelihoods, increases in the cash economy and interaction with other groups and institutions, families are benefiting from the education of their children. Elders note how often they use their literate sons to help them read and write, and to communicate with outsiders in languages other than Maa (Saragi, Sairiamu). These older sons, who received some education, are pushing for their younger brothers and sisters to be sent to school. It also seems that the church, support from the government in the form of boarding schools (Meliyo) and other related development initiatives are important external agents promoting education in Maasailand. (Kipara, Kariankei, Saragi, Katatei).

4.2.6 Changing Pastoral systems

For 6 of the 9 families keeping livestock is still the main source of their livelihood. This means that changes to the pastoral system have had a profound impact on families.

Decreasing herd mobility: There appear to be two trends that are constraining mobility of livestock and resulting in an increasingly sedentarised pastoral system. First, it appears that sedentary lifestyles are self-perpetuating as the actual and opportunity costs of uprooting the family rise; and second, free movement across the landscape is increasingly constrained.

Increasing sedentarisation means that the costs of moving the family increase: they need to either take children out of school or provided for them; if part of the family is not moving with the herd they have to cover their daily needs while the animals are away; and permanent settlements and assets need to be looked after. The women in the Kipara family commented, 'Moving with the animals was hard work as we had to set up home in many places, but at least it kept the family together. Now the animals leave but the women and children stay behind to look after the fields. This is good as it provides food but when the livestock are not here the family feels divided'.

As the quote shows, mobility and labour are intertwined, if you do not have sufficient labour in the family it is very hard to move livestock, and in drought times families are especially loathe to pay herders to take their animals. When conditions get very severe they will have less incentive to save the herd. In all the families labour available for keeping livestock is decreasing as children go to school and young men migrate to seek work elsewhere. Although most of the Mzee have kept some children out of school to look after the cattle, is this enough to maintain the mobility of the herd?

In addition mobility is also becoming increasingly restricted. On subdivided land, herders need to negotiate with the land owners of all the land they are using. In the Mara, cultivation is expanding on private land and farmers do not welcome animals. The experience of Kariankei's family illustrates this very well. They live in a valley between two hills, one to the north and another to the south. Before subdivision, they were able to move their cattle freely in both grazing areas. Since subdivision many people have moved into the valley to farm. Kariankei has to use a small corridor to leave the valley, and graze animals on the low quality southern Oklinyei hills where they were allocated land. They have neither the money nor the connections to access better quality pastures in the

Northern Ole Gilishew hills. As he only has a small herd now he has managed to acquire 13 acres of land near his boma and grazes his cattle there.

In contrast, further south on the edge of the Massai Mara game reserve Kasoe, is relatively optimistic about livestock movements. Koyiaki group ranch is not yet subdivided but Kasoe expects to receive 150 acres, and because he has a network of friends and family in the area he expects to continue to access other areas of the group ranch. What concerns him is the tendency of people to sell land, thus allowing in-migration. Migrants are less likely to allow free access to their land. Kasoe's livestock movements are also being restricted by increased fines in the Massai Mara game reserve, now charging 10,000 Kshs if caught grazing in the reserve.

Both families are concerned about similar issues, but Kasoe's relative optimism and Kariankei's difficulties appear to be related to their wealth, and the existence of a network of social relations and extended family in the area. Kariankei moved with his mother away from the extended family after the death of his father. As a result they do not have so many social relations in the area. In addition his ill health has meant that most of the herd was sold to pay for medical treatment.

In the Group Ranch of Olugului in Amboseli land subdivision has only taken place around the agricultural land of the Namelok swamps. Both the families that live in Ingitto to the North of the National Park, graze animals in the area, until the dry season when they go to Inkaron which is a grazing area reserved by the neighbourhood for the dry season. Saragi recalls an attempt by the Kaputiei Group Ranch to the west of Olugului to cut off access to grazing areas, however the dispute was solved amicably and livestock mobility was maintained. What will happen here if land became subdivided?

The pattern between Amboseli and the Maasai Mara is similar for drought refuge areas. In Olugului North of Amboseli routes have not changed significantly, pastoralists still either go north to Embirikani, or across the park to the slopes of Kilimanjaro. Key changes are that they are no longer allowed to use the park legally, and ECF is so rampant in Endonet at the foothills of Mt Kilimanjaro on the Kenyan side that they have abandoned it. In the Mara families used to move to Longoria in very dry times. Longoria is now being subdivided and is subject to ethnic conflict and is therefore no longer used as a dry season grazing area. Similarly Katatei feels that the subdivision of Namelok swamps (East of Amboseli) has cut off many key cattle routes, made it harder to access forest resources, as land is being cleared for agriculture

In Longido even without the privatisation of land, mobility of livestock has reduced. This is because increasing amounts of land are being given over to agriculture. Again, families are more sedentarised; they send children to school and engage in other livelihood activities such as farming and local business.

Efforts to improve production: The families illustrate a range of views and approaches to improving their stock. Only one family, Saragi, has got improved cattle and goats in their herd and think that the benefits in fast growth and increased milk production outweigh their reduced mobility especially in drought conditions. Sairiamu and Kipara have both started to try to improve their stock but have not yet been able to assess the results, although Sairiamu already recognises that he may have to invest more in veterinary drugs. Other families were either sceptical about the ability of improved livestock to resist

diseases or did not have the opportunities to access improved breeds in their area. It would be interesting to discuss with the families whether general sedentarisation has led to the introduction of improved, but less mobile, breeds. Does reduced mobility in general, lead to using livestock that are less mobile, and does this mean increased risk in the event of a drought?

Livestock diseases: Families have to treat a range of livestock diseases. None have regular contact with extension officers or vets outside the markets which seem to be the main source of information. Others comment that illiteracy means they are unable to read the instructions for drug dosage. This is especially problematic for new drugs which they have never used before.

Livestock disease, both outbreaks and high prevalence rates, have also been a major factor in families movements and histories. Families who have seen their entire herds wiped out through disease perceive livestock to be far more vulnerable than agriculture as a means of production. Both Saragi and Sairiamu commented that they had stayed in Ingitto because of the relative low rates of disease.

Conclusion: seem to be many factors driving reduced mobility of pastoralism in Maasailand. Education, diversification, privatisation of land, separation of families and reduced social networks (or inability of social networks to expand to cover the number of different land owners).

4.2.7 Diversification of livelihoods

Of the nine families, six still rank pastoralism as the most important of their livelihood activities. Two, both in Tanzania, feel they depend more on agriculture. Six families have at least two other livelihood options, one of which is some sort of cash income (off farm income or remittances). Meliyo is the exception as his family depends entirely on his small herd and limited livestock trading, he is also one of the poorest families ranked **poor** in a community wealth ranking exercise. Diversification of livelihoods includes: renting out property, renting out farmland, working as night watchmen in Mombasa, working with tourists in Mombasa, livestock trading, and running small businesses from the bomas (women).

All the portraits show families diversifying out of various positions of poverty, in a context of lack of information, and government co-ordination. As discussed above, shocks such as the 1984 drought and severe health problems of the household head forced Katatei Kariankei, and Meliyo's families to diversify. Other families diversified as their herds were no longer sufficient to provide for the families needs (Saragi, Kasoe, Kariankei, Sairiamu). Families perceived that pastoralism was vulnerable, and their cash needs for children's education, medicines, clothes, and veterinary drugs had increased. Diversification was a strategy to meet those needs without selling too many cattle. This difference between the families is illustrated by the experiences of Sairiamu and Katatei above. Sairiamu, at least, is able to try out different crops and farm set-ups finally opting to lease out his land and returned to concentrate on what he knew best, livestock. Katatei, was forced into farming for survival when he lost all his livestock. In 2000, when land was subdivided, they were forced out of agriculture. Katatei now depends on remittances from his son Kikanee in Mombasa, and contributions from Joseph.

Table 2 and figure 4 below show one families analysis of diversification of livelihoods. The graph shows very clearly how activities have diversified over time, and also the difference in perspectives between the older and younger generations.

Table 2: Ranking of livelihood activities by a poor family in the Mara

Rank	Source of Livelihood	Reasons
1	Livestock	<ul style="list-style-type: none"> - Source of food - Income - Cultural Values - Buying land
2	Isaka's Salary from Olosirua Wildlife Association	<ul style="list-style-type: none"> - Regular - Cash - Purchase food and veterinary drugs - Buying Wuantai's medicine - Shared by whole family
3	Dividends from Oliopa Wildlife association (Simiren's land at conservation area)	<ul style="list-style-type: none"> - Lump some - Buying livestock - Received quarterly

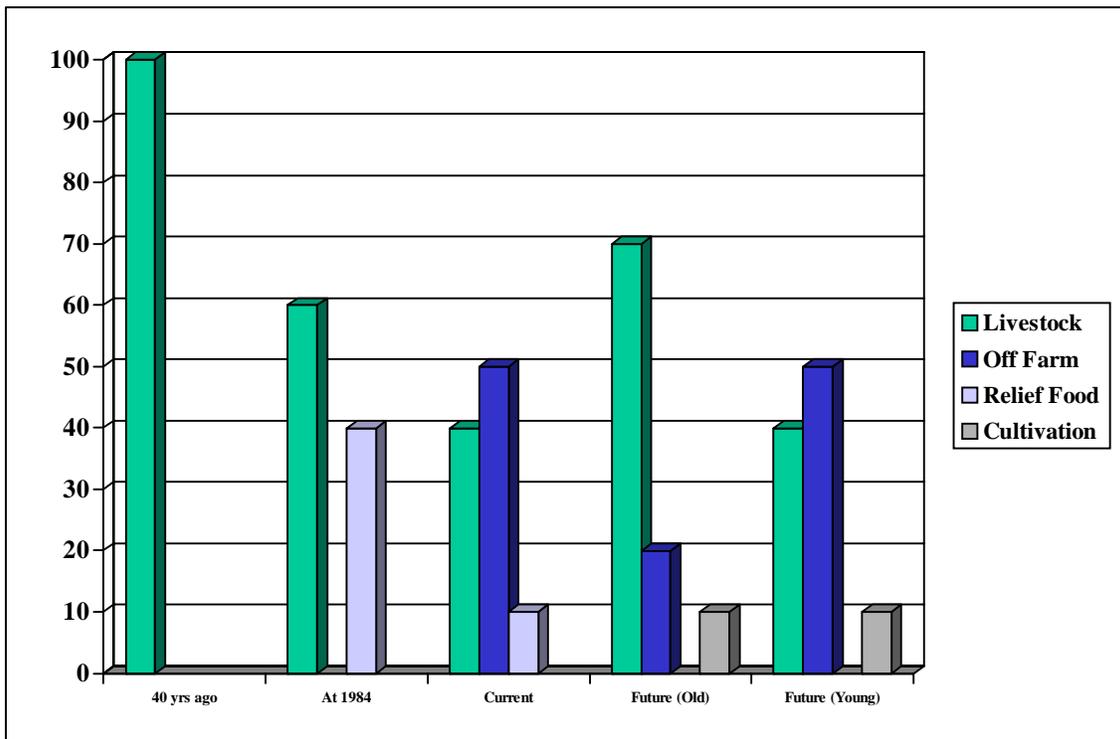


Figure 5: Graph showing changes in livelihood activities

Wildlife tourism revenue: Although families say that proximity to wildlife has negative impacts, its link to tourism benefits the families directly and indirectly. In Amboseli, revenue is shared through the group ranch, Katatei saying that it is invested in schools and health facilities, although both Saragi and Sairiamu felt they had missed out as benefits went to children at secondary school which they feel is unfair. Similarly, revenue from wildlife in Tanzania (often from hunting permits) comes back to community level, and is invested in community projects. Direct benefits from proximity to wildlife/tourism include:

- Selling artefacts in cultural bomas (wife's of Katatei and Kasoe) which cover some food and education costs but is highly seasonal;
- Revenue from membership of wildlife associations (Simiren, Kariankei's son). However this revenue is precarious as wildlife associations are often mismanaged. Simiren wants to try to join another association, and Kasoe who was receiving income from 2 campsites has received nothing since 2003 because of controversy over land ownership.
- Employment as park ranger (Kariankei's son)

Wage labour: Although none of the household heads are in wage labour many of the grown up sons or brothers' work as night watchmen, in the tourist industry, or in the parks (Saragi, Sairiamu, Katatei, Kariankei). Often their wives live with the family (Saragi, Sairiamu, Katatei) and their income contributes to the family or is invested in livestock, one son told us he puts a proportion of income into a bank account. People commented that work in the tourist industry is seasonal, and they have noticed the downturn in recent years. Other jobs are also difficult to find and insecure.

Women have also embraced opportunities to diversify – working in cultural bomas and setting up small businesses selling sugar and tea from the homestead, and/or selling firewood from the homestead.

Farming: Two families are farming at present. Kipara, inherited agricultural land in Tanzania and has since expanded it, and Saitoti ole Nina's family own 15 acres of agricultural land which they inherited from their late father. However Saitoti's family are cultivating 15 acres of land. Both Sairiamu and Katatei used to farm, but Sairiamu now leases out the land and Katatei who started after he lost his herd in the 1984 drought stopped in 2000 when the land he was allocated was too far from a water source. When Sairiamu started farming he produced cash crops for sale in the markets. On finding this too complex and time consuming he turned to subsistence farming, again his family neither had the skills or resources to farm successfully so he now leases out the land for an annual payment. What is common about all experiences of diversification is that families are trying different things at different times, they are exploiting available opportunities in order to cover costs in an increasingly monetarised society, and in most cases to invest any surplus in the herd.

Could you say that land subdivision has increased livelihood options? In theory it gives people security, perhaps the chance to farm, or to benefit from wildlife association revenue, and in theory to raise capital against land titles. However, again this depends on the land they acquire and the poor and less connected families have not been able acquire productive land for agriculture or land in wildlife areas. Thus those that may have the greatest need to diversify to secure their livelihoods are unable to do so.

Box 1: Two families' experience of diversification***Kirisia***

The family of Kirisia is pastoralist, depending mostly on livestock keeping for their living. This is due to a mixture of environmental, social and cultural reasons. The low rainfall in the area and lack of access to water means that cultivation is not possible. Most people in Inkiito are pastoralists as the area is conducive for livestock keeping. Many decisions about access to pastoral resources are made in consultation with the neighbourhood. Kirisia inherited a pastoralist way of life from his parents. He considers it to be an integral part of being in the Maasai community, where the size of your herd symbolises your status.

In addition to keeping livestock Kirisia's family leases out a plot of land near Namelok, and receives periodic remittances from his brothers Lemukeku and Kisham working in Malindi. The motivation to diversify came from a sense that pastoralism is increasingly vulnerable to droughts and changes in climate and land access. They also realise that as the family grows and more children go to school they will need more cash to cover fees especially for the more expensive boarding school that his son Lekatoo attends in Namelok. By diversifying, the family feels it can better survive the dry seasons and droughts, and are in a reasonably strong position to respond to changes in the access to natural resources in the future.

Moinan

The family has 7 cattle, 15 shoats, a plot for rain-fed cultivation and some off-farm income from their sons and relatives who are working elsewhere.

Kikanae (who works in Mombasa) and Olouma who works as a Games Scout with the Kenya Wildlife Service-Amboseli remit part of their incomes. Olouma is Moinan's brother-in-law. Olouma's first wife, Kiseyia, lives in Moinan's home. Kikanae started working in September 2001. He comes home about four times a year, and brings foodstuffs or money to buy clothing or livestock. Joseph Kesire, Moinan's second son, occasionally helps in some small things. His job as a watchman in Ong'ata Ronkai near Nairobi hardly generates enough for the rest of the family.

The family used to farm in the Namelok swamps, but on subdivision they were allocated land away from the water, and have not been able to cultivate.

4.2.8 Changing roles, changing values

The strict division of roles is changing in these Maasai households. Although when asked, all the household heads said they were the main decision maker of the family, other family members have influence which is not solely based on their age. Education helps people to break out of their traditional roles. Literacy and ability to speak different languages gives people knowledge, and knowledge is often translated into influence. Also as families livelihoods diversify, those who contribute economically have a larger stake in decision making. For example, Kariankei and Saragi consult with their sons who are in education and employment. Ngitto, Saragi's eldest son is influential in decision making about

diversification of livelihoods, education, and improved breeds. It seemed that the Mzee concentrates on the livestock whereas his sons seek income from other sources. They were instrumental in the decision to diversify. In younger families the Mzee still makes decisions alone (Sairiamu, Meliyo and Kipara).

Women's roles have also changed, often as a result of shocks to the household, and extreme poverty. In three families women have left to sell handicrafts in cultural bomas or set up business to earn income (Kipara, Katatei, Kasoe). Their contribution to the household gives them a stake in decisions. Katatei's first wife, Anna was instrumental in accessing land from her family to cultivate when they lost their herd. She is now very central to decision making within the family. In a third family, a wife has left to sell artefacts at the local cultural boma, but is also close to the school and so during school terms, children stay with her.

These changes are also reflected in the extent to which families see themselves as traditional or modern. Traditional features cited by all families include: dress code, kraal structure, and general division of labour. However as we have seen above, the division of labour is changing and they are increasingly involved in the cash economy. School children often wear western type clothes, and diets now include maize, potatoes and other vegetables. The families of Kipara and Katatei (although not Katatei himself) have embraced Christianity which has changed some traditional practices such as religious ceremonies and other rites of passage. Kipara stated that he no longer used traditional healers. Some elders are concerned that these changes will erode cultural identity and family cohesion, thus placing a lot of value on maintaining cultural practices (Kasoe, Saragi).

What is driving these changes? Education resulting in changing values and access to information, which can result in diversification of livelihoods from a position of relative strength, or increased influence on the basis of acquired skills. At the other end of the scale we see shocks, and extreme poverty and vulnerability forcing people to break out of their traditional roles in order to survive and in-migration and contact with other traditions.

4.2.9. Where are the families going?

Three families expressed fears about access to pastoral resources in the future, especially in the event of a drought. These fears are based on observations of more in-migrants and reduced mobility especially in the Mara. Kariankei fears that a prolonged drought could result in massive livestock death. Kasoe expects his herd to decline as he sells them to feed his growing family, educate his sons and mainly because there will be less pastures and less mobility to support his herd.

Some families are very settled where they are, saying they would only move if a massive drought hit. Others feel less secure, with impending subdivision in their area, they do not know where they will be allocated land and if they will have to move to be close to that land. One family in the Mara is considering moving to be close to the poor quality land they were allocated, as they are not able to buy more land where their boma is, where livestock movement is becoming increasingly restricted. The other, wealthier, family in the Mara is looking forward to accessing land when their GR is subdivided. They plan to settle closer to the rest of their family, and construct more permanent (Mabati) houses.

Despite fears about the future of pastoralism, most families still think that investing in livestock and especially cattle is the best option. One son of a household head has a bank account and one household head is considering opening an account. A family in Tanzania has invested some cattle wealth in a house in the nearby market centre for renting out, and another in Kenya plans to do so.

Another common aspiration is that their investment in the education of their children will result in employment. Younger members of the families reflect this in thinking that in the future income from employment will make up a larger proportion of their livelihoods. Whether this will remain so, when they take on responsibility for the family's herd is not clear.

Farming is seen as future by Kipara, he wants to invest more in improved crop varieties. Others are more circumspect, saying they will only invest in farming if they have spare resources (human and capital).

5. FUTURE PROJECT ACTIONS

ILRI aims to continue this work in 2005 by holding a series of consultations in the communities that each family comes from. These meetings will seek to assess the extent to which the family is representative of the wider community, and take forward discussion and reflection on the key issues the families identified. ILRI are currently seeking funds for this phase.

The families involved in the first phase feel empowered by *their* analysis of *their* livelihoods. The communities also have a stake in this, as they were central to the process of choosing the families. Thus ILRI has an obligation to help facilitate feedback to the communities. In addition, ILRI aims to disseminate the families' analyses of change in the form of a booklet and video called *Voices from Maasailand*. This will help to inform the public and decision makers of the realities Maasai face.

Outputs proposed for Family Portraits II.

- 1) An understanding of the extent to which the challenges, problems, and opportunities that 9 families face, and the strategies that they use to overcome/exploit these, is representative of the wider community. This will increase the impact of the family portraits.
- 2) Communities learn from and build upon the work done at family level. They will also be able to add to the analysis of the drivers of change in Maasailand and, with the support of local partners, develop action plans to tackle challenges and exploit opportunities.
- 3) Anonymous family portraits (when permission is granted from the families) are available to RECONCILE/IIED Pastoral Programme for their training modules on Pastoralism in East Africa. This will strengthen these modules by providing real in depth, appropriate case studies about what is happening in Maasailand.
- 4) 'Voices from Maasailand', a booklet and accompanying video, in which the Maasai from five different areas speak for themselves, and tell their stories about change. This is disseminated widely in Maa and Kiswahili to development agencies, partners, schools,

libraries and government. The sites would include Amboseli, Maasai Mara, Longido, Simanjiro, and Kitingela.

ANNEX 1: Activities Planned and Implemented

Dates	Activities planned	Notes on implementation
June to July:	Training workshop, recruitment of female facilitators, 2 portraits in Amboseli as training exercise	Implemented as planned
July to October:	Five other portraits completed in the Maasai Mara (2), Longido (2) and Amboseli (1)	Implemented as planned
	Portraits written up and translated into Maa	Implemented as planned
October	Review meeting and first analysis of portraits. Planning family feedback methodology	Implemented as planned
October to December	2 Family portraits (Longido, 1, Simanjiro, 1)	Implemented but follow-up and feedback to complete
	Family Feedbacks in 7 families	Implemented as planned
December to January	Writing up thematic analysis for DFID	
	Write up of methodology	The methodology was presented to other ILRI staff and to other partners in January 2005. The write up has not yet been done due to lack of time/resources. Planned for 2005

Note: Activities under the goal section of the logical framework depend on the Belgian Funded Project 'Better Management of Pastoral Lands', which will be using the family portraits in its outputs. In January during a meeting of this Project, ways to integrate the portrait narratives with survey work were discussed and agreed. Therefore it is highly likely that this goal will be achieved.

ANNEX 2. LOGICAL FRAMEWORK
Family Fortunes: Changing Livelihoods in Maasailand

Project Summary	Measurable Indicators	Means of Verification	Important Assumption
<p>Goal – to contribute an in- depth understanding of changing livelihoods in Maasailand, within Maasai communities and broader development debates.</p>	<p>Whether portrait narratives are inserted into ILRI publications on pastoral livelihoods.</p> <p>Whether family portraits are used as a tool to enhance policy discussions</p> <p>Increased awareness of the drivers of change amongst certain Maasai families</p>	<p>Belgian funded ‘Better policy and management options on pastoral lands’ project documents.</p> <p>ILRI initiated and other policy discussions</p> <p>Methodology document including interviews with families involved</p>	<p>Belgian funded project achieves its objectives</p> <p>Policy fora exist</p>
<p>Purpose – to identify the direction and drivers of change in Maasai livelihoods and analyse in depth those factors and institutions that the Maasai consider help or hinder their survival</p>	<p>Portraits include the families analysis of what is driving change and the factors and institutions that help or hinder this.</p> <p>These 9 analyses are reworked to indicate changes across Maasailand</p>	<p>Nine family portraits completed and written up</p> <p>Thematic document on the drivers of change in Maasailand</p>	<p>That families are going to value and accept the family portraits.</p> <p>That there analysis of change will have sufficient depth and richness.</p>

Outputs 1) To develop with 9 families a family portrait through a process which they own and lead.	Participatory process of building portraits with families, and feeding back to the families the results. Responses from the family in feedback session	9 families own a 'family story', in Maa language with accompanying photos of their choice. Methodology document	
2) To adapt and refine the family portrait tool within the East African pastoral context	Views of community facilitators, views of community on how appropriate and useful the methodology is and why	Document on how methodology was adapted and its strengths and weaknesses.	
3) To produce and disseminate a thematic analysis of the stories the families told about change	Produce a document which analyses change thematically	Document disseminated to DFID, NGOs, CBO, KWS and relevant government departments	That the analysis of the families is rich
Activities Initial training workshop on the family portrait methodology			
Identification of families and planning			
Preparation, write up and feedback of each portrait			
Thematic analysis, analysis of methodology			

Annex 3: Family portraits

	Family composition	Sources of livelihoods	Natural resources	Difficulties in accessing resources	Drivers of change	Future plans
Wuantai Ole Kariankei's	1 wife and 3 children	Livestock , income from game reserves and dividends from Oliopa Wildlife association as land at conservation	Land on a hill with no water	Allocated land is away from any infra structure	Education, health status, employment , family size and market	Move and make a boma across the river in order to access socio –economic infrastructure and expand cultivation
Kanyinke Ole kasoe	5 wives and 15 children	Livestock, remittances from sale of artecraft, proceeds from camps and livestock trading	Woodland with adequate pasture	Depletion of pasture due to wildebeest immigration, vegetation destroyed by elephants and distance to the salt lick	Tourism and land subdivision	To move the boma to new location due to security of tenure, and for access of water and pasture
Saragi Ole Noomeek's	5 wives and 31 children	Livestock and income from tourism and remittances	Rain, swamp, water and access to land to move herd , grazing area and access to salt licks	Lack of access to group ranch and conflicts with wildlife predation	Increasing population, education, off-farm activities, group ranch committee and settlements	Sending kids to school, to be more diversified and engaging in other economic activities that brings income
Sairiamu Olole Parsae's	2 wives and 10 children	Livestock, remittances and income from leasing an agricultural land	Water points, fire wood, pastures and rivers	Livestock predation by wild animals in the group ranch and wild;life are treats to human life	Drought, education, external contacts, economic Impacts of Amboseli national park and competition of pastoral resources	Selling livestock to overcome the drought conditions and deposit the proceeds in the bank, buy land for building ,develop shallow wells and paddocks, upgrading livestock through cross breeding and education
Katatei Ole Ntirra	2 wives and 11 children	Livestock ,agriculture and remittances	Forest, water pump and land	Land allocated to someone else through poletical connection, land subdivision, human	Poverty, cash economy,change in lifestyle, group ranch committee	Hopes to own more cattle and big family in future and sons getting better jobs

				wildlife conflict and increasing deforestation and population	and church	
Kipara Lesidai's	3 wives and 20 children	Cultivation and livestock keeping	Well and spring water, public pasture lands and natural forest	Long distance to the water well, privatization of group ranch, predation from wildlife and land subdivision	Agricultural expansion, education ,church, rental house and the market	Farming, increasing livestock numbers, planting drought resistant and short duration crops,education,expand town house to rental and business purposes ,harvesting rain water and adopting improved breeds
Meliyo Maanja	1 wife , 5 children and his mother	Livestock for source of food (milk and meat) and cattle trading	Private well	Land is owned communally and elephants destroy trees	Draught, education and market	Education, increasing the size of herd, expand in cattle trading, cultivation and building a permanent house for rent
Saitoti Ole Nina	2 wives ,14 children, his mother, sister and sister in-law	Farming and firewood sales	Water point and grazing areas	The family is not aware of any benefits from the wildlife management projects		Increase in cultivation in order to sale the crops and kids education
Mohono Ole Sarika	5 wives and 29 children	Cultivation ,livestock keeping and gemstone business	Bimodal rainfall and water dams	Wildlife-livestock interaction, outbreaks of livestock diseases due to wildlife and increase in human population that affects natural resources	Drought, livestock diseases and gemstone business for income	Education , increasing land under cultivation to get more food, and acquire more livestock

CONFIDENTIAL

WUANTAI OLE KARIANKEI'S FAMILY PORTRAIT

1.0 The Family



Introduction

Wuantai Ole Kariankei from the *Ilmakesen* clan was born in 1932 in Melelo, Ololulung'a division, Narok district. He is a Maasai pastoralist with no formal education. He belongs to the left hand circumcision section *Irkaamaniki* of *Ilnyankusi* age group. Wuantai is the only child of Pianto Gilisho, the daughter of the legendary Maasai leader (*Olaiguanani*) ole Gilisho and Nking'iis Ole Kariankei of *iltalala* age group. Currently he lives with his family at Osero lorkumum area of the former Lemek group ranch north of the Maasai Mara and 250 km south of Nairobi.

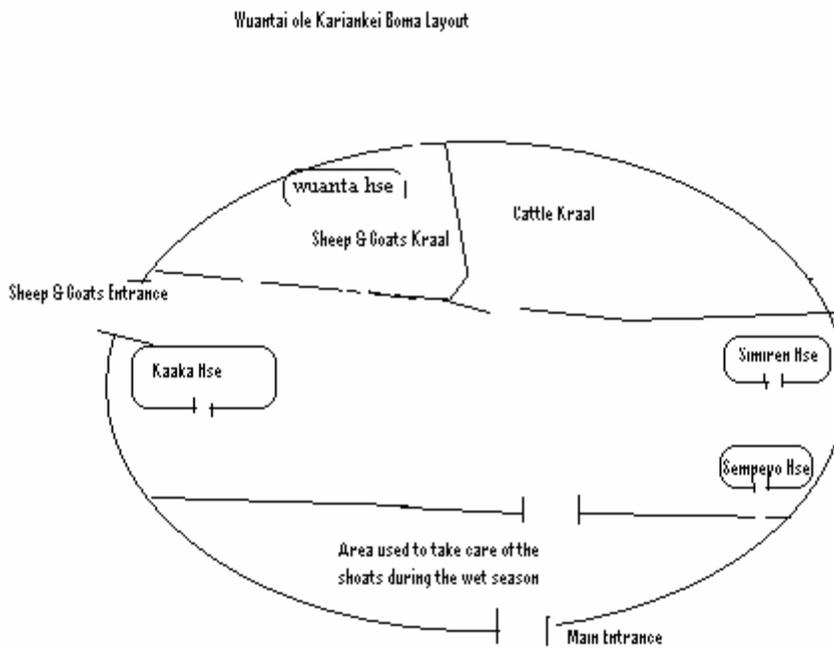
Unlike most of his age mates, and contrary to the Maasai custom of polygamy, Ole Kariankei is married to only one wife, Sempeyo Koriata aged 59; Ole Kariankei could not raise a big family because he has been poor and sickly for most of his adult life. He is a father of two sons Isaka Morosua aged 33 and Fredrick Simiren aged 31 and one daughter Namerai aged 40 years, ole Kariankei's family is relatively small compared to his age mates families. He lives with two of his elder son's wives, Kaaka (Reson) and Kisinyunye who both have three children, two sons and one daughter. His grandchildren from his daughter Namerai who is married at Nkorrkori 17 km away occasionally visit and live with the family, this is normally done to ease her burden of child rearing whenever she gives birth. In addition to the family members, Kaaka's sister Kosenja lives with the family, helping her sister to look after the children. Senchura and Malipe, Namerai's children also live with family and Maripet ole Lepore is the family herder.

It is only Namerai a mother of seven who has left the family to live at her matrimonial home at Nkorrkori. The other two sons still live with their parents occasionally leaving home to work or study. Isaka is working as a game scout at Olosiriua wildlife Conservation Association, one of the five associations that came up after the split of a larger Koiyaki Lemek Wildlife Trust. The family's last-born Fredrick Simiren is a second year student at Daystar University undertaking a degree in communication and community development.

Wuantai's family lives in a traditional Maasai home Enkang' (Kraal) or Boma in Kiswahili except for a small Mabati roofed house constructed by his educated son. The Enkang' is a circular enclosure built with thorny bushes to create a space for keeping livestock and enclosing huts. The cattle, goats and sheep are kept separately within the Enkang' at night. Huts are built inside the Enkang' along the fence and the livestock are kept in another enclosure at the centre of the Kraal. The huts are dome-shaped simple structures built using sticks and plastered with cow-dung mixed with soil and sometimes ashes to make them leakage-free during the rain season. Ole Kariankei's boma (40m in diameter) has three huts and a Mabati house.

Sempeyo and Kisinyunye share one house and Kaaka lives on the second house while Wuantai lives on a smaller house that also serves as oripie (for night watching).

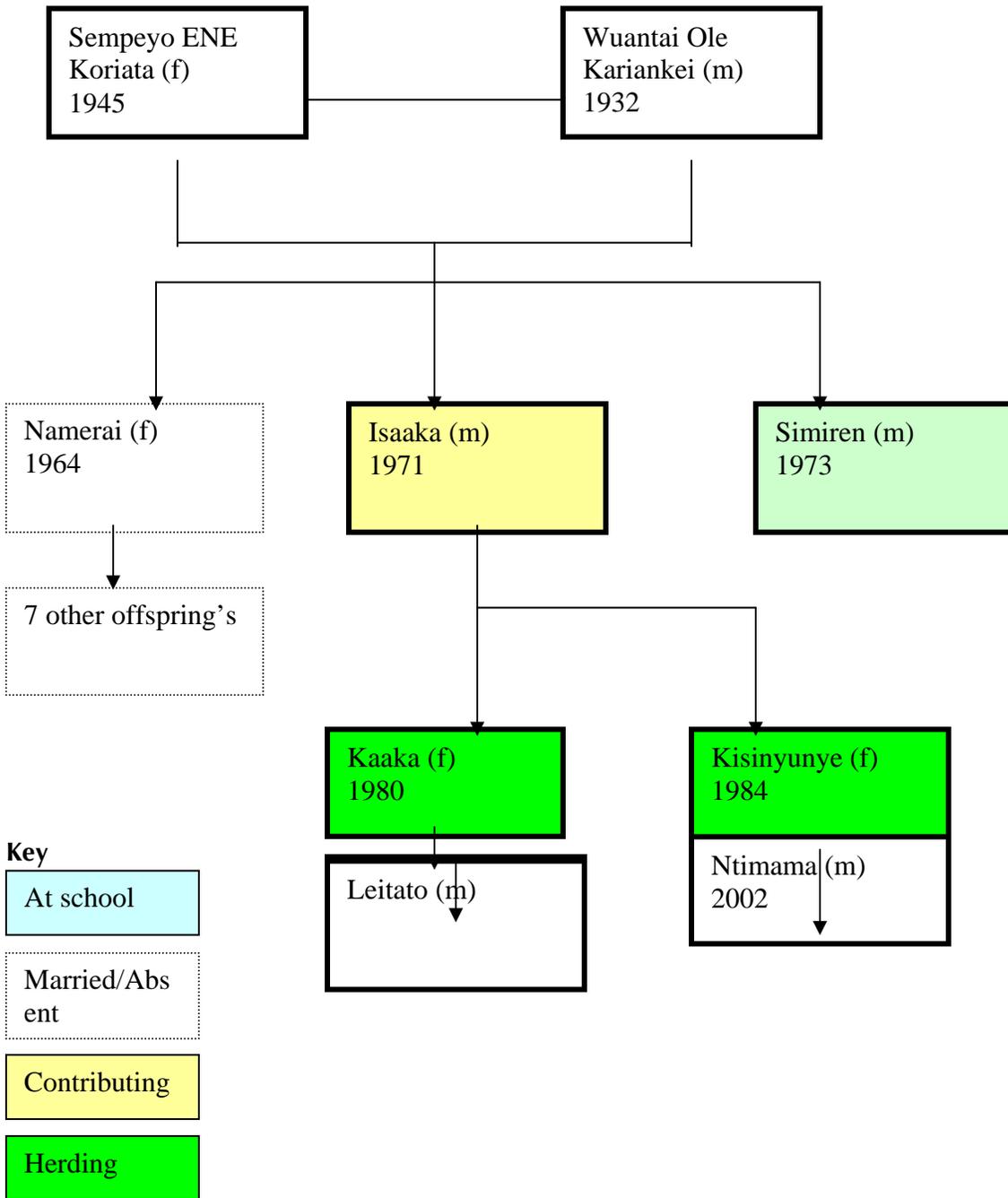
Figure 1.2: Boma layout



1.1. Family Composition

In figure 2 and the section below, we present Wuantai’s family tree indicating members’ relations, occupation, and location of domicile.

Figure1.1: Wuantai’s Family Tree



As illustrated in the diagram above, Sempeyo Koriata is the only wife of Wuantai ole Kariankei. Sempeyo was born in 1945 and is a mother of two sons and one daughter. Sempeyo is not educated and works as a housewife. She only moved out of the boma for a short period when she worked at the Lemek Catholic Mission as a cleaner in the Sister's Convent. Her first-born Namerai was born in 1964 and like her mother is not educated and she is a mother of seven children. Namerai lives with her family at Nkorrkori 17 kilometres away.

Isaka, named after Isaac, an employee of the water department who worked with Wuantai at the water department in Lolgorian in the early 1970's is the elder son of Sempeyo. He was born in 1971 and is not educated since his father felt that he needs to have a son to help him in managing the family's herd and later take care of the parents at old age. Isaka, unlike his father is married to two wives, Kaaka (Reson) and Kisinyunye. Kaaka born in 1981 is the first wife. She has two children Leitato born 2001 and Nyamalo born in 2004. Kaaka is a housewife, but she also contributes in herding the family livestock. Like her husband she is not educated. She lives with her sister Kosencha who assists her in taking care of the children. Kisinyunye was born in 1984, like her Co-wife she is not educated and she is also a housewife and herds the animals. She has one son Ntimama born in 2002 and named after the Narok north member of Parliament William ole Ntimama.

Fredrick Simiren born in 1974 is the last son of Sempeyo. He is a second year student at Daystar University undertaking a degree in communication and community development. Previously, he had taken a six months certificate course in Kenya Tourism at Air Travel and Related Studies centre in Nairobi in 1998. The family of Mr. Ludwig Enders, a German friend whom he met while working as a naturalist/culturalist at Voyager Mara Safari Lodge pays Fred's school fees. He describes his meeting with the family of Enders as a miracle, and an act of God, because the sponsorship has changed his life and has helped him to make a leap towards his dream of studying International relations and possibly becoming Kenyan Ambassador in an international country. A Catholic Missionary Fr. Frans Mol following a request from Fred's mother supported his primary education at Lemek Primary School between 1983 and 1992. His secondary education between 1993 and 1996 at Olchekut Supat Apostolic School (OSAS) was partly supported by Koiyaki Lemek Wildlife Trust, a local wildlife Conservation and community development association.

1.2 Family history, movements and significant events

Wuantai was born in 1932 at Melelo 40 km west of Narok town. He was the only child of Pianto Gilisho, the daughter of the legendary Maasai leader ole Gilisho. Pianto ene Gilisho was born in 1902 at Entoror (currently Laikipia) and was a young girl when the Maasai were tricked into moving south to live at the southern reserve by the colonial administration. She died in 1962. His father Nking'iis ole Kariankei of the *litalala* age group died in 1945 at an advanced age. Wuantai remembers very little of his grandfather Kimulwa ole Kariankei.

In 1938 his family moved to Mau and later in the same year they moved back to Olkiriaine. They stayed at Olkiriaine for a short time before moving to Nkareta in 1942. In 1949 Wuantai was circumcised at Olkiriaine where they lived since 1946. In 1950 the family lived in several places in Mau division, Olokurto, Orkiu lemuny, and Kamirarr. When he became a Moran, in 1952, Kariankei and his mother moved to live with ole Gilisho's family in Lemek valley after the death of his father and subsequent break up of the larger Kariankei family. While leaving with his grandfather Ole Gilisho, they moved to Orkekun near the present Lemek trading centre in late 1950s (*pee Emurati iterekeyiani*) shortly after they moved to Ng'osuani staying at Endoinyo ole yiaile (Ole yiaile hill). In 1960 he married his wife Sempeyo before moving to Koyiaki briefly staying at Rekeru. In 1962 they moved again to Ng'osuani where they lived for one year before moving back to Lemek in 1963. In 1964, the family left Osinoni for Ng'osuani where Namerai was born after staying for a year. They later moved north to Esinoni, then back to Lemek in 1972 staying at Osero lorkumum a few kilometres from the current boma. All the above movements made were entirely in search of pastures and water for their livestock, with an exception of 1972 when the family were fleeing from an attack by the Kipsigis community who raided their neighbours' livestock. The family has lived at osero lorkumum for thirty years and are not planning to move from their current home unless the owners of the land they are residing at force them out.

Since moving to Osero the family has changed their boma site four times, each time moving at most 300 metres from the previous site. The reasons for their movement varied, initially, they moved because the families they lived with had increased in size. The second time they moved was because there was too much dung accumulation in the boma, and lastly, they moved to position themselves at their preferred location in readiness for land subdivision. The family had previously lived with Ole Koros and Ole Gilisho's family who are now their neighbours.

Significant events

Wuantai remembers several events in his life that he considers significant. One of the events took place during the Mau Mau period in 1952 when the Mau Mau attacked their village and stole their livestock and a woman who was herding the cattle. On pursuing the Mau Mau they killed two of them but lost one of their own. He also remembers when the Kipsigis attacked the Maasai and stole all the cattle belonging to ole Sadera and Miyioni ole Naimodu. Another event he remembers was when a buffalo seriously injured him in 1982 in the evening while going to see his livestock. He recalls that he was taken to Narok hospital while semi conscious. Wuantai also remembers the dreaded 1974 drought (*Nadotolit*) and the drought of 1984 that swept almost all the livestock in Maasai land. He recalls the various ceremonies that he went through like circumcision, Moranism and finally initiation into elder hood.

Sempeyo recalls an attack on their boma by the anti stock theft police following livestock theft by the Maasai from the Kipsigis at Mulot. On that day all the people in their boma were made to sit at the centre of the cattle enclosure with all the livestock for a whole day. The cattle were later recovered by the dreaded Anti stock theft unit from Koyiaki. The coming of catholic missionaries remains in her mind, she gained employment for the first time with the missionaries as a caretaker at the Convent. She learnt to use a sewing machine, and repaired clothes and made curtains for the missionary's houses.

Simiren remembers when he met his sponsor for his university education. He remembers always insisting to his parents that he wanted to go to school even when he was very young. The deteriorating health of his father has always preoccupied his mind. He recalls when his father was almost dying of what was later diagnosed as asthma in 1990, his father called them to give them his last wish but was saved when he was rushed to Tenwek hospital. He also remembers the time they received two cows from AMREF when they were almost without any. In 1990 he lost all the family cattle while herding, although the cattle were later recovered at 2.00 am some 10 Kms away from the boma he has never forgotten this event.

Map 1: Kariankei's family movements within Narok District.



1.3 Family identity

This family considers themselves traditional but they feel that they are in transition to modernity especially because of the two son's interactions to the outside world. The family hopes that in the future they will be able to make themselves improved mabati houses and

also diversify their income sources. However they will continue to keep livestock for as long as there is space, 'living without livestock is out of question'.

1.4 Family relationships

The family shares all the labour requirements in the home. Kaaka and Kisinyunye perform most household duties in the family. In addition they alternate in looking after the sheep and goats. Other duties like sweeping the sheep pen and repairing the houses are also shared with Sempeyo giving a helping hand in milking, cooking and going to the market.

Wuantai's Kraal is located within a few hundred metres from his neighbours and thus he maintains a good working relationship with their neighbours. The family joins the rest of the community in ceremonial activities and livestock management. They share veterinary syringes, a spray pump and searching for lost livestock. Occasionally they lend a hand in making new bomas or houses.

Cooperation amongst neighbours has not changed much following land subdivision. Social relations have not been affected by land subdivision; community members continue to help each other during ceremonial activities and sharing various communal roles and responsibilities. However since land was subdivided some people have become individualistic in resource use; some community members do not want to share their water and pastures with their neighbours or do so selectively.

Wuantai is also invited with his age mates to officiate reconciliation functions, and some cultural ceremonies being among the few eldest people in the community. He also visits his age mates regularly to share their experiences on different issues in life.

The family maintains relations with their in-laws, where Namerai is married, as her mother Sempeyo, would spend time to help them during special events such as birth, circumcision, and family ceremonies. They also receive maize from their in-laws every harvest time.

Decision-making/management roles

Mzee Kariankei plays a central role in decision-making in the family and livestock management. When his sons are present at home, he involves them on issues of family income and livestock management but he retains the final say. None of his sons would sell livestock or move the family's herd without his permission. Besides being the major decision maker in the family, he also has some other duties to perform in the family; it is his duty to look after sheep and directing grazing routes for cattle in conjunction with the family shepherd Maripet ole Lepore. He sleeps at (*oripie*) a hut meant for watching over the boma at night to maintain general security through out the night.

Political involvement/position

No one in the family has a political position; they think this contributed to the poor allocation of land they received when Lemek Group Ranch was subdivided in 1999 - 2000. The only political connection the family has is through Wuantai's nephew Ole Koriata who was a former senior chief and a retired councillor for Ololulung'a. Because of being in a different area administratively this political connection has had no direct implication to the family in resource allocation.

1.5 Languages and Education

All members of Wuantai's family speak Maa and in addition a little Swahili. Sempoyo speaks the Kalenjin language; she learnt it from her mother who was a Kalenjin. Isaka who works as a game scout speaks little Kiswahili while Simiren a student at Daystar is fluent in Kiswahili and English. The two sons who speak multiple languages act as a link between the family and non-Maasai speaking people whenever the need arises.

Simiren is the only educated person in this family. He is a second year student at Daystar University undertaking a degree in communication and community development. Previously, he had taken a six months certificate course in Kenya Tourism at Air Travel and Related Studies centre in Nairobi in 1998. The family of Mr. Ludwig Enders, a German friend whom he met while working as a naturalist/culturalist at Voyager Mara Safari Lodge pays Fred's school fees. He describes his meeting with the family of Enders as a miracle, and an act of God, because the sponsorship has changed his life and has helped him to make a leap towards his dream of studying International relations and possibly becoming Kenyan Ambassador in an international country. A Catholic Missionary Fr. Frans Mol following a request from Fred's mother supported his primary education at Lemek Primary School between 1983 and 1992. His secondary education between 1993 and 1996 at Olchekut Supat Apostolic School (OSAS) was partly supported by Koiyaki Lemek Wildlife Trust, a local wildlife Conservation and community development association.

The family relies a lot on the potential of Simiren to get job opportunities in the future for the family's well being. Because of this, the family is positive about education.

Despite having realised the importance of education, Mzee does not regret not educating his elder son Isaka. Due to Mzee's poor health and the low livestock numbers owned by the family in the early years, Isaka had to be present at home to take care of the family and take his father to hospital when sick. Isaka accepts that his absence from home would have seriously affected the family, but on the other hand he wishes that he had gone to school. He plans to educate all his children, through education he argues, it is possible to get good job, have large herds, better houses and be successful in life.

1.6 Health status

Wuantai has had ill health for the last 34 years since the 70's. He was treated in several hospitals in Nairobi, Thogoto, Narok and Tenwek. Most of the treatment he received was on respiratory infections and Tuberculosis. After spending the entire family herd on his treatment, the family opted to take him hundreds of miles away to a medicine woman at

Sikinan, magadi area of Kajiado. He had his ribs pierced and some substance was removed. Following this treatment and subsequent medication using herbs, Ole Kariankei's felt well for the first time in 10 years. This however was short lived as an attack by a buffalo left him seriously injured. Although he healed of wounds inflicted by the buffalo, respiratory failure soon crept in. In 1998 he suffered a major respiratory failure that left him almost in a coma, he was rushed to Narok and was attended by a private doctor for Asthma. His improvement was miraculous as described by Fredrick; he was out of the hospital in a record two days. Since then he has been taking Asthma drugs and his health has remained fair except for occasional cough bouts. Simiren blames doctors for failing to diagnose the sickness his father has suffered for such along time; "if we had known that my father was suffering from asthma, perhaps we would have had more livestock".

The impact of his sickness has negatively impacted on the financial position of his family. At one time in 1987 the family had to sell the last cow to take him to hospital. Apart from that major sickness, the family has had no other serious health problems. Common colds, malaria, and pneumonia are among ailments that family members suffer from occasionally. At non-acute stages these diseases are treated using herbs like *Osokonoi*, *Lekidongo* and *Oltutu*. Other herbs such as *oloonchashuri*, *Ologumati* and *Olng'eriantus* are given to children mixed with milk. These herbs are given to children from as early as three months to help prevent stomach protrusions and general improvement of health.

Mzee Kariankei and his wife Sempeyo



1.7 Family assets

The family owns three pieces of land of 100 acres each. Two parcels are on the sides of the Olkinyei hill and are not suitable for settlement as they are steep and stony these parcels belong to Isaka and his father. Simiren's 100-acre parcel is at Inkilenya inside the area designated by the community as wildlife conservation and tourism area. Human settlement is not allowed in this zone according to a land use plan developed by the community in 2000. Due to lack of a place to make their boma in the parcels they have received from the group ranch committee, the family has recently bought an extra 13 acres on the land

they are currently living in. They also have a radio, and a syringe for treating their livestock.

2. LIVELIHOODS

2.1 General

Wuantai ole Kariankei keeps livestock for cultural reasons. One needs cattle for paying the dowry and when one wants to marry future in-laws will look at the number of cattle owned before they allow the marriage to go ahead. The more livestock one has, the higher the possibility of being accepted in marriage. The size of one's herd also determines his position in the society as wealth is ranked in accordance to the number of livestock that one has. He justifies this with a Maasai proverb *menya irkimojik oorook esikar* (An empty hand cannot be pleasurable). For these reasons livestock keeping has been the family's most important source of livelihood.

Livestock is the major source of livelihoods managed by Wuantai and his two sons whose herds live together. Livestock provide milk, meat, and money when needed. Hides and skins are by products from the family's livestock and are either sold, or used as cover for the beds or for ceremonial activities. Ole Kariankei's family keeps different species of livestock and Wuantai says that as he grew up he found his parents having the different species; sheep, goats and cattle. Sheep and goats are kept because they breed faster and can be used for getting quick cash to settle small debts, fat for a sick person and food for important visitors. They are also used in certain minor ceremonies like *embarnoto oo nkeru* (naming of children).

The family decided to diversify as they realised that the returns from livestock were not sufficient to cover the family' needs without depleting the herd. Isaka and Simiren decided individually to seek alternative sources of income to support the family. Isaka used to work for the Koyiaki Lemek Wildlife Trust. The organization broke up in 2001 because of political difficulties prior to the 2002 general election. After the break up, the organization split to 5 associations and Isaka joined one of the associations Olosirua as a game ranger earning an annual income of KShs. 72,000. The family also receives revenue (KShs 45,000 per year from Oliopa) from the conservation area by virtue of Simiren owning land in the conservation area.

Owing to the extra money the family is getting from Isaka's salary and the revenue from the conservation area, they are now able to reduce the number of livestock they sell per year, buy more livestock to increase the size of the herd, buy more veterinary drugs, meet household needs and most of their health costs. However, with Isaka working and Simiren being in college away from home most of the year, there is a lot of pressure on Wuantai who manages the livestock on a daily basis.

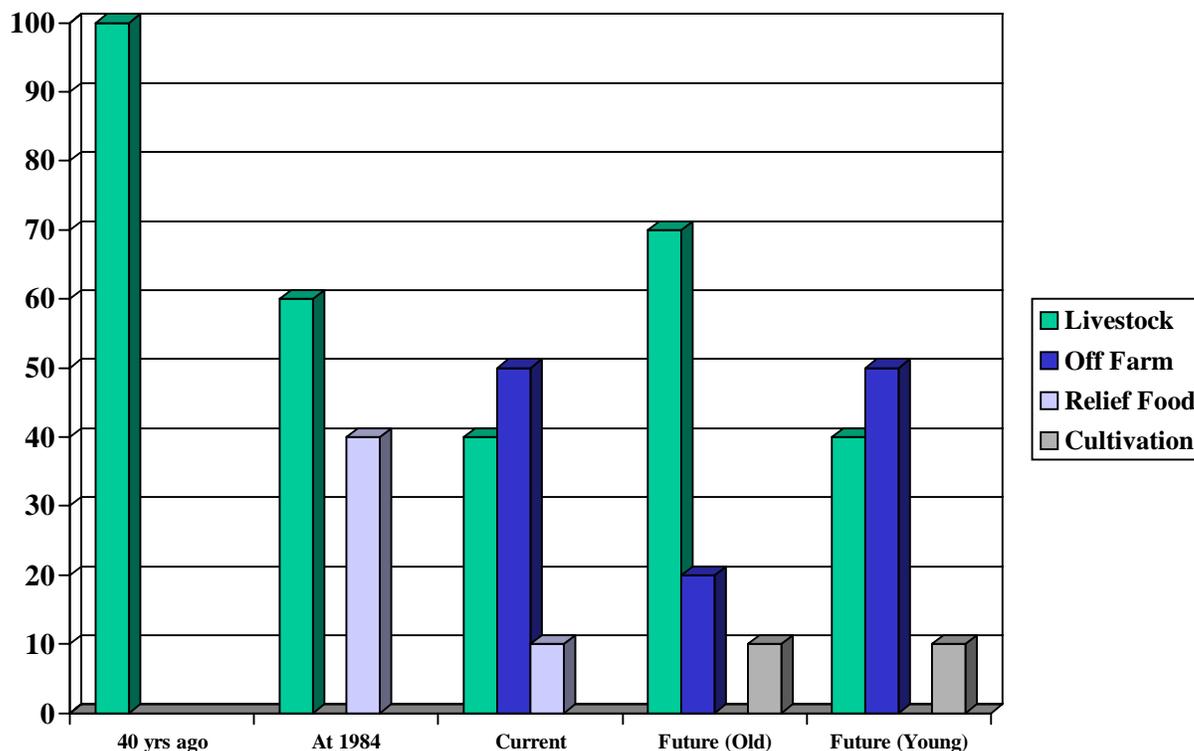
Ole Kariankei's identifies some strategies for diversification in case a drought kills most of his herd. He would borrow cattle and sheep from his friends while taking good care for the few that may survive. Cultivating a section of his land and building a plot to rent are some

of the plans he has for the future. Wuantai sees his grandchildren going through education, getting employment and contributing to the development of the family.

Table 1: Ranking of livelihood activities

Rank	Source of Livelihood	Reasons
1	Livestock	<ul style="list-style-type: none"> - Source of food - Income - Cultural Values - Buying land
2	Isaka's Salary fro Olosirua Wildlife Association	<ul style="list-style-type: none"> - Regular - Cash - Purchase food and vertinary drugs - Buying Wuantai's medicine - Shared by whole family
3	Dividends from Oliopa Wildlife association (Simiren's land at conservation area)	<ul style="list-style-type: none"> - Lump some - Buying livestock - Received quarterly

Graph showing changes in livelihood activities



2.2 Livestock

Family's favourite bull



2.2.1 History of the herd

When Wuntai separated from his extended family to live with Ole Gilisho's family in 1952, he owned 10 cows, 30 sheep and 10 goats. The herd size grew through reproduction and by 1980 he had 50 cows. However, due to his ill health most of his livestock were sold to enable him travel to seek treatment at various hospitals. By 1987 he sold his last cow that was previously donated to him by AMREF to settle his hospital bills.

Wuntai used various strategies to reconstitute his herd after losing most of his animals while seeking treatment. In 1989, after realising the gravity of their situation, he pleaded to his *Ilmakesen* clan to contribute livestock to his then impoverished family through a cultural practise called *engelare* (contribution). This was done and he was given 40 sheep and 4 goats.

To help a clan member who had lost most of his herd due to natural factors, a clan will normally undertake *engelare*. The procedure for *engelare* starts with the member concerned convening a meeting where he will explain how he lost most of his herd. The clan if it is convinced during that meeting that the member needed help and the reason given is satisfactory will state the number of livestock to be contributed by the clan. A few people are then appointed to go around requesting clan members to contribute livestock to the family. Later a day of arrival of the contributed stock will be stated and the one to receive them is told to prepare traditional liquor and slaughter a sheep for the party. The arrival of the sheep is followed by blessings for the sheep to multiply.

He also bought some sheep and goats using the Kshs. 3,500 he received from KWS after a buffalo seriously injured him. Mzee Kariankei's wife has been a midwife and was paid inform of sheep and goats for her services. Wuntai explains that the shoats paid to Sempeyo multiplied quickly and their mortality was low. In one incident, the family received 40 sheep and a heifer as payment for *Enyamu* (Fine for stolen livestock where a culprit pays double for any stolen animal) when one ram was stolen from their flock.

Since Isaka got employed at the wildlife association and the family started to receive tourism revenue, they were able to further increase and better manage the herd. From this initial stock, they exchanged the rams with steers in a cultural practise called *Irkerra loo lasho*.

2.2.2 Composition of the herd:

Wuntai says that it is not traditional to count and record livestock numbers, this they associate with pride before God and if they count the herd the animals could die *en masse*. Every evening the family members identify all the livestock individually to check that none are missing. They brand and ear notch animals according to their clan and can recognise each animal individually. Each family member has a specific notch style for his goats and sheep. Cattle have one notch; the Kariankei family unlike other Maasai families have two branding styles. The first one they claim was handed to them by God through lightening that made a brand on a family heifer a few years before Wuntai was born. The Second is a clan brand used by all the *Ilmakesen* to identify their livestock. However, he allowed us to count his livestock for this exercise and the actual numbers are presented in the table below.

Table 2: Wuntai's Cattle numbers

Cattle type	Number
Breeding bulls	4
Steers	10
Lactating Cows	15
In-calf cows	6
Heifers	18
Weaned calves	2
Suckling calves	15
Total	70

Herd composition

Type	Adult Livestock	Number born in 2004
Sheep	131 ewes, 2 rams, 31 castrated males	62
Goats	51	19
Cattle	72	11

Table 3: Wuantai's Sheep and Goats (Shoats) numbers

Shoats type	Number	Born
Goats – Bucks	2	
Goats – Does	23	
Kids	27	
Castrated goats	8	
Total	60	
Sheep – Rams	2	
Ewes	131	
Lambs	3	
Castrates	40	
Total	137	
Total no. Of Shoats	197	

Wuantai's family shoats

The family keeps more sheep than goats because sheep are more suited to the environment and they multiply much faster than goats. It is also cheaper to buy a sheep in the market than a goat of similar size. The family also receives more sheep than goats as presents from their friends. The family has never introduced improved breeds in their herd because they are not available locally and are not resistant to diseases and drought.

2.2.3 Management of the herd

Wuantai manages the family's herd. Early in the morning the livestock is divided into two main herds, small stock/calves, and older animals. Wuantai escorts them to watering points and decides which areas should be grazed that day. The daughters in-law usually stay around the boma with any sick animals and also assist in herding. In the evenings, he counts and identifies any sick animals as they return to the boma. Livestock in this family grazes entirely around their home unless there is a serious drought. The family has hired a herdsman Ole Lepore to look after cattle; they need an extra herdsman to allow Ole Lepore to rest or take care of sheep but do not have enough money to pay the two herders.

When Wuantai considers the number of times they moved their boma and livestock when he was young, he realises how much has changed over the years. Constant movement is no longer possible because of the natural increase in population and in-migration by other communities, and more recently, because of land subdivision. Owing to the fact that this family has a small herd, their animals are normally grazed not far from home even when the neighbours' herds have migrated. Drought coping strategies depend primarily on mobility rather than selling livestock. This is because they want to maintain cattle to reconstitute the herd. Therefore they live in the hope that the rains will return before it is too late, and do not want to sell animals and endanger their herd.

2.2.4 Livestock movements and strategies to get access to pastures

Several years ago, movement of livestock due to drought was common; in 1984 the family moved their livestock to *Irkarian* (Lolgorian) in search of pastures and water. In 1993 they moved the livestock to Nkorrkori where they lived with Namerai's family and in 1987, they moved to *enkutoto oo laibartak* with the other community members. In 1980 they went to Nkeresureni (Ng'osuani) where there is a relative (sister to Sempeyo) still in search of pastures. In 1993, they moved their sheep to Endoinyo ole Gilisho temporarily when fires burn the hills and there was plenty of new grass following short rains. During these movements the rest of the family remained at home and only the livestock and the herders would move. Since then the family has remained at one place limiting their entire grazing around their boma.

Recent livestock movements

Year	Moved to	Reason
1994	Moved from Osero lorkumum (current location) Ole Gilisho hills in Lemek group ranch	Access fresh pastures for the sheep following a burn of the hills
1994	Moved to Nkeresureni	Cattle moved because of Drought
1996	Moved to enkutoto oo Laibartak	
2000	Moved to Nkorrkori	Following drought when most of their neighbours moved to Lolgorian in Transmara, The family would not move to Lolgorian because of limitation in labour

Due to land subdivision, movement of livestock was reduced and thus to get pastures for their livestock nowadays, they graze on the land that they bought and up the hills that they were allocated on subdivision. They occasionally graze on their neighbours land but this depends entirely on their relationship with the neighbours.

On the other hand, the family sees land subdivision as a good thing as it enhances security of land and enables one to own land due to opportunities to sell and buy land. When funds will be available the family plans to pay some money to the neighbour with land on Ole Gilisho hills an important grazing area they lost after subdivision

2.2.5 Disease control

A number of livestock diseases affect the family's herd. The most common are East Coast Fever (*Oltikana*), Foot and mouth disease (*Orkirobi*), and Nagana (*Entorrobo*). The family joined hands with three other neighbouring families to construct a common crush where they spray their animals, using a borrowed pump. Since the government withdrew its support to vaccination programmes, Kariankei's family has had to organize with his neighbours to buy vaccines and invite a veterinary officer. The family treats their livestock by themselves without the help of a veterinarian. Wuantai also notes that Tsetse flies have increased since elephants started coming to the area and they treat affected cattle using Veriben or Novidium solution. They use Oxytetracyclines (OTC) to treat a number of diseases including: ECF, Anthrax, Contagious Caprine Pleuropneumonia (CCPP) and Enterotoxaemia, Deworming is done using Nilzan and ticks are controlled using a variety of acaricides.

Table 4: Average Monthly drug quantity and cost used by Ole Kariankei's family

Type of drug	Quantity	Amount (KShs)
--------------	----------	---------------

Accaricides (Ticks)	800 mls	800
Veriben (Nagana)	5 satchets	250
Novidium (Nagana)	3 tablets	150
Oxytetracyclines (Several diseases)	500mls	400
	Total	1,600

Kariankei's family does not sell manure heaped outside their boma because there is no market for it. The women normally sell hides and skins from the dead or slaughtered animals and the revenue realised used to purchase foodstuff. Most proceeds from the sale of livestock are reinvested in more livestock mainly bought at Lemek and Aitong' markets

Table 5: Distribution of Milking cows and goats among women in the family

Name	Cows (Dry Season)	Milk produced in litres(dry season)	Cows (Wet Season)	Milk produced in litres (wet season)	Goats (Dry Season)	Goats (Wet season)
Kaaka	2	1.5 litres	5	7	2	6
Kisinyunye/ Sempeyo	4	3	9	13.5	4	6
Total	6	4.5	14	20.5	6	12

Due to the small size of milking cows, very little milk is produced. The family consumes all the milk hence no milk is sold.

Table 6: herd dynamics

Species	No. Sold	Gifts in	No. Bought
Cattle	4	-	8
Sheep	4	2	2
Goats	4	-	3
Total	12	2	13

2.2.6 Sale and purchase of animals

Since the beginning of this year, the family has sold 4 oxen and purchased 8 young cows 4 males and 4 females. They have also sold 4 rams to exchange with calves expected later in

the year. 4 goats were sold and 2 sheep and 3 goats bought from money received from the sales.

Ole Kariankei's family have observed the trend towards commoditising livestock. Families with fewer livestock prefer to sell them instead of exchanging them, unless they are able to exchange with relatives. This change has been brought about by the cash economy, and the family feels it is linked to the strained relations amongst the community

The main market family uses to sell their livestock and buy foodstuffs or livestock is at Lemek only two kilometres away. Every Tuesday is a market day at Lemek and women especially Sempeyo visit the market to shop for the family while as Isaka and his father visit the market to sell or buy livestock and to get news from other areas from the many people who will be visiting the market.

They get information about market prices from other people who have been to the market, and by going to the markets themselves. The family also gets information on various issues like health (HIV) from the area chief and church. However, there are no extension services in the area to give information on various issues that are relevant to the community. The prices of livestock are normally good during the Christmas holidays and when animals are fat because they fetch good prices.

2.3 Cultivation

In 1997, Isaka cultivated one acre of maize and beans. During the stage of maturity of the crops, elephants raided the farm and destroyed the entire crop, since then they have not cultivated. The family hopes to cultivate a one (1) acre plot of maize at Nkorrkori where their daughter Namerai is married. They plan to grow maize for domestic consumption, and as the area is agricultural it does not have an elephant problem.

2.4 Off-farm activities

2.4.1 Salary and remittances

Isaka who is employed as a game ranger at Olosirua section of the former Koiyaki Lemek Wildlife trust gets a monthly salary of KShs 6,000. He uses this money to buy drugs, buy food and clothing for the family and pay the herdsman's salary. Isaka also buys drugs for his sick father every month. The family also gets money from Oliopa Wildlife trust where Simiren is a shareholder by virtue of owning land in the conservation area. He uses half of the KShs 15,000 received every quarter to meet his expenses while in college and the rest is invested in livestock or used to meet the family's expenses. In the year 2003 he received a total of KShs. 35,000. He is planning to shift to another organization Olosirua Wildlife trust where he thinks the finances are better managed than in the Oliopa wildlife trust. He joined Oliopa in 2001 for political reasons but was disappointed by the poor management and political interferences. The money from the Conservation Association is not reliable to the family as the availability of the revenue depends on whether it is a good season for tourism.

Isaka says that for him to be effective in his work of a game ranger he has to be well versed with the wildlife issues, be hard working and courageous. His work has become

increasingly unpredictable. When he started working they were paid promptly but now they often end up not being paid especially during the low season.

The family does not engage in any small business but Sempeyo is interested in selling wares and foodstuffs in the future and has requested her sons to raise some capital to help her start the business at Lemek market. She and her daughters in law sell skins and hides to tradesmen whenever one of their livestock dies or is slaughtered.

2.5 Daily and seasonal labour

Table 7: Women daily activity schedule

Time	Activity	Remark
5:30 am	Waking up	
6:00 am	Lighting the Fire	
6:30 am–7:30am	Preparing calabash and Milking	
7:30 am – 8:00 am	Making and serving Tea/feeding children and herdsmen	
8:00am – 8:30am	Selecting calves that will remain at home/opening the gates	
8:30am – 9:00am	Fetching water	Two trips carrying 20 litres container at the back. Water lasts all day
9:00am – 11:00am	Cleaning (sweeping house, washing clothes, cleaning calve and sheep pen, washing utensils)	
11:00 am – 12:30pm	Fetching firewood, cooking and serving food	
12:30am – 3:30 am	Beadwork, visit friends, relax at shade, sleep, go to market,	Undertake any one or combination of these activities, time also used to complete any of the morning activities not yet completed or undertake any afternoon activities or activities that are not on daily routine
4:00am – 5:00am	Make fire, make and serve tea, clean calabash,	
5:00am – 6:00am	Attend to Goats/Sheep – count, open for kids and lambs,	
6:00 am – 8:30am	Milk cows, close gates, put calves to pens,	
8:30 am – 9:30 am	Cook and serve supper, wash children	
9:30 am – 10:00am	Sit outside the house to talk when there is moonlight or relax in the house	Time also used to tell stories to children or finish household tasks such as washing
10:00pm – 5:30 am	Sleep	

Note:

- Activities change with season with some activities taking longer or shorter times between seasons as described in the sections below.
- Feeding and taking care of children will be undertaken the whole day and between different tasks.
- Occasionally one of the women except Sempeyo will be out herding sheep, during such times she will undertake her roles till 9:00 am before she leaves for herding and resume her duties at 5:00 am when the sheep returns home. During her absence Sempeyo would take up her day's tasks assisted by the other wife.

Photo of women carrying water



Table 8: Women's seasonal calendar

Washing clothes				
Firewood collection				
Herding livestock				
Watering livestock				
Child care				
Cooking				
Milking				
Cleaning sheep pen				
Ceremonies				
Feeding babies				
Cleaning household				
Housing repair				
Beadwork				
Cleaning calabashes				
Collect Household water				
	Short rains Mid Nov – December (Oltumure)	Short Dry season Jan-mid Feb. (Oladalu)	Long rains Late Feb – Late July (Enkokwa)	Hot dry season Aug-October (Olameyu)

Notes:**Dry season**

Difficult tasks during the dry season include cooking, Herding and fetching water. Cooking increases during the dry season, due to lack of sufficient milk for the family. Herding becomes a hard task during the dry season, as the livestock travel long distances to the hills in search of pastures and water. Fetching water will also take a longer time since the only water source during this time will be at Emashini 3 km away from their home. Cleaning the sheep pen and repairing houses becomes much easier and less regular during the dry season.

Rainy season

Milking, cleaning, collection of firewood and repairing of the houses becomes difficult tasks during the rainy season. Because many cows will have given birth around the early wet season and the milking environment becomes messy milking consumes a lot of the women's time.

Cooking becomes less due to the availability of milk, Duties related to ceremonial occasions increase due to the availability of milk and livestock duties are relatively easier during the rainy season.

Seasonal Survival strategies

During the dry period food becomes a major problem and women have devised survival strategies such as milking goats, diluting milk with herbs extracts, and getting grains from Namerai. The women will collect wild fruits like *Olamuriaki* and *olmisigiyoioi* to supplement for their food needs. An extra herder is employed at this time to exempt Wuantai from herding sheep and allow women more time to undertake housework. Financial demands on Isaka increases and most of his salary will go into buying foodstuffs. The family will also sell livestock to buy food and rarely receive relief food supplies from the government or non- governmental organization.

3. NATURAL RESOURCES**3.1 General**

Osero lorkumum is relatively well off for natural resources, they receive more rain than other places to the east of the Lemek group ranch. They have adequate water resources and access to Lemek salt lick on Lemek stream that flows from the middle of the group ranch into the neighbouring groupe ranch, Koiyaki. Despite this they feel that Nkorrkori to the (north/south/east/west) is better because it is possible to cultivate the land to make more money and food for the families.

When Wuantai and ole Gilisho's family came to Lemek in 1972, they found that there were olive trees (*Olea Africana*) stumps probably left by fires an indication that perhaps Lemek was more forested than it is now. There also existed pockets of bushes and open woodlands at the foot of the two hills of the Lemek valley. At that time there was little human settlement. Settlement existed beyond the present Lemek centre, but there were no people on the southern part of the valley all the way to Maasai Mara national Reserve.

Fires started by the community damaged trees, and the bushes that are now scattered around Lemek replaced previous forests. Slowly the settlements crept in to Ng'osuani then spread to Koyiaki. The first families in this area were the families of Ole Sopia, OlorMaitai'and Ole Gilisho. When ranches were developed at the southern end of the group ranch, the first people to settle were white men who requested the families to contribute steers that were reared, until they were fat then they were sold. Later, the white man introduced improved breeds (Sahiwal and Boran). When the white men were leaving, no meeting was convened to discuss how the land was to be shared. They left the ranches to the leaders (chiefs, and clerks) who were the elites and those who were politically well placed.

3.2 Land

Ole Kariankei being a native of Lemek group ranch and especially among the first people to live at Osero Lorkumum area feels that land allocation in Lemek group ranch was not done fairly. When land registration, demarcation of group boundaries and registering of members was being done he was only married and did not have any children to register.

The committee that did the registration had a temporary office in every trading centre within the group ranch, for those wishing to register. The chairmen of the land committee were Ole Munka, Ole Saitolok, and Ole Sairoua. Ole Sairoua did the first allocation of land to individual members, without making any boundaries and his system was seen to be fair as everyone was allocated land around the areas they lived in. An election held a few years after saw Ole Karia replacing Ole Sairoua. Ole Karia's committee oversaw the final subdivision of the group ranch.

Several meetings held to discuss subdivision of land outlined the procedure for land subdivision. It was resolved that all members will get equal shares, hills and plains were to be subdivided in a way that each person will have a share on flat land and those allocated the hills were to get a bigger portion of land as the hills were less productive. This resolution was never followed and this saw to Mzee Ole Kariankei being allocated a hilly place with no economic value at all despite being the oldest member in Osero lorkumum. They think that a committee member, whose opponent the family had supported at a previous election, engineered this anomaly. Simiren who was away during the election was allocated a place of his choice through the influence of the same committee member. Simiren who is educated was able to lobby for a better piece of land at the conservation area.

After land subdivision members who were displaced from where they used to live and given plots elsewhere, which was contrary to agreements made in the meetings, petitioned the area District Committee. They were astonished by the DC's decision to refer them back to the committee members claiming they had the jurisdiction over land allocation. One of Kariankei's sons accompanied by 50 other people who were either displaced, allocated land in inaccessible places or one individual who was not allocated anything went back to the DC a second time. This time round they were told to write their petition of which they did, and presented it to the DC. The DC did not take any action but directed them to the Lands office and out of this they felt that the committee members who were very powerful already corrupted the DC.

The family dropped the case because it was proving expensive having already cost the family three cows. There was a meeting that was held by *enikutoto* and in this meeting it was resolved that the land should be given to Wuantai's family because during the previous subdivision by Ole Sairowa, they were allocated the same piece with two others namely Ole Gilisho, and Koros family. Wuantai's family also felt they have a right to this piece because they had lived in that land for so many years. The committee favoured a son of Ole Gilisho since his father's grave was in the land in question, and Wuantai was given land on a hill with no water, away from any infrastructure and where they cannot build a house. Ole Kariankei blames the land adjudication committee for all the wrongs committed in demarcating the group ranch while at the same time congratulating them for at least ensuring that the entire 89,000 acres of the group ranch were surveyed. Kariankei blames the invasion of Maasai land by the other tribes (Kipsigis) to the committee members who

brought their friends and sold land to the Kipsigis by exchanging with livestock and money without the knowledge of the community. He says there were initially no other tribes in Maasai land except across Amala (*Enkare oorkunoni*).

Presently the family has one land with a title deed (100 acres) at the conservation area and two pieces 200 acres at the Olkinyei hill for which they were planning to collect a title to it. They also bought 13 acres of land on the land on which they are residing at to be able to access basic infrastructure such as schools, health centres and other social amenities. They intend expand this land by another 12 acres to be able to have enough space for their boma and at least some space for their livestock. The family feels that land is affordable as an acre costs one cow or an equivalent of Kshs.10, 000.

3.2.1 Advantages of land subdivision

The family sees the following advantages in land subdivision: it gives freedom to use land how the owner deems fit; one can construct permanent houses, fence their land, build a water source for their livestock, while those families without livestock could rent or sell part of their land to buy some livestock. Isaka adds that it is because of land subdivision, that Simiren was able to get a piece of land at the conservation area and with this, tourism revenue, despite having never lived near the conservation area.

3.2.2. Disadvantages of land subdivision

Wuantai and his family feel that there are negative impacts of land subdivision on their family and the community. Some negative impacts are that since subdivision of land, some dams have been privatised even those that were made from public funds e.g. Ole Sairowa's dam and Ng'osuani dams where the route to access them has been closed. Accessing some sections of Lemek stream for salt licks, requires that livestock have to travel along way as the shorter way falls under private land. During the process of demarcation, there were no routes set up to ensure that important resources do not become inaccessible. Land for grazing the livestock has notably decreased as most people have privatised their parcels and community members with few livestock opt to rent out the grazing areas. Wuantai's livestock for example can now only graze in the southern hills where they have friends but cannot graze on pastures at Ole Gilisho hills on the northern section of the valley since they do not have land or money to pay to get access.

Ole Kariankei is also disturbed by too many people who are selling land at throwaway prices and without knowledge of their families. The money received from such sale is used to drink and the livestock received are quickly sold to buy alcohol. The family is also concerned that if land was sold to outsiders, they might decide to develop it for cultivation hence depletion of wildlife in the Maasai Mara game reserve and an introduction of alien cultures to Maasai land. Though one of the family's pieces of land is located at the conservation area 20km away, the family's' livestock cannot access pastures on this land on a daily basis. This land was allocated to the family after land subdivision in 1998 and was therefore not utilised in the past. Though the family appreciates income from the conservation area, they may consider taking their livestock to this piece of land in case of a severe drought.

Wuntai feels that land subdivision will eventually kill both livestock keeping and wildlife conservation and will break up the social ties that held the society together.

3.3 Water Resources

The family does not own a water source but their livestock gets water from a dam ½ a kilometre away at *Enchoro e Kirokor*. During dry periods the livestock will drink water from Lemek cattle trough 3km away. At the community cattle trough water is pumped from a borehole by machine with the families contributing fuel quantities depending on their herd size. Wuntai's family used approximately KShs. 50 per day in 2002 when they last used this water source. Lemek Stream /river seasonally flows along the Olkinyei hills providing water and is an important salt lick for the family's livestock. For domestic purposes, the family gets water from a spring next to the dam or from Esimiti spring 4 km away during the dry period. The government has recently extended water from this source to about 1 km to the Kariankei's family.

3.4 Human Wildlife conflicts

There is no major problem with the predators attacking ole Kariankei's livestock because in addition to maintaining a thick thorny fence around his boma, he watches over at night. The only predator problem experienced was a leopard that took the only three family dogs. The main conflict with wildlife involves the marauding elephants.

The family reported that the elephants were the main nuisance in the area as they kill/harm people and livestock. Besides this they occasionally close routes making it difficult for people and livestock to access different places like water points, pastures and forest resources. When elephants kill people or livestock the family reports to the KWS authorities situated only 4km away at Lemek trading centre. Initially in 1997 young men used to team up and chase the elephants away but it seldom happens in recent times because KWS will arrest anybody found killing wildlife.

Ole Kariankei feels that the elephant has replaced the buffalo, which killed many people when he was young. Elephants attracted by the acacia woodland and the salty waters of Lemek stream do stay long periods around the bomas.

3.4.1 Advantages of wildlife

The family receives revenue from Olosirua wildlife association quarterly by virtue of owning a parcel of land at the designated conservation area. This revenue is considered very important to the family survival; it comes as a lump sum every school opening times making it easier for Simiren to travel and meet living expenses while in college. In addition the balance of the revenue is used to purchase drugs for Wuntai, buy maize, veterinary drugs, foodstuffs and occasionally buying a heifer or shoats.

3.4.2 Disadvantages of wildlife

Wildlife poses a threat to the family livestock, recently, a hyena sneaked into the family kraal at night and killed one of their biggest rams. The herbivores compete with livestock to access water and pastures. Wuntai adds that the family is willing to live with this problem but is disturbed by predators.

The elephants as explained above, were singled out as the most destructive animal. In the early 80s buffalo was a major threat to lives, two members, Wuantai and Simiren were injured by buffaloes while herding. The family is eager to cultivate but marauding elephants have made this impossible.

3.4.3 Strategies to live with wildlife

Due to the above problems posed by wildlife and lacking effective intervention of KWS authorities, the family has devised some strategies to deal with the wildlife. Proper fencing and night guarding is used to keep away predators while an adult is employed to look after the herd during the day. In cases where a predator finds access to the Kraal, the family would set up wire traps in places where they suspect the animals have been sneaking through. The other way is by trying to poison them and as a last resort they may involve the community in killing a rogue animal. The elephant are mainly avoided and family members restrain all their activities to daytime. In a few cases family members would chase away elephants by shouting and beating empty sonorous containers.

The family's perception over wildlife is divided, on one hand they feel that wildlife is a menace while on the other hand they are positive due to the revenue they receive from the wildlife association and the fact that one of their son, Isaka, is employed by the wildlife association. They say that besides the marauding elephants that are said to have increased in recent years, they would be happy to live with the other species of wildlife like gazelles, Impala, hares and Zebras because they pose no threat to people and their livestock.

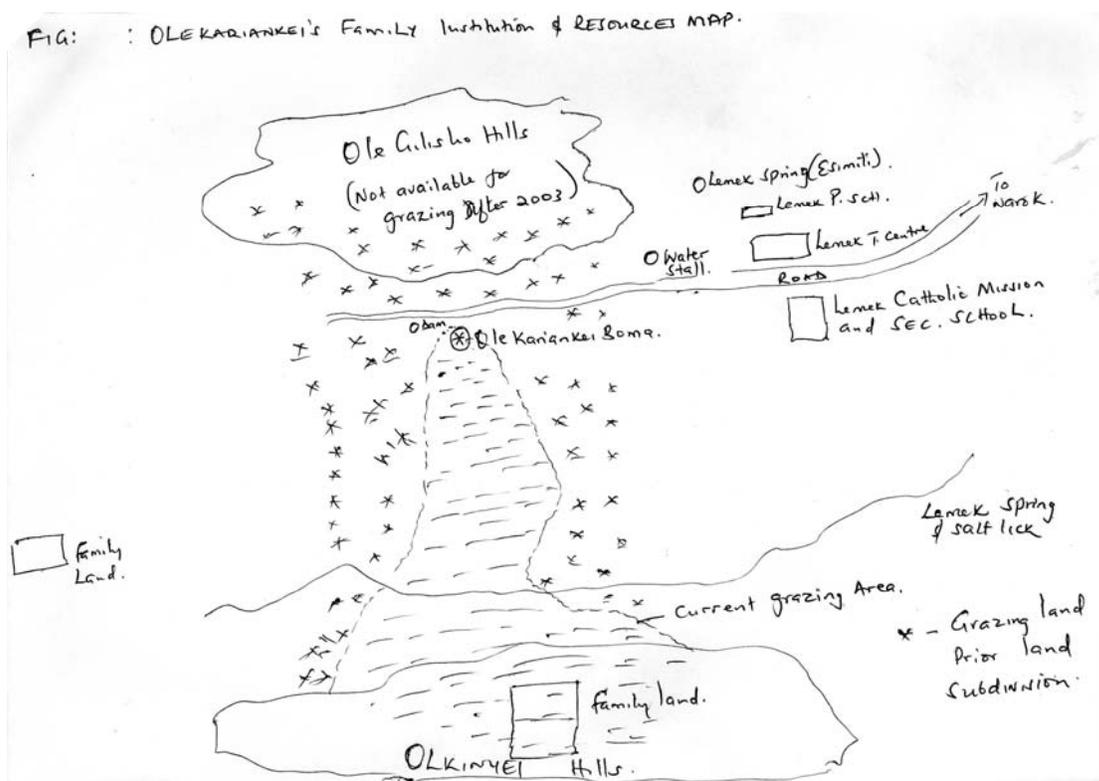
3.5 Seasons and Seasonality of resources

Osero Lorkumum community experiences five major seasons as described by Wuantai ole Kariankei:

- Short rains (Late November – December)
- Short dry (January-February)
- Long rains (March – May)
- Cold season (June – July)
- Long dry season (August – early November)

Over the last 10-15 years the amount and trends of rainfall have drastically decreased. The rainy seasons are starting late and do not last more than two months. The short rains that use to start in October now start in December and only last for three non-continuous weeks. The short dry season in January now lasts for up to two months – shortening the long rainy season. The overall rainfall pattern has become quite unreliable and unpredictable. The direct impact of unreliable rainfall pattern means affect seasonal availability of pasture and water resources. The herders increasingly take the family livestock to the hills that, in the past, were only grazed once every two years and only for a short time. Construction of a small dam by one of the neighbours has helped the situation, with the availability of water nearby the family's livestock survive by taking water and feeding on a little of what is available on the areas along the riverine vegetation of the Lemek stream. Ole Kariankei fears that in the event of a prolonged drought and with limited movement possibilities livestock deaths will be massive.

Map 2: resource map



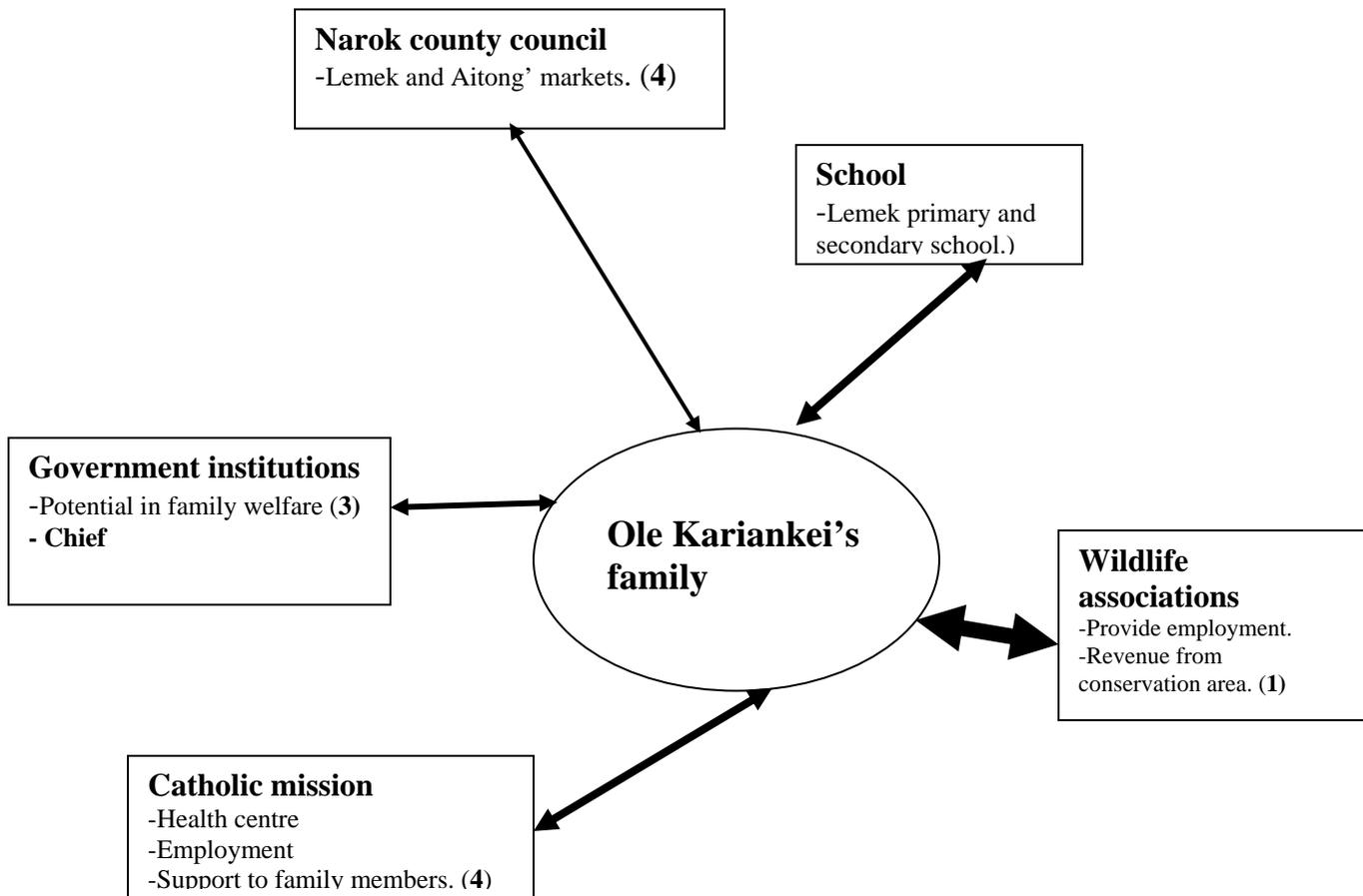
4. INSTITUTIONS

The infrastructure and socio-economic resources available to the Kariankei family are a market at Lemek centre 4 kilometres away. This is where the family gets their foodstuffs and drugs for their livestock. A bigger market at Aitong 20 kilometres away serves as a major livestock trading market. The family lives a kilometre away from the Lemek-Mara rianta road and just another kilometre away from the Lemek health centre where they are treated for minor illnesses. They visit Narok for the treatment of complicated cases.

Table 9: Social services institutions

Institution	Ranking
Wildlife Association	1
School (Lemek primary and Secondary)	2
Government	3
Narok county council (market)	4
Catholic Mission	4

Figure 6: Institutions map showing relationship and importance to Wuantai's family



Notes:

Wildlife Associations: The family appreciates the employment of Isaka by the Olosirua Wildlife Association and the dividends they receive from Oliopa wildlife Association, where Simiren is a shareholder.

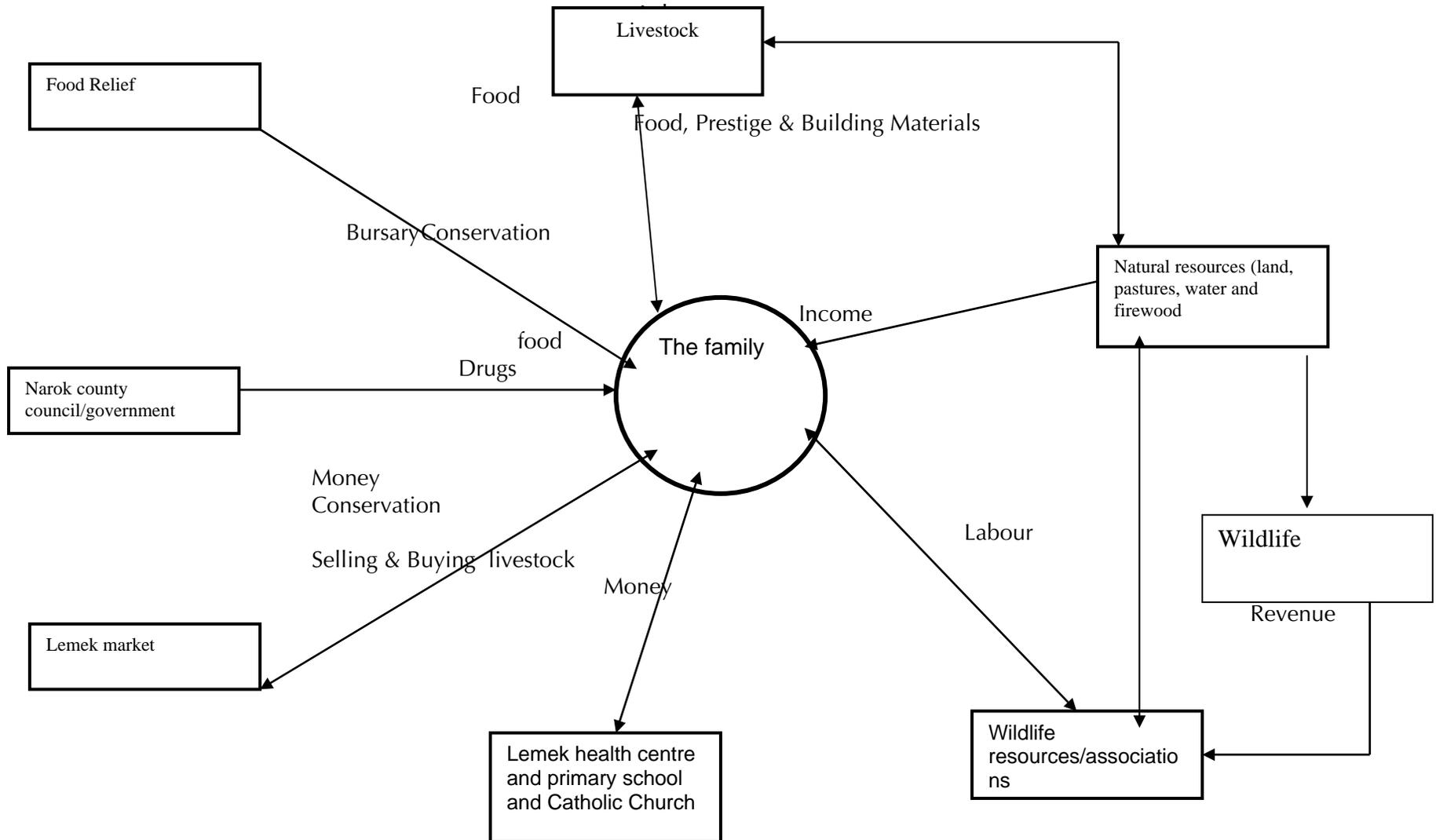
School: The family ranked school the second most important institution to them as they are now beginning to see the fruits of education from their educated son Simiren who was educated at Lemek Primary and Olchekut Supat Apostolic School both located in Lemek.

Government: The government was ranked third even though they recognize that it has a great potential to influence the way they live, they are disappointed that the government abandoned most of its projects in the area. An example is the health centre, public works projects that used to repair the roads, and the water department that used to ensure that water was available in the area.

Catholic mission and Narok county council; these two were ranked fourth. The family likes the services that the catholic mission is offering to the family and the community at

large such as church, ambulance and health centre. At one time they had employed Sempeyo to work as a caretaker to the convent. However the family feels that with time these services have really deteriorated and increased in cost and thus are no longer affordable to them. Narok County council was very influential in cattle dip services for the livestock but this project collapsed as those sent to provide the service would over dilute the acaricides thus making them ineffective and the local people opted to dip their livestock at home. However the services of markets being provided by the county council of Narok are of great help to the family and community at large as it lessens the distance they have to travel to the market at Aitong' and Mulo.

Figure 7: Linkages Between Family, Livelihoods and Natural Resources



5. THE DRIVERS OF CHANGE

The family identified the following as the key drivers of change in their livelihoods

- 1. Education** has brought a positive change into this family since one of their sons is in the University. Change of culture, dressing and building a new iron sheets house is brought about by education.
- 2. Health Status.** Mzee Kariankei has been suffering from Asthma for a long period and this has greatly affected his entire adult life thus he has not been active in various family activities. His poor state of health has contributed to his small family size and poor financial stability as so much was used in trying to treat him.
- 3. Employment.** Interaction with other non-Maasai communities by Isaka and Fred has also affected the living style of this family. Also from the salary they're paid they have been able to increase their herd size, plus feed the family. Isaka also reported that as a Ranger they are trained enough in order to be more disciplined and has also brought a positive change both on his line of duty and at home. Employment provides a good forum for people to interact with outsiders and through this, Simiren was able to get a sponsor for his university education.
- 4. Cash economy.** Introduction of the money economy has affected the living style of this family because every small item that is needed in their day-to-day life has to do with money. It has also commercialised livestock keeping and brought about strained relations amongst community members as the worth of everything is in terms of money.
- 5. Family Size.** Kariankei's family is small as compared to other families of his age group but according to him he says that he finds it easy to manage it and all members maintained good relations. The only constraint they find in their small family is that they normally face shortage of labour for their livestock and thus they resort to hiring a herder.
- 6. Market.** Kariankei reported that selling and buying of livestock has been made easier by the presence of a nearby market at Lemek centre and the mobile traders. A variety of domestic foods and clothing are now readily available at the market and thus this changes the lifestyle of the family.

6. THE FUTURE AS SEEN BY THE FAMILY

The family expects that in 5 years, the number of livestock in Lemek will reduce due to lack of grazing and water resources. They also foresee a situation where more people will fence their own land arguing that fencing is only being delayed due to the presence of wild animals especially elephants. There will also be limited access to water points and salt licks a problem that will impact on livestock management. Wuantai's family sees that might be forced to move and make a boma across the river Lemek where their land is in order to have space for their livestock. However they hope to retain the current boma, and to expand the land around the boma to 25 acres in order to access socio economic infrastructure. Simiren sees a bright future for the family as he hopes to get a good job after he completes his studies and contribute more to the family. Isaka hopes to expand the family by having more children and educating them. He also hopes to be wealthy, he wonders whether wildlife and hence wildlife conservation will continue to be an important livelihood choice for the community as this will affect his employment. He also predicts that cultivation will continue to expand southwards as elephant corridors are closed by the expanding population and as outsiders buy land from the Maasai.

CONFIDENTIAL

KANYINKE OLE KASOE'S FAMILY PORTRAIT

Location of Ole Kasoe's Kraal GPS 36M 0743540 9847932
Elevation 1613m

1.0 The Family



Introduction

Kanyinke Ole Kasoe of the *Ilmakesen clan* (Sub clan *Lesire*) was born in 1958 at Endoinyo Narasha, Olkinyei group Ranch, Narok District south of Kenya. He is a Maasai pastoralist with no formal education. He belongs to the *Ilkirupi* age group, left hand section of *Ilkitoip* age group. He is the last-born son of Nemamai and Mukato ole Kasoe. Mukato died of Malaria while herding his livestock at Lolgorian, Transmara district before Kanyinke was born, and his mother Nemamai was responsible in bringing him up until he became an adult. She died in 1998 while living with the family. Kanyinke has 3 elder brothers who currently live at Emarti and Mararianta within Koiyaki ranch and three sisters who are now married.

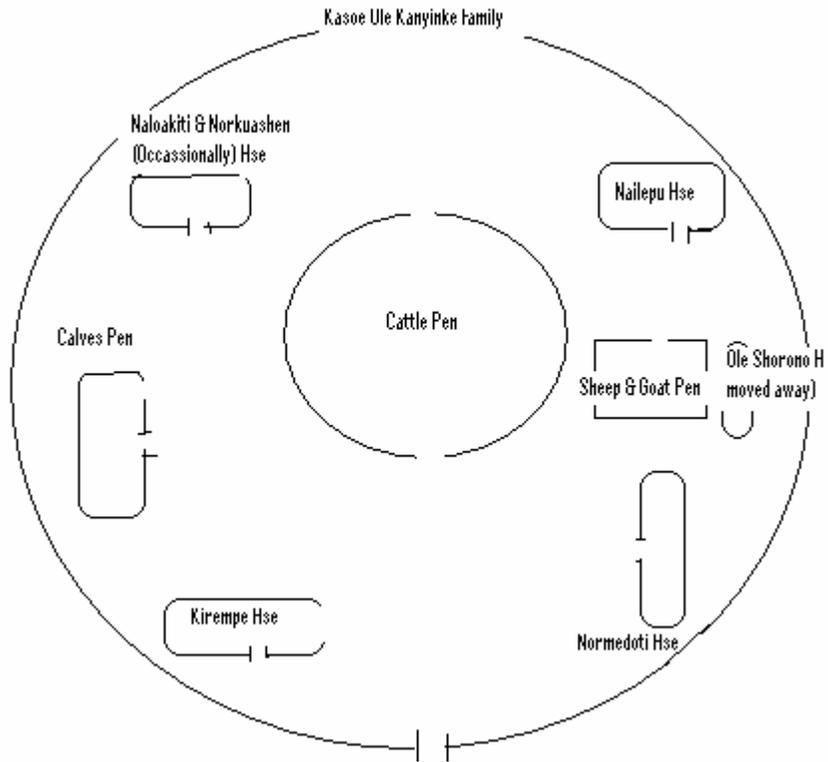
Kanyinke, nicknamed Nekarsialoi when he was a young boy (because of his habit of playing in mud/dung when taking care of the family's livestock) currently lives with his family 320 km south of Nairobi at Ng'ueng'ueny, near Talek trading centre, Koiyaki location and 200 metres inside the Eastern boundary of Kenya's most visited protected area, the Maasai Mara National Reserve.

He is married to five wives aged between 34 and 17 years. He considers this number of wives, as above average for his age mates, and thinks he was able to marry many wives because he owned a large number of livestock. He Family lives with a five-Year old boy Noonyuat ole Letoluo, the fifth wife's brother, and Ole Shorono and his wife Kijoolu both who are originally from Maralal, Samburu district. Ole Shorono and his wife came from Maralal in 2003 and were requested by ole Kasoe to stay at his family to help in herding and taking care of the family when Ole Kasoe is not at home. (See page 3, for the Kasoe's family Tree)

Out of his family, Noorkuashen the first wife has moved to Kolong 3 km away. She left the family to sell artefacts to tourists at Kolong' cultural boma, and is also a base from which the children can attend Talek primary school. At the moment she is with her daughters Yiamat, and Sintoyia, and her son Kayiok. Kayiok, the first born son lives with his mother during the school terms and attends Talek primary school, he moves back to the rest of the family to herd his fathers herd during vacation. Noorkusashen visits the family once every week and remits part of her income to the family to purchase foodstuffs and drugs for the livestock. Nabiki (Sinka) has moved to live and help her aunt at Olare Orok 5 km away. She however

The rest of the Kasoe family lives in a traditional Maasai home called Enkang' (Kraal) or Boma in Kiswahili. Their enkang' is a circular enclosure (60m diameter) built with thorny bushes to create a space for keeping livestock and huts. The cattle, goats and sheep are kept separately within the Enkang' at night. Huts are built inside the Enkang' along the fence forming a circular-shape where the livestock stay in the centre of the Kraal. The huts are domed-shaped simple structures built using sticks and plastered with cow-dung mixed with soil and sometimes ashes to make them leakage-free during the rain season. Kasoe's boma has 5 huts and an enclosure for cattle and sheep. One hut left by Noorkuashen has been converted to a calves' pen.

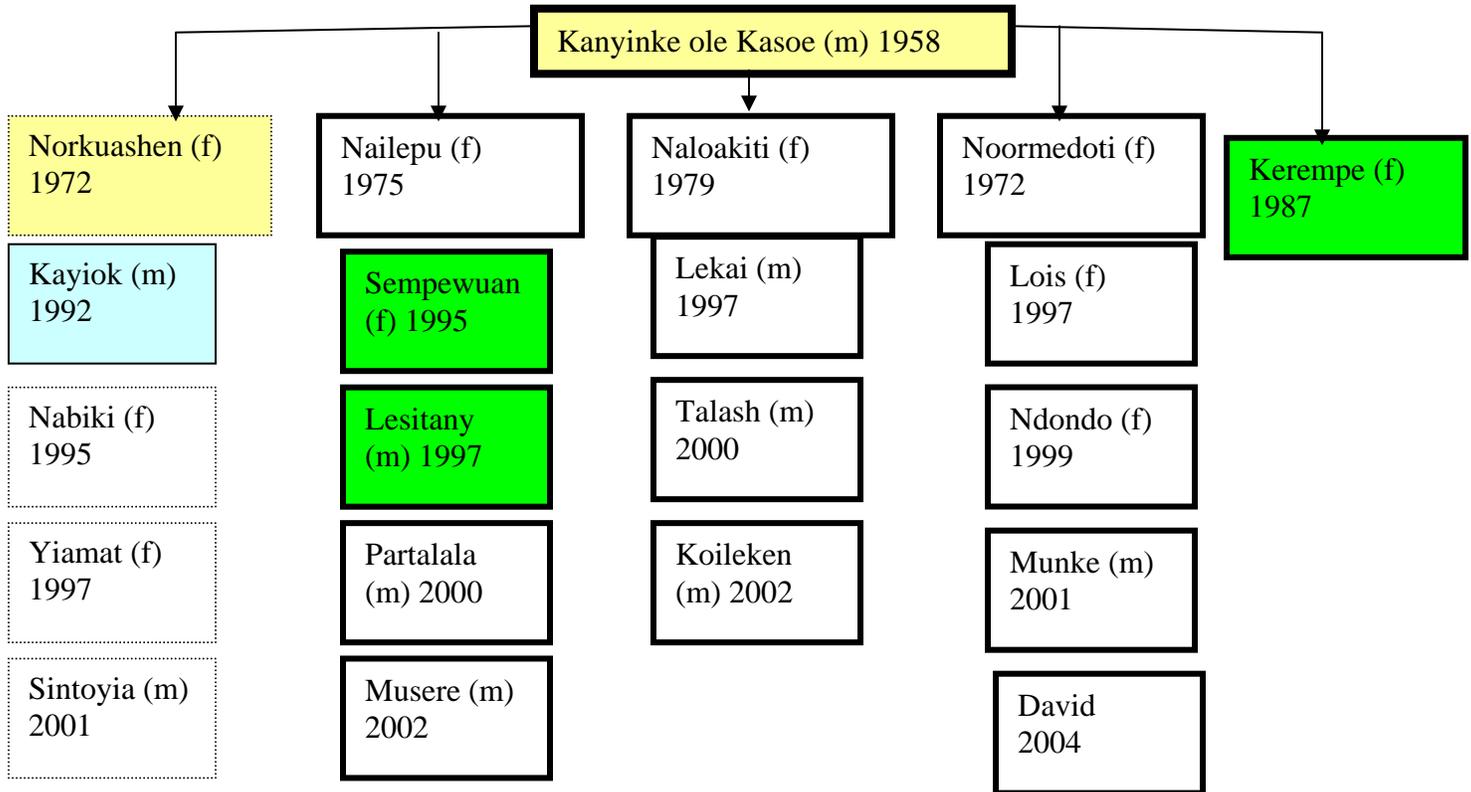
Figure 1: Kasoe's boma layout



1.1. Family Composition

In figure 2 and the section below, we present Kasoe’s family tree indicating members’ relations, occupation, and location of domicile.

Figure 1.1: Kasoe’s Family Tree



Key:

- At school
- Herding
- Present at home
- Living at cultural
- Contributing Income

As indicated in the figure above, *Naisuyiasui*, nicknamed *Noorkuashen* (Name meaning the one who comes from the place where potatoes are grown, in this case Naroosura) is the first wife of Kanyinke ole Kasoe. She has no formal education and her main occupation, as a housewife is to raise her children and manage the livestock at home by milking, watering and feeding the small stock. However, in 2003 she received money from her husband after he sold a cow and moved to Kolong to sell artefacts and beadwork to the tourist visiting the Mara National Reserve. Naisuyiasui is the mother of 4 children; her first-born son Ronkorua (Kayiok), named after William Ronkorua Ole Ntimama, the Member of Parliament Narok North Constituency is a standard two pupil at Talek primary school and is the only child in the family who is attending school. Nabiki (Sinka) the second born has left to stay with an aunt at Olempalakai near Olare orok, she helps her aunt to take care of her children and look after the sheep and goats. Yiamat (7 years) and Sintoyia (3 years) both stay with their mother helping her with household chores. They all visit the family occasionally especially during the low tourist season in January to April. Other members of the family especially Ole Kasoe and Naisuyiasui's co-wives do visit the family at Kolong.

Kasoe's second wife Nailepu (Noorkisaruni) is 29 years old and a mother of four one daughter Sempewuan aged 9 years and three sons Lesitany (7), Partalala (4) and Musere (2). Sempewuan helps her mother with household chores and collecting water and firewood. Lesitany and Partalala look after the family sheep and goats. Musere is still too young to engage in any family duties. Naloakiti the third wife also has three children, two boys Lekai (7 years) and Koileken (four months) and a girl Talash (4). Noormedoti the fourth wife like all of Kasoe's wives has not been to school, she is a mother of four two girls, Lois (7) and Ndondo (5) two boys Munke (3) and an infant who has not yet been named awaiting the naming ceremony three months later. Ole Kasoe's last wife is Kerempe (17) married in 2003 and is yet without a child. She however lives with Noonyuat (6) her brother who also helps in herding when he is not attending pre unit classes at Florida school near Talek. In addition to her household chores she takes turns with the boys and her husband to look after sheep and goats.

Ole Shorono and his wife Kijoolu (commonly referred to as Ng'oto pita) left their home in Samburu due to poverty and they came to live with the family in 2003. Ole Shorono are not only an age mate to Ole Kasoe but also a clan member. Living with Ole Kasoe's family favours them because they get milk and meat and occasional support from Ole Kasoe's family. In turn they also participate in managing the livestock herd especially when Kanyinke a livestock trader is not at home. In addition Ole Shorono will be paid a fee by the neighbouring families for collecting herbs especially the type used in making local brews for ceremonial occasions.

1.2 Family's history and movements

Kanyinke Ole Kasoe was born at Endoinyo Narasha, Olkinyei group ranch Narok district in 1958. He remembers *Olari loo Nkariak* (the year of the floods 1961) when he was a young boy. His father Mukato Ole Kasoe (*Oltiyeki age group*) died before he was born, he grew up with his mother Nemamai his three brothers and three sisters and an uncle. The family moved in 1968 to Olesere, northern end of Koiyaki group ranch in search of better pastures and to avoid the Rinderpest (Lipis) outbreak. Due to water shortages at Olesere the

family moved south to Talek to be near Talek River where the livestock can drink, in the next six years the family moved five times between Talek and Olesere, staying at Olesere where pastures are plenty during the rain season and at Talek during the dry season. They would move out of Talek immediately it rains to avoid Tsetse fly and stay at Olesere as long as there was water available from the temporary water pans.

In 1974, following an outbreak of East Coast fever, the family moved north to Emurua Dikirr in Olkinyei group ranch where they stayed until 1976 before moving to Talek. The family stayed at Talek only occasionally moving out to Ilchurra 5 km away when there were conflicts between the community and the Kipsigis over livestock theft. During their stay at Talek, Ole Kasoe remembers that there was very little settlement in Talek area and even then the families that stayed in Talek only did it temporarily before moving north. In 1978 the family moved to stay in Emarti near Sekenani where ole Kasoe was circumcised, two years later Kanyinke and his brother moved to Ng'ueng'ueny a few kilometres from the current boma location. They changed their boma in 1979 and again in 1997 when he separated from his brother to develop the current boma. The last boma changes were occasioned by accumulation of dung in the boma and ageing of the huts. Ole Kasoe plans to stay at the current boma until the group ranch committee allocates him his share of land. He speculates that his land might be either around Olesere or Emarti since this is the area where the rest of the Kasoe extended family stays.

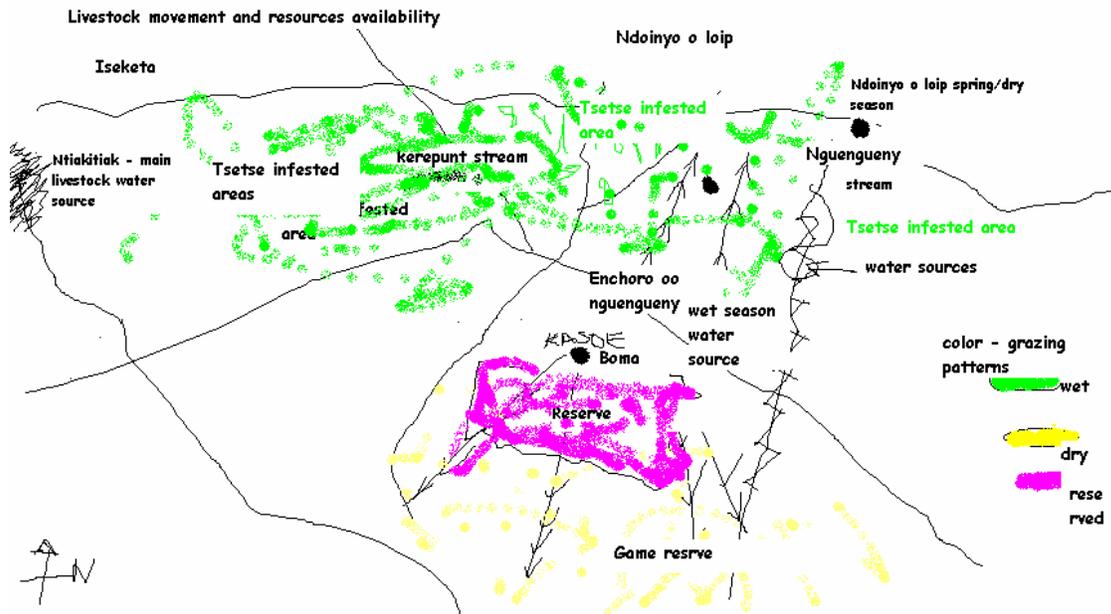
Recent movements

Year	Moved to	Reason for moving
2003	Moved to ng'ila in Siketa within Koiyaki group ranch	To seek better pastures
2002	Moved to Enkikwei within Koiyaki group ranch	Avoid tsetse fly
2000	Moved to Lolgorian	Due to a severe drought
1995	Lolgorian	Drought
1984	Emarti	Drought
1975	Olare Orok	Avoid tsetse fly
1961	Lolgorian in Transmara district	Due to drought

Significant events

One of the most significant events recalled by Kanyinke Ole Kasoe is *Enjore* (cattle raiding) he participated in with his age mates. In 1980 immediately after he graduated as a warrior, with his age mates they crossed the Tanzanian border to raid cattle during one of such raids they were attacked by security personnel who killed two of his colleagues. In a similar event they came back home with 7 cows each, the cows become part of his starter herd. Another event he remembers was when he married Norkuashen in 1978. While trading livestock at Narok he learnt that there were plans to give out Norkuashen to someone else, he had to make quick plans to collect her from her home without going through laid down tradition. A lion attack that left him injured on both hands and legs remains in his memory since it happened in 1982, his age mates killed two lions during that day.

Map 1: Family movements and resource map



1.3 Family identity

Ole Kasoe feels that his family is largely traditional. They have not modified the hut type, boma construction style, and type of clothing. However the family has diversified the diet to include non-traditional foods such as ugali, rice, potatoes and vegetables. Ole Kasoe points out that he will take all his sons to school and may be a few girls because he has realised the importance of education especially for boys who will stay home to help the family. He also intends to maintain all cultural practices except piercing of the lower ear (Eudoto oo Segeruani).

1.4 Decision-making/management roles

Kanyinke is the key decision maker in the family. He controls decisions about livestock management including treatment, sales and gifts giving. He informs the wives when the decisions are already made. He takes active responsibility for herd management, whereas his wives are responsible in managing milk and milking animals. Each wife owns livestock but cannot sell them or give them away as gifts. The wives, however, can and may exchange livestock among themselves if they wish. The wives control all what happens inside the house including building the houses, taking care of the children, cooking and preparing hides and skins for sale. Kanyinke Ole Kasoe decides who looks after cattle and shoats and grazing routes on a daily basis except when he is away in which case his wives take the responsibility.

Ole Kasoe's other duties include herding, treating livestock, guarding at night and buying family food at Talek market. His day starts at 5:30am when he wakes up to inspect the boma to ensure that all went well the previous night. He spends the early morning within his herd treating them and releasing cattle and later sheep to graze in the nearby areas. During the hot part of the day, he sleeps or visits his neighbours to discuss various issues that affect the entire community. He reports back home at four o'clock in time to supervise the arrival of sheep and goats and later cattle into the boma. He occasionally spends a whole day herding especially during the dry periods when cattle are grazed away from home or further inside the National Reserve or when Ronkorua his eldest son is at school. When he is not at home, he will be involved in livestock trading or visiting other bomas to share in celebrations, meetings, or just to have fun drinking with his age mates. Every Thursday of the week he or one of his wives would go to the market 8 km away to buy food, clothing and other household items for the family or drugs for his livestock.

His children especially the sons aged over 4 years help in herding. Ronkorua, Lekai and at least one of the women are involved in herding cattle when school closes while as Lesitany and Kerempe looks after the sheep and goats. The girls help their mothers in household chores and take care of the young stock (calves, and kids) that is left at home near the boma. Ole Shorrano mainly helps in herding and fencing the boma.

1.5 Family Relationships

Family members maintain very close working relations, although each woman is responsible for her specific duties such as cooking, cleaning and taking care of the children, they join forces in activities such as cleaning sheep and goats pens, herding

livestock and plastering their houses. They also help and exempt each other from demanding roles when one are either sick, pregnant, raising a young child or are away from home. Such roles will include plastering the house, taking care of sick animals, collecting water and firewood, and herding. They would also take turns in going to the market and herding.

The family has also maintained a close relationship with the rest of the community. During ceremonies such as naming of children and circumcision several members of the family join the community in the celebration and undertaking associated tasks. Ole Kasoe is highly regarded by the age mates and is always invited to officiate many of this ceremonies, the number of livestock he has given out as gifts is a testimony to this. He is also called whenever there are conflicts and fights between community members in conflict resolution. His home is an important meeting point for his age mates who occasionally visit to discuss issues such as grazing patterns and livestock movement decisions. He however does not hold any political or traditional position, his step brother who lives at *Emarti* 20 km away is a signatory to the Maasai Mara group ranches committee, a position he feels has not benefited them in anyway except on few occasions when they seek financial support for activities such as to treat a sick family member.

A new activity that women at Ole Kasoe's family have recently engaged in and participate with the rest of the families is termed *Emisa* (a table) this is a money raising activity undertaken either before a girl is married or on request for any purpose including buying utensils for a family, this activity has brought together women within the community. All the women at Ole Kasoe family recently benefited each receiving 7 cups, a mug, a kettle, Sufurias, and a basin following a successful *Emisa* they organized.

Cooperation with neighbours has not changed much since land subdivision was started in the group ranch. However, large families no longer live in one boma as people are placing themselves in strategic positions where they expect to get their pieces of land. The reduced number of people in each kraal is disadvantageous since sharing of available labour is diminished.

1.6 Languages spoken by the family

All members of Ole Kasoe's family speak Maa. Only Ronkorua and Noonyuat speak little Kiswahili. The inability to speak other languages does not seriously affect their relations with their neighbours since most of them are Maasai. The family is however limited in their relations with outsiders especially during market days and interaction with tourist operators where they have to rely with outsiders for interpretation. Ole Kasoe also has to rely on his trading partners to sell livestock when in Dagorreti and Ewaso Ngiro market. Because of this disadvantage plus other factors such as the risk of carrying a lot of money in cities and inability to be away from home over long periods he has recently opted to sell his livestock at Aitong centre 25 km away where most traders are Maasai.

1.7 Family's Health

The Kasoe's family does not have a member with serious health problems. The family members occasionally suffer from Malaria (*Oltikana*), Brucellosis (*Nang'ida*) and Typhoid (*Nenkare*). Affected family members are treated at CMF talek dispensary while serious cases are treated at CMF clinic at Ewaso Ngiro or Narok district hospital. They also use herbs from tree barks or roots from *Osokono*, *Olamuriaki*, *Orkonyil* and *Orguenguenyi* (*Acacia tortilis*) trees to treat malaria and *ole parmunyo* and *Osanankururi* to treat common cold. When children are 3 months old milk given to them is mixed with extracts from *Orupanti* or *olmisigiyoi* to avoid protrusion of stomach and general health.

Ole Kasoe also thinks that children now grow up faster, girls used to grow much faster than boys but boys currently seems to catch up and there is only a small difference with both sexes reaching the age of circumcision almost at the same time

ole Kasoe



Family assets

Ole Kasoe's family owns an undeveloped plot of land in Talek, although there are no immediate plans to develop the plot or to sell it. Kanyinke is also registered as a member of Koiyaki group ranch; because the ranch is being subdivided he expects to get 150 acres of land when subdivision of the entire ranch is complete. Other family assets include two veterinary syringes and a cattle spray pump.

LIVELIHOODS

1. General

Livestock is the major source of livelihoods for Kasoe's family. Ole Kasoe made a decision to keep his livestock because it is the only inheritance he received from his parents, and the only livelihood activity he has enough experience to undertake. When he separated from the rest of the family he had 200 cows. He will do everything to maintain this level unless a calamity strikes. He also keeps livestock because he feels it is the only way he will be respected in the community, besides this, livestock is a source of food for the family and he also requires them for customary practices such as payment of dowry, gifts to friends and relatives. Ole Kasoe claims that his livestock is a mobile 'hospital,' products such as urine, fat, skin, bone marrow and dung are used in treatment of various illnesses. He claims that without livestock products such as meat and bone most herbs are useless, this is why almost all herb extracts are boiled in meat and bones to make health-giving soup.

Photo of livestock



The family stock is comprised of cattle, sheep and goats. They keep cattle mainly for milk and occasionally sell to raise money for demanding activities such as treatment of a sick person and raising capital for businesses. Cattle are only slaughtered during important ceremonies where a large number of the community members are in attendance. Sheep

and goats are kept for meat and are occasionally slaughtered for the family when there are important visitors or soon after birth. Sheep are very important because they are prolific breeders and are able to multiply faster. Goats are also kept because they are resistant to most diseases and have better meat and they fetch better prices in the market.

The family recently diversified into other income generating activities when they realised that returns from livestock were not sufficient to cover the family's needs without depleting the herd. These new income sources include selling of artefacts and curios (crafts) to tourists, livestock trading and receiving revenue from Osokonoi and Enkiwancha campsites at Olare orok inside the Game reserve.

2.1.1 Ranking of livelihood activities

Ole Kasoe's family views livestock as the most important source of livelihoods for the family because it feeds the household, acts as a savings bank, and is culturally important. Kanyinke himself ranks livestock trading as second in importance because the profit from his trading activities means that he no longer sells his livestock to meet daily family requirements. He also uses the profit to purchase household items and veterinary drugs for livestock. The cash accrued from the livestock trading is also used in building up the family herd. On average, five to ten animals are sold in a market at *Aitong* centre and the family earns from KShs. 500 to 2000 as a profit per animal sold; the transaction normally takes place twice a month. The remittance from artefacts and curios sold to tourists was ranked number three; Noorkuashen, Kanyinke's first wife is the one involved in this business at *Kolong* cultural boma. The money remitted is used to purchase foodstuff and drugs for human and livestock. On average, this amount KShs. 4000 – 5000/week during the peak tourists season (July-September and December) and less during the low tourist season.

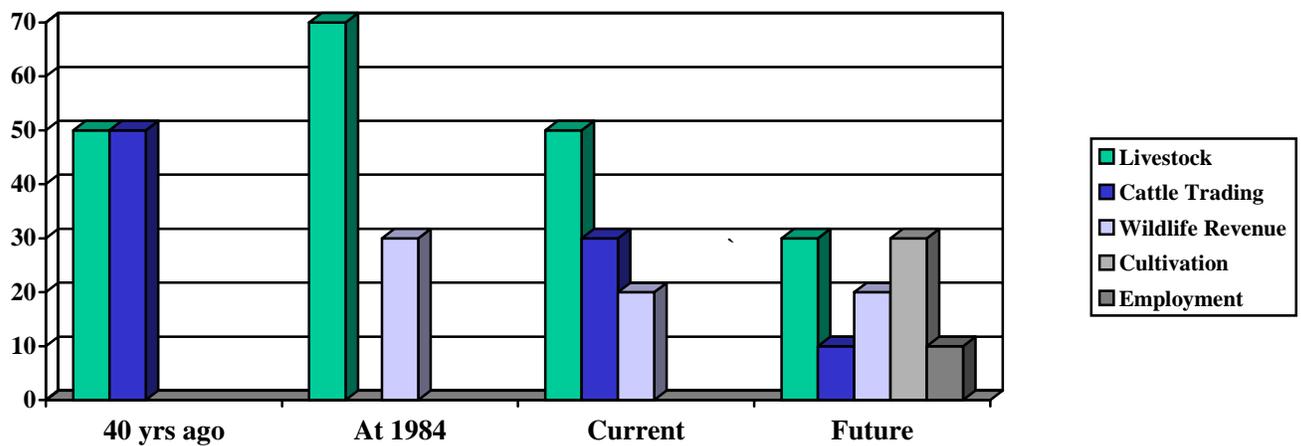
Kasoe's family also receive payment in form of shares from the two campsites at Olare orok inside the Reserve (*Osokonoi* campsite– with 14 members, and *Enkiwancha* campsites – with 12 members). The family receives up to KShs. 10,000/camp/year and the last time they received the share was in July 2003. The remittances from these ventures were ranked number four in importance. This is because shares allocation and distribution is not regular and is highly affected by the number of tourists in that particular season. The money however is received as lump sum hence is often used to build the livestock heard. The controversy over ownership of *Olkiombo* land has affected this year's distribution.

Table1: Livelihood ranking of Ole Kasoe family

Source of livelihood	Rank	Reason(s)
Livestock	1	<ul style="list-style-type: none"> - Income - Cultural values - Source of capital for livestock trading and purchase of artefacts - Milk, meat and other products
Livestock trading	2	<ul style="list-style-type: none"> - Regular cash - Income used to buy drugs and livestock and meeting family

		health costs
Remittances from Sale of artefacts at cultural boma	3	<ul style="list-style-type: none"> - Regular - Used to purchase food - Meeting small expenses - Education of Ronkorua
Proceeds from Camps	4	<ul style="list-style-type: none"> - Lump some used to purchase livestock and meeting large expenses - Not regular and depend on unpredictable tourist season

Changes in relative importance of different livelihood activities



Notes:

Kasoe’s Family reported that they would like the wildlife revenue to increase in the future, as the money they get from wildlife is not affected by external factors like drought and one does not have to work for it. They also said that they would like to have more Livestock in the future so that they can sell them then invest in plots, education for his children and build permanent houses. Kasoe sees that in the future his cattle trading business would decrease as he now has more family obligations and his age is advancing.

If the land for rearing more livestock diminishes they plan to start cultivating. He plans to cultivate a piece of land at a place called Orkuroto with two of his friends (Central Koyiaki).

Note: The Wildlife Revenue includes the money accrued from the sale of beads by Norkuashen.

2.2 Livestock

2.2.1 Composition of the herd:

Ole Kasoe's family keeps cattle, sheep and Goats. The family kept 10 donkeys but were all lost (4 died of trypanosomosis, 3 eaten by hyena and he gave three to family friends). Kanyinke has increased the size of his herd from 200 cattle he inherited from his parents when he became independent 26 years ago.

photo of favourite bull



Table 2: Kasoe's livestock numbers at the boma at Ng'ueng'ueny Talek

Type	Number
Breeding bulls	3 big and 16 young
Steers	13
Lactating animals	42
Calves	60
Others (Heifers, Non lactating adult cows, weaned calves)	245
Total of all cattle at boma	360
Goats	30
Sheep	280

The family keeps more sheep than goats because goats are less tolerant to trypanosomosis and does not reproduce so quickly. Early this year the family had over 500 sheep, they lost over 250 sheep to a disease suspected to be *nado e monyita* (Enterotoximia) characterised by bloody diarrhoea loss of body condition, dullness and sudden death.

Kasoe's family also owns four dogs that play an important role in security of the boma especially during the night.

Satellite Herd

As a strategy to avoid and cope with different unforeseen events, avoid some diseases and as a strategy for hard times such as droughts, and also to maintain close ties with family and friends, Kasoe's family developed separate herds of livestock in different location; this is hereby referred to as *Satellite Herd*. A number of animals are given out to friends for different purposes with Ole Kasoe spending time visiting each of the herd. A total of 65 cattle are out kept as a satellite herd with other families, below is a list of the satellite herd with some reasons for keeping away from the rest of the herd given by Kanyinke.

Table 2: Satellite Herd

Number of cattle	With (name and place)	Reason (s)
11	Noorkuashen (1st wife)	Milking for children attending school and living with 1st wife
5	Ole Letoluo (Kerempe parents (5 th wife)	Support to poor in-laws
28	Liamam (olare orok)	To avoid Tsetse fly and Trypanosomosis and weaning calves
6	Ole Lepore (Empopongi)	Poor family, friends to the family
4	Kanyinke's sister (Olempalakai)	Given to a sister for milking
6	Friend at Emarti	Calf received as Payment from sheep sold, later sold the calf and bought more
3	Ole Letoluo (At mpuuai)	Poor friend
65	Total	Family Coping strategy

2.2.2 Livestock mobility

The northern pastures between the homestead and Isiketa and *Endoinyo Oloip* become inaccessible in the wet season due to high infestation of tsetse flies. The flies prevent cattle from grazing especially during the hot hours of the day as their biting disturbs the cattle. These pastures are only used early in the morning or late in the day during the very dry season when pastures elsewhere are depleted. Treatment of livestock from Nagana becomes a very expensive activity when cattle are grazed on the northern pastures.

The family lives 200metres inside the park and this gives them a good chance to utilise the resources available in the reserve. The reserve is an important source of water and pastures during the dry period and is the only part of the area with very low tsetse population hence a refuge for the family livestock. The family livestock commonly uses the salt lick at the reserve.

The dry period starts soon after the cold month of July through to November, during this time, livestock especially cattle will graze northwards towards Isiketa and *Endoinyo Oloip*

or southwards further into the reserve. When the cattle are grazing on the northern woodland, they would go a day without drinking water due to lack of a water source. They would drink at Ntiakitiak River when they graze towards the park. Sheep and goats will graze around the boma all year round moving further away from the boma as the dry spell progresses.

In the dry season herding becomes a major activity for Ole Kasoe and Ole Shorrone because livestock will increasingly walk for long distances and will almost on a daily basis graze at the reserve. If the security personnel find the herds at the reserve, the owner is fined Kshs. 10,000 per herd; this makes herding quite difficult during the dry period and they fear that the loss of access to the reserve resources will affect their livestock. At the same time to meet the increasing food requirements of the family, one of the men will also visit the market to purchase foodstuff for the family. It was for this reason that ole Kasoe requested Ole Shorrone to come and live with the family.

Ole Kasoe will at these times stop his trading activities and almost entirely herd his cattle. During really bad times, Ole Kasoe will migrate to settle further inside the park along the Ntiakitiak River or towards Enkikwei to access the only green pastures at Musiara marsh near the northern end of the Maasai Mara National Reserve. Another drought coping mechanism he has employed in 1994 and 2000 is to move to Olorikoti (Lolgorian) while there he found it difficult to herd because the area is heavily forested. He lost some of his livestock while herding and people stole two.

2.2.2 Improved livestock breeds

Ole Kasoe is aware of improved breeds of livestock. He has seen them at a farm in Nkorkorri at the northern end of Lemek group ranch and in Nairobi when he was a cattle trader.

The family almost entirely keeps indigenous livestock breeds although they introduced a Sahiwal cross bull in 2002 from Lolgorian, it has since died because of disease suspected of being black quarter. The family bought a Red Maasai ram in 2003 to improve the sheep and no improvement of the goats was undertaken.

For Kasoe the disadvantage of the improved breeds include; the inability of the animal to withstand droughts, low tolerance to diseases and high management requirements.

He notes that despite these disadvantages the animal breeds fetch better prices in the market, grow faster and are better in production of meat and milk compared to his herd. Ole Kasoe would want to introduce them into his herd when he gets his piece of land where he can manage them well. Due to the fact that there will be no space for keeping many livestock following privatisation of land, he plans to introduce improved breeds to maximize on the above advantages.

The main source of information for Ole Kasoe's family is the oral news (*Ilomon*) he gets while travelling to different places. He also inquires from those with improved breeds like ole Keiwua's ranch on information required from time to time.

2.2.3 Disease control

The major livestock conditions in the area according to Kanyinke included (for cattle) East Coast Fever (ECF), Nagana (Trypanosomosis), Foot and Mouth disease (FMD), Olmilo (Heart water or Cerebral Bovine Theileriosis) and Olodua (Rinderpest). Common diseases that affect sheep include *Olodomyita* (Enterotoxaemia) a very serious disease that has killed half of the family's sheep. During the study period alone, 5 sheep died of the disease at Ole Kasoe's boma and nearly all his neighbours lost a sheep each day. Other diseases include Blue tongue and *Oltikana* (Anaplasmosis). The family uses the antibiotic called Oxytetracyclines (OTC) to treat a number of diseases including: East Coast Fever, *Olodomyita* (Enterotoxaemia, and *Olmilo* (Heart water). They also use Veriben (or equivalent) and Novidium (both of which are anti-trypanosomosis) to treat Trypanosomosis transmitted by tsetse fly. Ole Kasoe concludes that Trypanosomosis is the most regularly treated disease on his herd, it appears to be increasing and with no place to move to, he finds it the biggest challenge to his livelihood. He has given up on his sheep recovering from an outbreak of enterotoxaemia having been informed by his neighbours that vaccination is the only way to prevent the outbreak. The family last vaccinated their cattle in 2002 against CBPP.

They de-worm the animals with Nilzan and use different Accaricides for tick control. Kanyinke, having not gone to school has no ability to take or read instructions on the use of veterinary drugs. Kanyinke thinks that most of the currently used veterinary drugs are not effective in treating livestock diseases the way they used to be when he was growing up; either, he thinks that probably the quality of these drugs is poor. Again, this may be due to fact that he himself cannot calculate the right dosage of drug to the right weight of the sick animal. Mixing of different drugs which was noted while there may be the cause of the noted less efficiency of vet drugs used among the community members. In general terms, this may also be contributed by the lack of veterinary extension services in the area which is leaving community members to opt for trial and error practices in treating livestock conditions which in turn may be creating a strain of micro-organisms which are resistance to drugs (due to prior exposure to non lethal doses) used.

photo (ole Kasoe treating a sick cow)



2.2.4 Herd productivity

Table 3: Livestock Distribution: Cows Milked and average daily milk quantities by each of Ole Kasoe's wives

Wives	Milking Cows	Milking Cows	Milk quantity (litres)/day in 2004	
			Dry season	Wet season
Years	2003	2004		
Noorkuashen	9	4	6	9
Nailepu	8	12	4	20
Naloakiti	9	9	6	22
Noormedoti	8	3	2	23
Kerempe	7	9	4	20
Kijoolu (Ole shorono's wife)	3	4	5	8
Total	44	46	27	102

Note: Milking animals increase in number during the wet season. Currently (August 2004) the women do not milk their sheep because of the deaths from a disease suspected to be Enterotoximia. Ole Kasoe has since stopped breeding of sheep till the situation improves. They have also never milked their goats.

Table 4. HERD DYNAMICS (in the last two years 2003-Aug 2004).

Species	Bought	Sold	Died Of Disease/Drought	Predation	Gifts Out	Born	Net change
Cattle	7	27	16	2	8	60	+21
Sheep	50	-	250	5	55	210	-50
Goats	-	-	24	-	-	20	-4
Totals	57	27	290	7	63	290	

Ole Kasoe also think that over time, there has been a general decline in livestock productivity, cows no longer produce as much milk as before, and the number of calves born by one cow in its entire life has declined. He remembers that calves used to die due to suckling too much milk, whereas now he often has to feed several calves as cows are not producing enough. A number of cows are not milked today because they do not produce enough milk for their calves. Ole Kasoe wonders whether *God* has become a politician (*Enoto enkai siasa anaa iltung'anak!*), there are now too many new diseases affecting his livestock and his family members, frequent drought periods and even flooding.

2.2.5 Markets and the Commodisation of pastoralism

Ole Kasoe views his livestock as a source of food and prestige but more importantly as an economic activity. Although cultural exchanges of sheep for cattle and big steers for smaller heifers does still occur, both side of the transaction attempt to get value for their livestock. The only exception is exchanges of different livestock species for ceremonial purposes where no community member is expected to refuse the exchange even if the animal he receives is small. Initially as ole Kasoe would put, cattle trading was for the poor (*ore apa biashara naa enoloomena*) this has changed where it is mainly the young people from families that own large herds that are involved.

They family normally go to the market at Talek on Thursday about 6kms away from there home. Nailepu and Noorkuashen frequently visit the market to shop for the whole family. Ole Kasoe being a livestock trader frequents Livestock markets in Aitong' 20 Kms away and Ewaso ng'iro 118kms away. He also occasionally goes to the Dagorreti market in Nairobi.

2.2.6 Future for livestock

Ole Kasoe wants to maintain a minimum of 200 heads of cattle up to a maximum of 1,000. He is not very certain that his livestock can finance his future plans especially if there are severe droughts. If his herd reduced by half he would rely on shoats by selling them to finance the needs of his family and also their milk. He would also increase his effort in his livestock business to be able to sustain his family.

In the event that his livestock reduces to half the current number, ole Kasoe would sell 10 heads of cattle and send one of his wives to operate a shop at Talek centre. This he hopes will contribute immensely in feeding his family. When his sons came of age the family will

depend on them, as those who will have been learned will get employed and those who will not have been educated will get into livestock trading.

2.3 Cultivation

Ole Kasoe's family do not do any cultivation owing to the fact that they live 200 metres inside the park, and the wild animals in the vicinity make cultivation impossible. Once they are allocated land they plan to use it all for livestock rearing.

2.4 Off farm income

2.4.1 Campsite share system

The process of registering with a campsite starts by a community member identifying a site suitable for camping; he would then clear it and seek permission to manage it from the group ranch committee. Alternatively he would request members of an already existing campsite to accept him as a new member. Ole Kasoe became a member of two campsites located at the Mara National Reserve using the second method. He applied and was admitted as a member of the campsites with 10 and 8 other people respectively. The group then approached the senior warden through the area councillor to seek permission to manage the camp. Admitting the Councillor as a member of the campsite always had an added advantage in pressing the Council to give permission. Once the process is complete, the members receive a letter from the council and hence receive authority to manage the site and receive rent fee. The game viewing fee, however, remains payable to the park authority.

The camps in which Ole Kasoe is a member is used by different groups of tour operators who pay the rental fee to the group every end of the tourist season in September and February. The members received their last revenue in September 2004. The amount they receive depends on the number of tourists who stay there; it usually ranges between 4,000-8,000 Kshs per campsite per year. Though he is optimistic that he will continue to receive the revenue, changing political circumstances pose a threat to this family revenue source.

2.4.2 Remittances

No member of Kasoe's family is on salary but the family receives remittances from artefacts and curios sold to tourists by Noorkuashen, Kanyinke's first wife, at the Kolong cultural boma. The money remitted is used to purchase foodstuff and drugs for human and livestock. She remits almost half of her average income (KShs. 4000 – 5000/week during the peak tourists' season (July-September and December) and less during the low tourist season) to the family on a weekly basis). The family also receives 20,000 per year from the two camps where Ole Kasoe is a member, money mainly used to buy livestock

Table 5. Women's seasonal calendar

Washing clothes				
Firewood collection				
Herding livestock				
Watering livestock				
Child care				
Cooking				
Milking				
Cleaning sheep pen				
Ceremonies				
Cleaning houses				
Housing repair				
Beadwork				
Cleaning Calabashes				
Collect Household water				
	Early Rainy season Nov – Dec (<i>Oltumure</i>)	Short Dry season Jan-late March (<i>Oladalu</i>)	Long rainy season April-June (<i>Enkokwa</i>)	Hot dry season June- November (<i>Olameyu</i>)

Notes:**Herding**

Women herd livestock when school is open and Ronkorua has gone to live with his mother at Kolong to attend school, they also build houses once every 5-7 years and any time they move the boma. Construction of the house is a very demanding activity for the women as men do not give a hand and a lot of wood, soil and water is required.

The dry season

During the dry season fetching water becomes a difficult task because the nearby water pools and stream dries up. They have to walk 4 km to Impuuai or to Talek River to get water for domestic purposes and for livestock left at home. Cooking is also a major activity during the dry seasons because there is no enough milk for the family. At times, when food is scarce, they boil herbs and mix them with milk and while going to the river or for firewood they eat wild fruits in the riverine bushes. The dry season also increases the workload on the two men Ole Kasoe and Ole Shorrano. Herding becomes a major activity for the men because livestock will increasingly walk for long distances and will almost on a daily basis graze at the reserve.

On the other hand general cleaning, cleaning of the sheep pen and plastering of the huts become less regular during the dry season

The rainy season

Plastering the houses with dung is a major activity during the wet season since it is undertaken every time it rains to prevent roof leakage. Naloakiti recently acquired a few iron sheets that she used to cover the section of her house occupied by goats. Cleaning the goats, sheep and calve pens becomes a daily activity. Milking cows increase in number and the milking environment becomes difficult, the young boys will milk sheep and goats and the small girls will help their mothers to milk.

On the other hand there is less cooking as milk is in plenty and hence less time is spent cooking and going to the market. Herding becomes easy as adequate pastures and water will be available around the boma. Ole Kasoe and Ole Shorrano will spent less of their time herding with ole Kasoe resuming his trading business. The spring 200 metres away will provide enough water for the family for domestic use and the pools at Kerempe and Ng'ueng'ueny stream will provide adequate water to the family herds. There is less livestock to be treated and so Ole Kasoe will afford to be away from home for longer times.

3. NATURAL RESOURCES:

General

The family feels that the area is relatively well off for natural resources and especially because of the low density of people and the existence of the reserve, their almost unlimited resource. Ng'ueng'ueny is dissected by two seasonal springs Ng'ueng'ueny and Kerepuut and Ntiakitiak and Olare orok are accessible. The area is mainly open acacia woodland with adequate pastures most part of the year. There are no other human settlements south of Ole Kasoe's boma within the reserve and a few bomas 20km north of the boma. During the dry season the area suffers acute shortage of water as the water pools along the streams dry up. Pastures get depleted during the late wet season by the thousands of wildebeest arriving from the Serengeti on their annual migration to the Mara. Firewood is readily available from the acacia riverine vegetation that is often pulled down by the

elephants. The main salt lick for the family's herd is found 15km into the reserve at *Enakorikor* and *embolie oo nkidong'i* along the Ntiakitiak stream.

3.1 Land ownership

Ole Kasoe's family by virtue of being registered members of Koyiaki group ranch expect to get a share of land when land demarcation is completed. As the only registered member of the family, he expects to get 150 acres of land. He expects that his parcel of land will be between Olesere and Emarti where his other brothers expect to get land. He also plans to buy 150 acres by exchanging it with his livestock at a cow per acre. He thinks that the sale of land by his community members is not a good thing stating *meetai entoki nalang' enkulupuoni, amu ninye eiki ntare o inkishu naa ninye sii Kenya kinukarieki* (nothing compares to land it's the delivering ground for sheep and cattle and when one dies it's the final resting place).

Ole Kasoe is concerned with the land subdivision and allocation in the group ranch. The land subdivision and allocation has been hi-jacked by non-committee members who allocated their relatives and political associates land on important wildlife areas to benefit from revenue from tourism. The allocation was done in total disregard of the families that were already living on the land. He complains that some members already got their full share near the reserve and are promised some more land on the areas they live in. Some have already received larger parcels than agreed by the entire community while others are yet to get any.

3.1.1. Advantages of land subdivision

Ole Kasoe sees some advantages of land subdivision, he is quick to point out that '*Ore eton eitu edung'i enkop ekipuopuo ake anaa iinkati*' (before our land was subdivided we would roam around like wildebeest. Following land subdivision each person will have a place of his own, where he can build a permanent house, or cultivate. He hopes privatisation will enhance the growth of better infrastructure in the area. The poor will also benefit, as those with land and no livestock will sell or lease their parcels in exchange for livestock.

3.1.2 Disadvantages of land subdivision

Land subdivision will however lead to a decrease in livestock numbers, as their movements will have been curtailed by the small pieces of land and lack of drought refuge areas. It may enhance individualism amongst the community members or encourage land-selling, leading to poverty among some families. Due to land subdivision in Koyiaki group ranch, some people have set aside a conservation area where livestock grazing is discouraged. Within this conservation area there are salt licks and watering points that are critical to livestock keeping. Land subdivision has also changed revenue distribution mechanism. Those whose pieces of land do not fall within the conservation area have been excluded from revenue sharing yet wildlife still occur on their land. Ole Kasoe, the only person registered in the family, expects to get his piece of land in February 2005.

The family knowingly is currently living 200 metres inside the reserve. They moved into this land when there was speculation that the land was curved out of the reserve together with the Talek area in 1984. The reserve management has not attempted to evict them but their livestock are arrested when they move further inside the park.

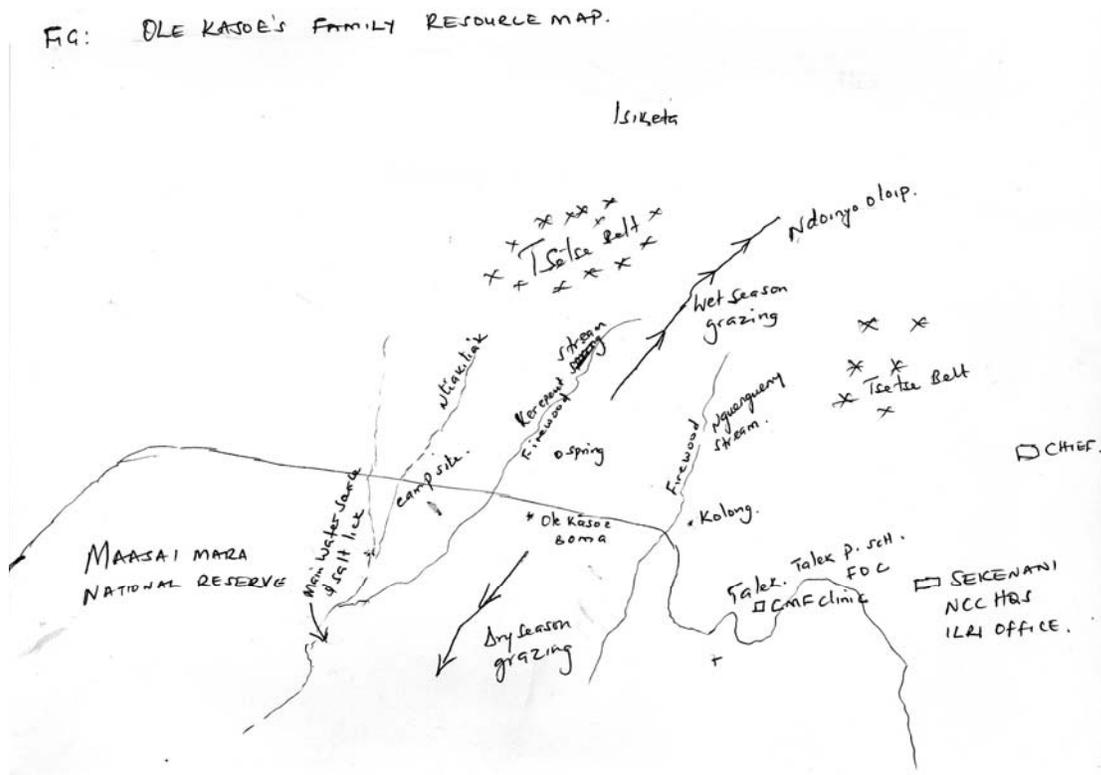
3.2 Resources and Seasonal availability

Ng'ueng'ueny experiences four seasons that affect resources quantity and quality. The short rain received between November and December brings the lush pastures (*Mpejot*) needed by the sheep and their lambs following the burning heat in September. The long rains are experienced between April and June a time when pastures and water becomes readily available. During this time, livestock will graze around the boma and drink water at the pools in the nearby Kerepuut and Ng'ueng'ueny streams. The availability of adequate pastures and water is short-lived, as the wildebeest migration will arrive in August to clear it. The dry period persists soon after the cold month of July through to November, during this time, livestock especially cattle will graze northwards towards Isiketa and Endoinyo Oloip or southwards further into the reserve. When the cattle are grazing on the northern woodland, they would go a day without drinking water due to lack of a water source. They would drink at Ntiakitiak River when they graze towards the park. Sheep and goats will graze around the boma all year round moving further away from the boma as the dry spell progresses.

Over the last 20 years Ole Kasoe has noticed a drastic decrease in rainfall amounts and changing trend. The long rains are starting late and the short rains hardly last a month. The dry period is now longer as compared to when he was a young boy herding his father's livestock. The overall rainfall pattern is becoming quite unpredictable and unreliable.

Despite these changes they feel that their area receives more rains than neighbouring areas, East and North of Talek. In fact several Talek and Sekenani families use ng'ueng'ueny as a dry season refuge area for their livestock.

Resource Map



3.3 Wildlife-livestock-human interactions

Due to proximity to the reserve, almost all wildlife species utilise Ng'ueng'ueny area, in numbers similar to the reserve. The herbivores compete with the family's livestock for pastures and water and spread disease such as MCF and ticks. The predators are also a potential nuisance to the family. Ole Kasoe's family while they have experienced some of these problems associated with wildlife, they are not seriously bothered by their presence. Lions and hyena only take the family's livestock at night when they are lost in the bushes. Ole Kasoe believes that like him, wildlife have a right to live and access the resources in the area. They are however disturbed by the elephants and buffalos that keep on killing and injuring people and the community's livestock. If the flow and regularity of dividends and other revenues from tourism to the family were enhanced, Ole Kasoe will be happy to live with wildlife. The revenue (Kshs.5, 600) he received in 2002 from his wildlife association helped the family purchase clothing. However, he has not received land within the conservation area and he did not receive any revenue in 2003-4. He hopes that the creation of Koyiaki Land Owners conservation association (KLOCA), which he is a member, may open up a new opportunity for receiving revenue.

Ole Kasoe has noted an increase in elephants, zebras, Ostrich, hyenas, Grant gazelle and impala. The number of buffaloes, wildebeest, topi, lions Thomson gazelle and warthog has gone down. The wild dog has since disappeared.

3.3.1 Disadvantages of wildlife

Elephants damage water sources used by the family and their livestock. This problem is especially important because the family relies a lot on pools formed by rainwater flow on the pans where elephants use to wallow to keep cool. The elephants often attack herders and livestock and create insecurity in the area thus making herding of livestock a problem. It is also because of the elephant that the family cannot cultivate.

Lions and hyenas attack the family's livestock especially at night and Ole Kasoe has to spend sleepless nights watching at night. Because of the threats posed by predators he cannot afford to be absent from home for long periods like other cattle traders. Ole Kasoe is happy to live with all other species of wildlife especially the herbivores. The buffaloes were involved in killing people in the early 80's in *Ng'ueng'ueny* area but the 1994 drought decimated their numbers and with it the threat they previously posed.

The wildebeest migration experienced in the Mara, though a welcome to the Koiyaki landowners conservation association where Ole Kasoe is a member, brings new threats to the family's herd. The wildebeest transmit MCF (*linkati*) to the family's herd. MCF has no treatment and thus the only option available to the family is to move with their livestock during the migration. The other theory as narrated by Ole Kasoe on the spread of MCF is through Vultures who on eating the placenta of wildebeest spread the disease through their faeces. Ole Kasoe argues that his fellow community members think that the disease is spread by Monkeys (*Naayook Kutukie*).

3.3.2 Appreciation of wildlife

The family of ole Kasoe does not appreciate the presence of wildlife, as he has little hope of getting any additional revenue from wildlife now that his piece of land will not be within the conservation area. He however says the little money he gets from the two camps where he is a shareholder is not reliable as it comes in small amounts and not regularly.

Two years ago tourism revenue from the former Koiyaki Lemek Wildlife Trust was used to pay community members medical expenses and to support secondary school children. The revenue commonly referred to as Wildebeest's money is currently used to demarcate the group ranch. Ole Kasoe feels that it is only a few group members who benefit from the money since the bursary and the medical schemes were stopped since the money for demarcation is only a percentage of the revenue received.

3.4 Access and problems of access to resources

Because of having friends and family living at Olesere, Emarti and Olare orok, ole Kasoe's herd will still access pasture and other resources in the group ranch even after subdivision. The family however fears that land subdivision will reduce access to some important resources in the group ranch. A few members in the group ranch who recently received titles to land at Olare orok have threatened to move some families off their land and ole Kasoe fears that this is beginning in a chain of activities that will eventually stop livestock movements in the group ranch.

Ole Kasoe complains of the newly introduced fine for grazing in the reserve. He argues that it is unfair for wildlife to roam the entire community land freely yet he is charged Kshs.10, 000 for grazing in the reserve. Particularly he sees this fines impoverishing people

with little number of livestock, as the authority does not charge a lesser fee for few animals found grazing in the reserve.

To avoid being arrested the herders drive their livestock into the park and hide in bushes all day long. A change of strategy by the Rangers to identify the herds and arrest the owner at home has increasingly become a deterrent from grazing at the reserve. Ole Kasoe's herd still occasionally grazes in the reserve but stays near the periphery and avoids the camps and roads. His herd has also recently experienced a new limit to access resources. The elephants occasionally chase herders and the young boys fear driving cattle to some areas. In January 2004, elephants killed 2 cows belonging to his neighbour.

Firewood resources are readily available. Ole Kasoe's wives collect firewood from the nearby riverine vegetation and hill slopes. As elephants pull down tree branches as they browse, they leave behind potential firewood for the women to collect. Building and fencing materials are also found within reach.

Ole Kasoe has noticed expanding woodland where he lives. When he first came to Ng'ueng'ueny in the early 1970s, the woodland was very extensive, however in the mid 1980s and early 90s there was a considerable decline of acacia woodland as more people came in to live at ng'ueng'ueny. Towards the end of the 90's most people that came to live near Ole Kasoe's family moved mainly towards Talek and Olare Orok to avoid increasing tsetse fly infestation. Ole Kasoe has since noticed expanding acacia woodland, with it Tsetse fly problem has increased and elephants are increasingly spending more time in the area. He could not explain the reason for the expansion of the woodlands especially because the areas at the reserve nearby have not shown similar trend.

4. SERVICES/INSTITUTIONS

The table below indicates the ranking the family places on important institutions/services around them.

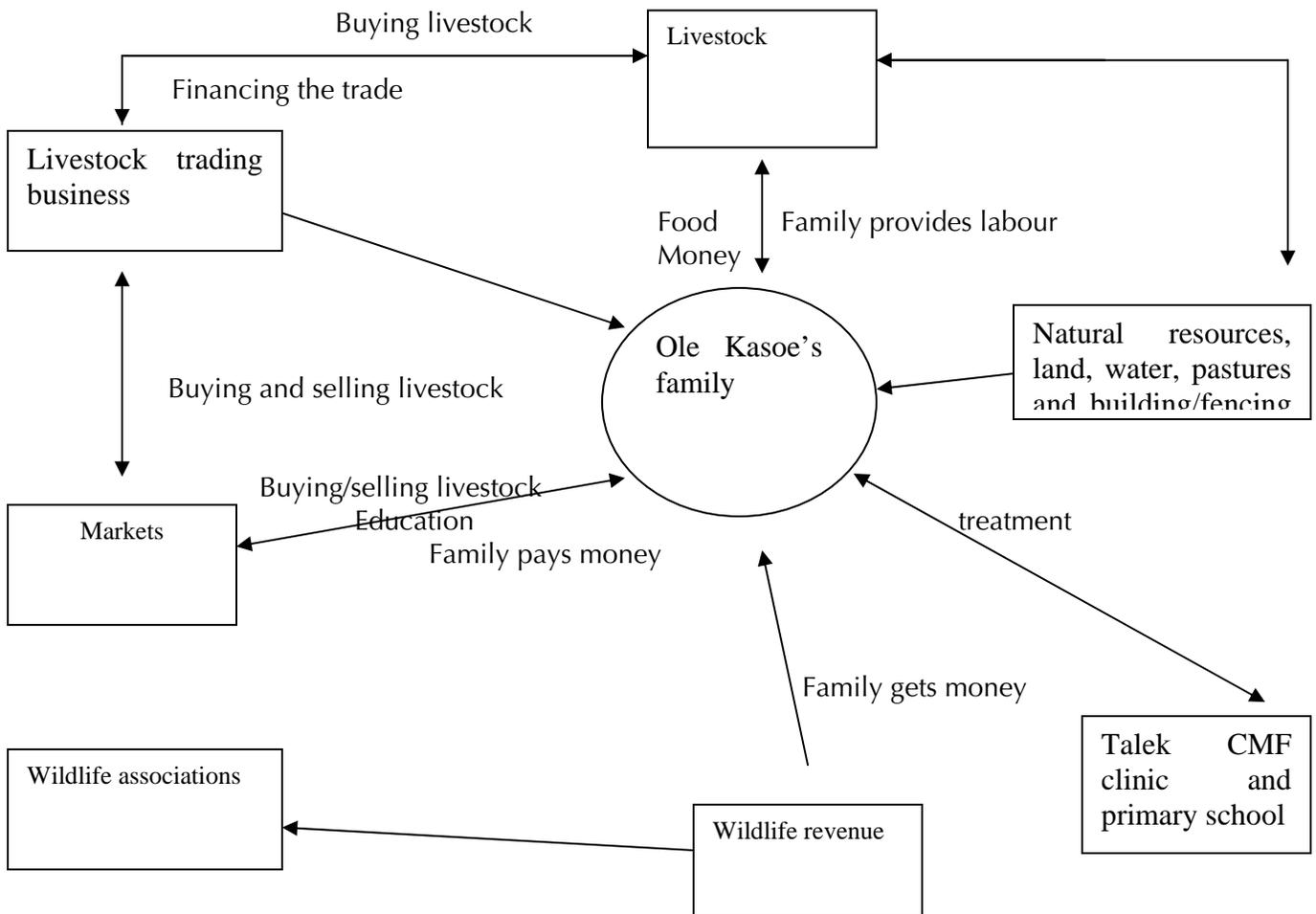
Table 6: Social services institutions and ranking

Institution –and reason for ranking	Rank	
	Men	Women
ILRI (Noomurua) - (M), involved people in their research and provide information, herding the family cattle while doing research and paid the family. Researchers are friendly and provided part time employment to community members ³ (F): See no direct benefits	1	4
Talek CMF Clinic: Treatment of family members at Talek and Ewaso ng'iro	2	2
Talek Primary school: Women seems to value education more than Kanyinke, Ronkorua attends class 2 at the school and his father plans to take all his sons and a few girls to this school	3	1
Market: Access to foodstuffs, buying and selling livestock.	4	3
NCC, GoK, Campfire		5
Campfire: Revenue from tourism, community projects on water supply	5	
Koiyaki Land Owners Conservation Association: Member, Potential revenue and political reasons	6	
GoK: Security, Administration (Chiefs), regulating livestock marketing through establishment of a cattle traders association. Government service has declined; No veterinary services and poor infrastructure	7	
Narok County Council: Security at the reserve has stopped Kuria people from stealing livestock. However Game Rangers arrest livestock at the reserve and reserve management has increased charges by 500% to Kshs. 10,000. Revenue from Maasai Mara Group ranches not reaching the family.	8	

NB: Ole Kasoe received Kshs. 23,000 from the former Koiyaki Lemek Wildlife Trust for the treatment of his son Munke in 2002 in addition to getting an annual dividend of Kshs 10,000. He feels that the breaking of the organization was not a good decision since he has not received any money ever since.

³ Note because ILRI was facilitating this portrait the importance of its services could be overstated.

Livelihood Diagram



5. Drivers of change

The family identified two key drivers of change: tourism and land subdivision.

Tourism has led to Norkuashen leaving the boma to live at the cultural boma so as to benefit from the sale of artefacts. This has resulted in increased income, access to schooling but as shortage of labour and a division in the family.

Land subdivision is a major driver of change for the family. It may mean they lose their access to the reserve that has been very important to the livestock. It has also already changed the way livestock revenue is distributed.

6. Plans for the future

Because of land subdivision the family predicts that they will be forced to move to a new location where they will start their boma all over again. Ole Kasoe plans to build improved houses perhaps with Mabati roof since there will be security of tenure. However, they fear that there will be fewer resources the family will utilise for their livestock; the reserve has offered them almost unlimited supply of pastures and access to water. They are also

excited that they will be close to the rest of their extended family for the first time in many years. Ole Kasoe hopes that most of his sons will be in school and perhaps he will marry off some of his daughters. He hopes that he will sell a few of his steers to build his plot at Talek to provide more income for his school going children. Overall he expects his herd to decline as he sells them to feed his growing family, educate his sons and mainly because there will be less pastures and less mobility to support his herd.

CONFIDENTIAL

SARAGI OLE NOOMEK'S FAMILY PORTRAIT



2004

1.0 The family

Saragi Ole Noomeek from the Orok Kiteng' clan (Sub clan Ilmakuperria) was born in 1947 in Engong'u Narok, Oloitokitok division, Kajiado District. He is a Maasai pastoralist with no formal education. He belongs to the Iseuri age group. He is the first-born son from the fourth wife (Nataana) of Noomeek Ole Lialo. Currently he lives in Inkiito area within Olgulului/Ololarashi Group Ranch, located 4 km north of Amboseli National Park.

Saragi is married to five wives, Moinan, Telek, Nooseuri, Noolosho, and Nooltetiain. They have 31 children, 19 sons and 12 daughters aged between 34 and 2 years. He also lives with a five-year-old grand daughter, Mpute, the daughter of Saragi's son Nekinyei and his first wife, Moinan.

Out of the 31 children of Saragi, one son, Katende, has become independent and has moved 50 km away with his family to settle at Imbirikani Group Ranch. Six of Saragi's daughters are married and have left to establish their own families in the neighbouring communities. They maintain relations with their family. Occasionally, their mothers go and spend time with them to help them during special events such as birth, circumcision, and family ceremonies.

Saragi's family lives in a traditional Maasai home called Enkang' (Kraal) or Boma in Kiswahili. An Enkang' is a circular enclosure built with thorny bushes to create a space for keeping livestock and huts. The cattle, goats and sheep together with donkeys are kept separately within the Enkang' at night. Huts are built inside the Enkang' along the fence forming a circular-shape where the livestock stay in the centre of the Kraal. The huts are domed-shaped simple structures built using sticks and plastered with cow-dung mixed with soil and sometimes ashes to make them leakage-free during the rain season.

1.1 Family Composition

As indicated in the family tree below, Saragi married five wives. None of them had any formal education and their biographies and children are set out below.

Moinan (born in 1957) is the first wife of Saragi her main occupation is to manage her household, to raise her children and manage the livestock at home by milking, watering and feeding the small stock. She is the mother of 12 children:

- Katende born in 1970 is now independent and lives in Imbirikani with his two wives, Noorparakwo and Naisho. The first wife has four children, a boy and three girls. The second wife has three children a boy and two girls. Both of them are housewives. Their husband is a pastoralist with no formal education.
- Nkuito was born 1972. He has primary education and keeps livestock. Occasionally, he does seasonal business in tourism in Mombasa. He is married to Noosikito (born in 1980) who has no formal education. They have two boys, Lemuja (born in 1999) and Koole (born in 2002). He works in Mombasa from August to March where he sells crafts and entertains tourists. During the tourist low

season (April to July) he returns home to help with herding and to look after his family.

- The third born of Moinan is also a male, Loongushu (born in 1974). He has no formal education but earns a wage by working as a security guard in Mombasa and returns home once a year for a month to help herd and support his father's family. He has one wife, Kiborisho (born in 1986), with a four-month old baby girl. Like her husband, Kiborisho has no formal education.
- Nekinyei (born in 1977) is the first daughter of Moinan. She has no formal education and is married with 4 children in Orgulului. One of her children, Mpute, aged 5, a female, lives with her grand mother, Moinan in Inkiito.
- Napi, a male born in 1980 is still single and has no formal education. He recently left the family to trek livestock between Inkiito, Kimana and Emali markets.
- Ndeenkei, the second daughter of Moinan was born in 1983. She has no formal education and is married with two children and lives in Loolakir 30 km away from Inkiito.
- Nampaso, another daughter of Moinan was born in 1986. Like her sisters, she has no formal education and is married in Imurutot and has two-children.
- Ntikamoi was born in 1989. She has no formal education and is married in Lenkism with no children.
- Sireneti, male born in 1991 is a shepherd
- Soila, a girl born in 1997, and Mpute, Moinan's granddaughter born in 1999 live at home and their help with minor household chores.
- Somoire and Leinga, twin brothers born in 1993, are class two pupils in Inkiito Primary School.

Telek (Narikuntomonok), born 1961 is the second wife of Saragi. Like her co-wife she has worked to manage her household since her marriage in 1977. She has 7 seven children:

- Her firstborn, Musunkui was born in 1986 is a mother of two and has no formal education.
- Two girls, Samunke (born in 1991) and Nkotetia (born in 1993) are in school (class two and three respectively).
- Tirina, a boy, born in 1997 is in pre-school.
- Kirisia a twin brother of Keton (born in 1999) is in pre-school while Keton helps his aunt in Entepessi as a shepherd boy.
- The last born of Telek is Gisa, a boy born in 2003.

Nooseuri, a third wife of Saragi was born in 1966, and like her co-wives, works in the boma. Her offsprings include:

- Parsanga, male (born in 1984) schooling in class seven,
- Mpiyo, married female (born in 1986) with class three education, and

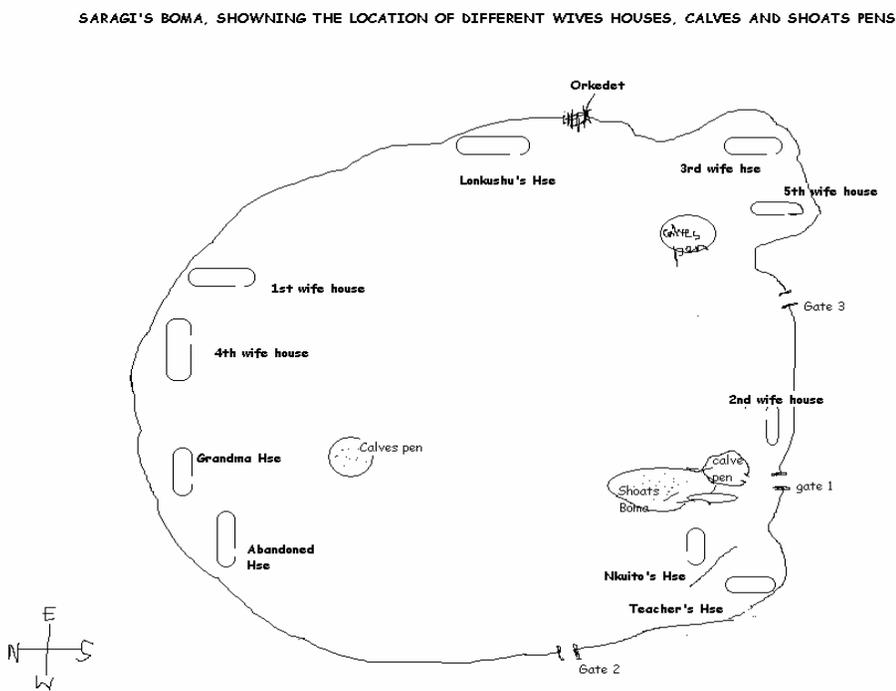
- Nasieku, female (born in 1988), who occasionally herds and helps her mother with household chores.
- Kerika, male (born in 1991) and Lokida male born in 1993 are in class two.
- Panian, a twin brother of Kerika is a shepherd.
- Kilasho, female (born in 1995), Saniti, female (born in 1997) and Sayore, male (born 2003) live in the boma and do not attend school.

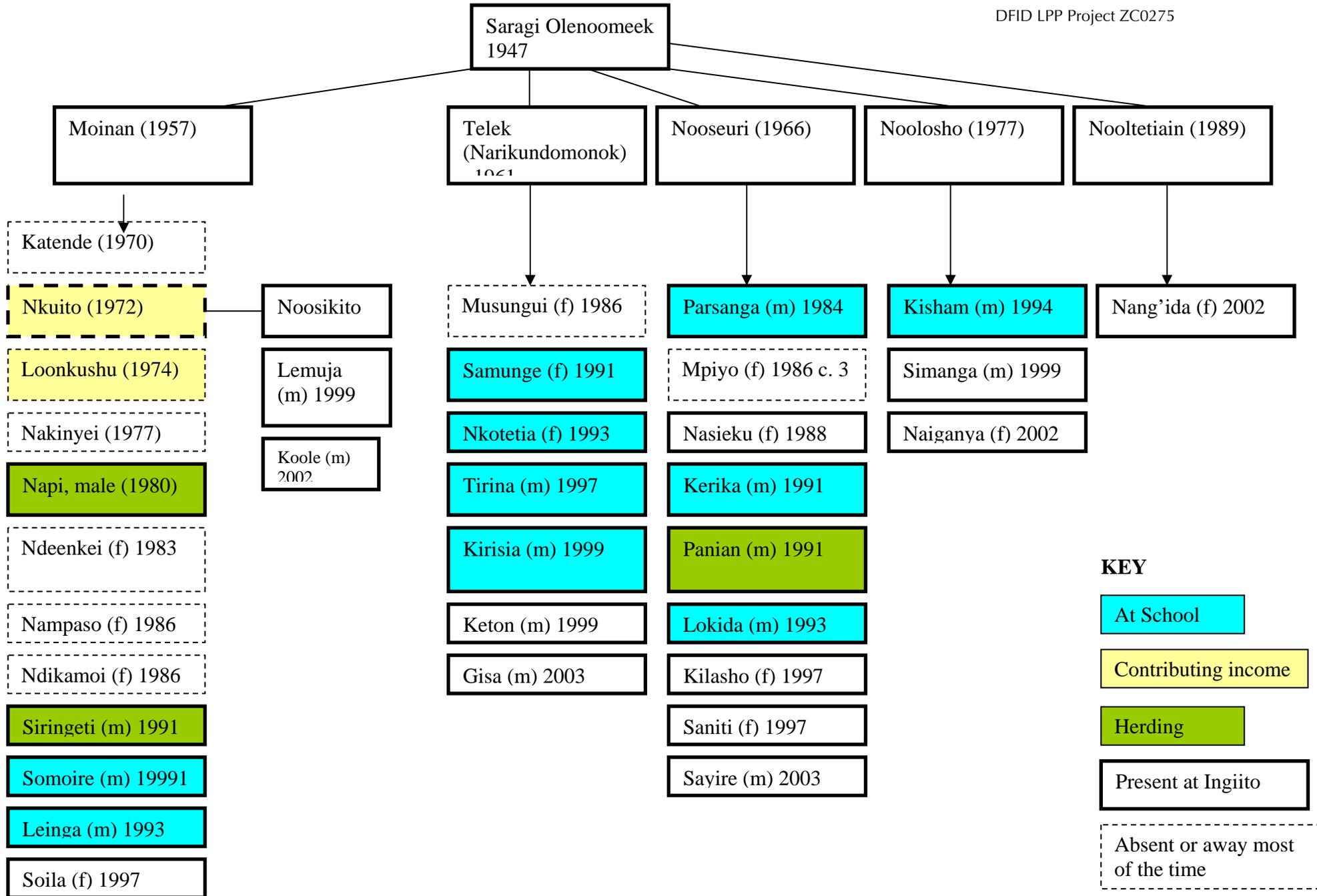
Nooseuri lost two children (not listed) one through drowning at the age of 8 in 1997, and another died at the age of 3 years during his sleep in 2000. The family suspects that a snake bit him.

Saragi’s fourth wife, Noolosho born in 1977 has three children: Kisham, male (born 1994) in pre-school, Simanga, male (born 1999) not in school and Naiganya, female (born 2002).

Saragi’s fifth wife, Nooltetiain (born in 1986) has one daughter, Nang’ida, born in 2002.

Figure1: Boma layout/Empukunoto olmarei le saragi.





1.2 Significant events in the Family's history

Saragi was born at Engong'u Narok in 1947 in what later became the present Amboseli National Park. He is the first-born son from the fourth wife (Nataana) of his father the late Noomeek Ole Lialo. Saragi's mother in her mid-seventies is still living with her son's family. She has four other sons besides Saragi, all living within the same neighbourhood.

Saragi also recalls of a massive livestock death in 1963 (the year that the Nyangusi age group became elders- Orng'eshher).

In 1968 the family moved from *Enkong' Narok* to Eselengei. *Engong'u Narok* is situated in the middle of the present Amboseli national park. They hoped to find better grass for their livestock in Eselengei. Then in 1970 in order to be closer to water sources they moved to *Naripi*.

One of the most significant events recalled by Saragi is the establishment of the Amboseli National Park in 1974 (when the Seuri, his age-group became warriors).

In 1975 they moved to *Njakita* because of an outbreak of East Coast Fever (ECF). In 1983 they moved to Inkiito community. During the devastating drought in 1984 the family moved to Engare Nanyokie in northern Tanzania in search of pasture.

Saragi remembers two major cultural events. The first event is the slaughtering of the bull of the earplugs (*Orkiteng' loonkulalen*) in 1983. This is a ceremonial picnic in which a junior elder or warrior slaughters a bull at the meat camp (*Olpu*) with his age-mates to mark the coming of age. The second event is the ceremony of the bull of wounds (*Orkiteng' loorbaa*) in 1989. This is a ceremony performed by an elder before he can circumcise his children for the first time. It involves slaughtering of a fattened bull without blemish in order to cleanses the elder from whatsoever wrong doings and inequities he may have committed in the past before he can enjoy a peaceful old age.

Since settling in Ingiito then they have moved boma three times within the community. The first move was because the family was increasing in size, the second because too much dung had accumulated in the boma, and finally because, as the family developed, they wanted to establish their own boma away from other family members. They have no plans to move again. Although with land subdivision underway there is uncertainty over the future of land tenure in the area. In the case they lost access to land following subdivision they have maintained relationships with relatives and friends in other sections of the group ranch and in other group ranches.

Another event remembered by Saragi's family is the introduction of crossbred livestock. The family has introduced a Boran bull, a Galla buck and a Blackhead Persian ram into their herd and flock. Although the introduction of these breeds occurred at different times, the family remembers the introduction of these breeds because of the impact it has had on the quality of their livestock.

Women particularly recall when they started small businesses in 2000 selling sugar, tealeaves, salt, beans, rice, cooking oil and wheat flour. This event is significant among women in the family because for the first time women handled some income of their own. In most cases, they sold skins to generate income from which they got their first capital.

The family feels that the time they started contributing to send-off parties for the marriages of their daughters in late 1980s was a significant innovation.

Noosikito, Nkuito's wife thinks the buying of a 100-litre water tank will be an important event in her life. Specifically, with this extra big container, her family can store a significant amount of water for their use in times of shortages.

The last significant event that is shared among the members of Saragi's family is the fact that the family move less now compared with the situation in the past. In part this is attributed to the issue of land subdivision and the need to settle near social services such as school, health centre and water points.

Saragi feels that his family is in transition between traditional and modern ways of life. He identifies the following indicators of change: men moving from one to two pieces of inside clothing⁴, increased use of shorts, use of wallets for women (which could be related to the increase in the cash economy), diets now include more cereals, and the family owns a bicycle which has meant that men also collect water.

In the future Saragi expects to increase the number of children in school and diversify into agricultural activities. He also embraces the introduction of new breeds of livestock although he is concerned that rapid change will erode cultural identity, and family cohesion.

1.4 Decision making and external relations

Saragi is the key decision maker in the family. When he is not around, Nkuito takes over. Saragi takes active responsibility for herd management, whereas his sons are more influential in managing other livelihood activities such as off farm income, selling or buying at markets, and diversification into agriculture.

Saragi's Kraal is located within a few hundred metres from families Kraals of five of his brothers from the same mother, Nataana. This means that they are still closely related as they share a lot in times of need. For example, these families participate in and contribute to each other for marriages and circumcisions. They also share labour in herding and watering livestock. The Inkiito community is divided into two groups, one with seven kraals and the other one with eight kraals. Each group waters their livestock on alternate days in order to reduce pressure on water points and grazing. Saragi's family has registered three people as members of the group ranch. This means when the arable land on the slopes of Mt. Kilimanjaro is subdivided, they will get portions of land for agricultural activities. In addition, when the rest of the ranch is subdivided, they will also get their personal pieces of land. The family hosts the local primary school teacher and his wife who live in the Saragi's kraal.

Saragi maintains regular interactions with members of his age group (Iseuri) with whom he consults and makes community decisions together.

Saragi is the treasurer of Inkiito community and a member of the community committee that works with the management of Amboseli National Park under Kenya Wildlife Services (KWS). His stepbrother is a secretary in the group ranch committee. This has facilitated the flow of information about what is going on in the at the group ranch level. The family also has relatives in Kimana who hold positions of influence – although they are unsure of the nature of the positions held.

1.5 Education

8 of Saragi's children go to school of which 2 are girls. Since the Catholic mission has promoted education in the area people sending more children to school. Saragi still has misgivings about this as he suffers from a lack of labour for herding, and sees how modern education can erode Maasai cultural values.

Saragi only speaks Kimaasai and is not a regular listener of radio programmes. Occasionally he listens to programmes in Maa especially traditional songs on a national radio. His wives Telek, Nooseuri and Noolosho speak some Kiswahili and can understand a few English words. As most of the people the Saragi's family members interact with on day-to-day basis are mainly Maasai, lack of understanding of other languages does not affect the smooth flow of communication between the family and its neighbourhood. However, two of his sons who speak multiple languages act as a link between the family and non-Maasai speaking communities whenever the need arises. The two multilingual sons are Nkuito and Parsanga.

Nkuito is literate and speaks Kiswahili, some English and Italian; this has helped him in managing his businesses especially negotiating with tourists in Mombasa. Parsanga also speaks Kiswahili and some English.

1.6 Health Status

There have been no major health problems in the family.

1.7 Family assets

At the moment the family does not own any land, but with three members registered in the group ranch, they expect to get 10 acres of agricultural land each and an undefined size of land when subdivision of the entire ranch is complete. Other family assets include a bicycle, a cattle spray pump, syringes for livestock and a radio.

2. LIVELIHOODS

2.1 General

Livestock is the major source of the family's livelihood. Animals owned by Sarragi and his son Nkuito are managed together. Three of Sarragi's sons have recently diversified into other livelihood activities: Napi has started trekking livestock to markets, Nkuito has sold crafts and provided entertainment for tourists in Mombasa since 2000, and Loonkushu has worked a salaried employment as a security guard in Mombasa since 2003. Also, since 2000, women have started small-scale businesses by selling retail products such as sugar, tealeaves, salt, beans and wheat flour.

The family decided to diversify as they realised that the returns from livestock were not sufficient to cover the family's needs without depleting the herd. It appears that Nkuito, Loonkushu and Napi decided individually to seek alternative sources of income and not a family decision.

As Saragi's sons earn cash from these other activities and remit to their family, they are now able to reduce the number of livestock they sell per year, buy more livestock to increase the size of the herd, buy more veterinary drugs, meet household needs, pay fees for the children in school and be able to meet most of their health costs. However, on the other hand Nkuito, Loonkushu and Napi are away working for much of the year that puts a lot of pressure on Sarragi who manages the livestock on a daily basis.

Table 1: Ranking of livelihood activities

Source of livelihood	Rank	Reasons
Livestock	1	It feeds the household, acts as a savings bank and is culturally important
Loonkushu's salary	2	It is regular, remitted in cash and distributed among the whole family
Napi's income from trekking and Nkuito's income from tourism	3	Napi's income is small and irregular, and Nkuito's earnings are directed to his own family

2.2 Livestock

Saragi's family cattle



Saragi's family keeps livestock primarily as a source of their food security – milk. Livestock also serve as a source of livelihood – for women through sale of skins to buyers who come to the boma, and the family in general through the sale of animals when needed. Livestock also serve social functions e.g., bride prices and ceremonies, mostly in the rainy season. Occasionally, livestock could be used to provide assistance to in-laws. One other primary reason for keeping livestock is because of it is the basis for cultural identity and historical heritage including inheritance.

Composition of the herd: Saragi says that it is not traditional to count and record livestock numbers, although in the evening they identify all the livestock to check that none are missing. They brand and ear notch animals according to their clan, and can recognise each animal individually. However, he allowed us together with Nkuito to count his livestock for this exercise and the actual numbers are presented in the table below.

Table2: Saragi's livestock numbers

Type	Number
Breeding bulls	3 (1 Boran and 2 Boran-Zebu crosses)
Steers	7
Cows	86
Weaned calves	15
Suckling calves	49

Goats	60
Castrated goats	5
Sheep	200

Regarding the ownership of more sheep compared with goats, the family pointed out that there is no adequate browse for the goats, and therefore sheep are better suited to the rangelands around the Inkiito community.

2.2.1 Livestock ownership

Animals in the herd belong to Nkuito and Sarragi but are managed together. Nkuito buys most of the veterinary products for the whole herd with income earned in Mombasa. In the same way when he is not there Sarragi manages Nkuito's animals as his own. Nkuito owns 32 cattle and 44 shoats (6 goats and 38 sheep) in the herd of 86 cattle, 50 goats and 200 sheep.

Saragi's family shoats



Saragi has full authority over the herd; his son Nkuito has authority over livestock that belong to him. The women within the family do not have any authority over any of the livestock. Occasionally, women are informed when livestock are to be sold, but the final authority rests in Saragi and Nkuito. However, women have full authority over the milk. At

times, they may decide to share the milking animals among themselves. Should the husband decide to take some to a needy wife without the consent of the other one, the concerned wife has powers to refuse.

Table 3: Livestock Distribution: Milked livestock and herd dynamics

Wives	Cows	Goat	Sheep
Moinan	12	12	4
Telek	10	3	3
Nooseuri	10	5	4
Noolosho	6	4	5
Nooltetiain	3	3	4
Noosikito	6	5	8
Kiborisho	6	5	5
Totals	53	37	33

2.2.2 Management of the herd.

Sarragi manages the family's herd. Early in the morning the livestock is divided into two main herds, small stock/calves, and older animals. Sarragi escorts them to watering points and decides which areas should be grazed that day. The kids usually stay around the boma with any sick small stock; the calves graze in a reserved area (*Olopololi*) along with any sick cattle. Family members Parsanga, Kirisia, Siringet and Panian, herd all the livestock. Sarragi oversees the women who care for any sick animals, which graze around the boma. Around 4.00 pm he counts and identifies any sick animals as they return to the boma.

Nkuito, when he is home from Mombassa between April and July 15th, takes livestock to watering points, goes to the market to sell livestock when the need arises, and looks after his own family, which resides in the boma.

They also share the labour in herding and watering livestock with other members of the *Inkiito* community. The neighbourhood has divided itself into two groups, one of seven bomas and one of eight bomas. Each group waters the cattle on alternate days, and the sheep every four days. Women draw water for the calves to drink in the boma. This arrangement reduces pressure on water points and grazing lands, and alleviates labour shortages at family level.

2.2.3 Herd Mobility

In normal years the herd moves between grazing areas according to the season but the household remains in the boma. However in years where the rains fail the whole boma moves with the livestock. Sarragi makes the decision whether to move or not in consultation with the wider *Inkiito* community. He bases his decision on the severity of the drought and information from the herders about the quality of the rangelands. When it is

very dry they are forced to subdivide the herd– which requires more labour. Meaning children are removed from school and women have to herd as well as their on-going work. During bad times they go eastwards to graze in the Chulu hills in Taita District, *Meruashi*, and also north towards Eselengei group ranch. If things get very bad they take animals across the park to *Endonet* but this is problematic because of the prevalence of ECF and expanding cultivation. According to Saragi and Nkuito the impacts of these forced movements are: introduction of new diseases, food insecurity, stress and tiredness of building new houses, carrying babies and kids. To cope with the increased workload, some boys are removed from school.

Drought coping strategies depend primarily on mobility rather than selling livestock. This is because they want to maintain cattle to reconstitute the herd, and they always live in hope that the rains will return before it is too late, and therefore do not want to risk selling animals and endangering their herd.

Table 4: Herd dynamics (in the last two years).

Livestock	Sold	Died Disease/Drought	Predation	Gift
Cattle	19	25	3	11
Sheep	12	13	0	2
Goats	7	7	0	3
Totals	38	45	3	16

2.2.4 Livestock trading/sale of animals

Saragi was a cattle trader in the early 60's to early 1970's, which enabled him to constitute his herd of livestock. He had hoped that his sons would continue, but they preferred to go and seek income in Mombasa so the family no longer trades in livestock.

The family sells a maximum of 10 cattle each year to meet household needs. Cattle are sold for between 12,000 and 20,000 Kshs when prices are good, and 6,000 to 15,000 when prices are less good. Goats and sheep sell from 1500 to 3000.

Family financial needs are met through selling cattle, especially in the dry season (from June – February). This period coincides with good prices after the harvest in agricultural areas in June/July. The family tries to avoid selling breeding animals, choosing steers and then older cows. There is some consultation in the family, although generally women are informed about which animals are being sold. If the cow of a wife is sold, they will try to find a way to return a smaller animal to her (returning the head). They also avoid selling cows belonging to one wife consecutively. At other times of the year, they sell livestock in order to meet needs such as health care (human and livestock) and school fees.

Nkuito always sells one cow each year to raise capital to take to Mombasa. At the end of the tourist season he reinvests his income into the herd by buying animals as well as drugs.

He also brings a bicycle each year, which he exchanges for a weaned calf at the end of his visit.

In 2003 Sarragi sold 10 cattle and slaughtered 4 (one to a orpul, one for the circumcision ceremony for daughter Nasieku, 2 for the Irmong'i loondomon naming ceremonies in preparation for initiation). Sarragi sold about 15 goats in the last year for purchase of household food. In addition one goat was slaughtered for guests, and four sheep were slaughtered (one when Nkuito's wife gave birth, two for guests and one when his fifth wife gave birth)

Sarragi's herd of cattle has increased by about 15% in the last year, although he has lost goats and sheep because of disease.

2.2.5 Markets

They sell livestock at Emali market (Fridays) about 50 km from Inkiito, and Kimana markets (Tuesday) about 40 km away (2 days). The neighbourhood organises someone to trek all animals to the market, Sarragi or Nkuito meet the animals there.

Each time they go to the market they have to pay to County Council a market fee of 15 KShs for small stock and 50 KShs for a cow whether they make a sale or not. The funds they believe are supposed to be invested in veterinary services but the family has not seen any evidence of this, and thus feels that the fees are not justified.

They get information about markets from other people who have been to the market, and both the number of traders and types of traders who come to the community to buy animals on the spot. If they see other tribes in the area it indicates that prices are rising.

2.2.6 Disease control

The family uses the antibiotic called Oxytetracycline (OTC) to treat a number of diseases including: Anthrax, Contagious Caprine Pleuropneumonia (CCPP), Enterotoxaemia, Ephemeral fever (3 days sickness), Tick fever. The herd also suffering from skin diseases, but the family does not feel these diseases as a threat to the herd.

In 2002 the Inkiito community organised for a veterinarian from Kajiado to come and vaccinate their animals against anthrax and CCPP.

They deworm the animals with Nilzan and use different Accaricides for tick control. Nkuito, having gone to school (Class 7) has the ability to take or read instructions on the use of veterinary drugs.

2.2.7 Improved breeds

The introduction of improved livestock was not planned. When the family moved to Eselenkei during the drought in 1992, they lived with a neighbour who had a Boran bull, from which they got their first boran-zebu offsprings.

Within the next 10 years, as a result of the qualities experienced from boran-zebu crosses, Sarragi introduced a number of improved breeds, namely: A Boran bull in 1998 bought from Emali, an Isiolo breeding goat (buck) bought from Kajiado in 1992, and a Gala breeding goat bought from Mariakani in 2003. In 1999 the family also borrowed a Gala breeding goat from the first son in Imbirikani, two breeding rams (one black head Persian in 1999 from Kimana, and a Dorper Ram in 1998 bought from Emali).

According to Nkuito, the big impact of crossing their livestock with exotic breeds, in this case the Boran bull is related to their faster growth rate and bigger size as compared to the local breed, the Zebu. The difference is that they mature faster and fetch higher prices in the market. The milk yield from the Boran-Zebu crosses is higher again when compared to the zebu especially during the rainy season. All these improve the food security of the family and increase income earned from livestock. He also feels that these crosses are not more susceptible to other diseases compared to zebu. However, they are usually the first to succumb to drought and cannot walk long distance when there is shortage of water and pasture. Despite this disadvantage the family plans to go ahead in improving their herd using boran bulls.

2.3 Cultivation

Saragi's family do not farm any land at the moment, however they expect to receive 30 acres (10 for each member registered with the group ranch) in *Endonet* at the foot of mount Kilimanjaro. Demarcation of land is currently ongoing, and Sarragi's family expect to pay KShs. 1000 for each 10 acres. The land is at a higher altitude and thus receives more rainfall. They intend to clear the land and grow beans for sale using external labour in the area. They have seen that people who are already farming beans are doing well, as you can harvest twice a year, and they fetch a good price on the market. They also see it as a potential grazing area when they are not cultivating.

2.4 Off-farm activities

Salary/wages: In Saragi's family three sons engage in off-farm activities. Loongushu is a security guard employed in Mombasa by a private company earns a monthly salary of KShs. 5970. He has worked there since 2003. Napi started trekking animals between Inkiito, Kimana and Emali since last month (May 2004). Nkuito works in Mombasa earns up to KShs 100,000 in a good tourist season. Nkuito is a member of the workers association in Mombasa from which he receives 15,000 - 20,000 Kshs each January. This is made up from each member giving 10% of the income from dances for tourists and sales of artefacts and jewellery. Since September 11th 2001 Nkuito has seen that the tourist industry is vulnerable to security threats. The number of tourist coming to Mombasa went down significantly and especially following the bombing of Paradise Hotel in Mombasa last year. Nkuito is well aware of the vulnerability of both pastoralism and the tourist trade. Therefore he tries to keep his options open. He has opened a bank account in which he deposits a portion of his earnings, at the same time as investing in the family's herd. The family sees their sons traditional skills as relevant to what they do: Loonkushu as a warrior qualifies to be a security guard, Napi's knowledge of the animal routes put him at the top

of cattle trekking, and Nkuito's cultural skills comes in handy to help him in dealing with and entertaining tourists.

Remittances: *There is no specific amount of money that each person remits to the family. Five months ago Loonkushu was able to remit KShs. 4,000, as well as buying six goats in 2003. These remittances were distributed among family members and were much appreciated. Napi's income is not stable as it depends on the situation in the livestock markets and the number of animals being sold. Nkuito, in addition to caring for his family, buys veterinary drugs for the whole herd and is closely involved in the management of the family.*

Small businesses: *All the women in the family except Kiborisho, the wife of Loongushu run small retail businesses. These businesses involve selling of the following products from their houses: sugar, tealeaves, salt, wheat flour, beans, rice and cooking oil. In general each involved woman buys at most 10 kg of sugar, 10 kg of beans, 7 kg of rice, 1 dozen of wheat flour, 1 carton of tealeaves, and about 10 kg of cooking oil. According to their projections, they make profits of between Shs. 5.00 and 25.00 per unit (kg, packet). Although almost all the women are involved in this business, it is only about three to four women that have stock to sell at any given time. As one may run out of a particular product, there may be others who still have the same to sell to customers. In addition to selling these products, the women also sell skins to tradesmen. People buy these products once every week or two weeks, depending on the season. There is more demand during the dry season than during the wet season. In fact, during the wet season when there is plenty of milk, the businesses stop.*

Saragi's family women milking their goats



Table 5: Women's seasonal calendar

Washing clothes				
Firewood collection				
Herding livestock				
Watering livestock				
Child care				
Cooking				
Milking				
Calabash washing				
Ceremonies				
Gate fencing				
Cleaning household				
Diverting water from houses				
Making Containers for moving				
Housing repair				
Caring for calves				
Beadwork				
Cleaning sheep Kraal				
Collect Household water				
	Early Rainy season (Oltumre)/Mid Nov – early Dec	Short Dry season (Oladalu)/Mid Dec – Mid February	Long rainy season (Enkakwa)/Late Feb – Late May	Hot dry season (Olamei)/June Oct

Note: the darker the shading signifies more intensive work.

Notes:

Herding

Women herd animals when school is open, they also build houses once every 6-10 years and any time they move home.

The short dry season

During the short dry season women water animals and collect water for the household. They overcome this by helping each other (between co-wives), having as many donkeys as possible, and when a vehicle is available in the community sometimes they are able to use it.

Cooking is also a major activity during dry seasons because there is little milk. At times, when food is scarce, they often boil herbs and mix them with milk. The dry season also increases the workload of men in going to the market to buy supplies. Herding also becomes a major activity because herds are separated into smaller units and they have to travel further to grazing lands.

The long rainy season

Plastering the houses with dung is a major activity after every time it rains – although they are increasingly covering the houses with polythene. Cleaning the goats/sheep pen on a daily basis is done jointly. Milking many cows in difficult conditions (mud and dung) becomes another taxing job – boys and girls usually help their mothers.

3. NATURAL RESOURCES:

The family feels that the area is relatively well off for natural resources, they receive more rain than other places at the moment although it means that there is in-migration, they are close to the park which has access to salt licks, a swamp, and water sources. Despite this they feel that Namelok is doing better because they have irrigated land, and better social services and markets.

3.1 Access to land

Saragi is still able to move his herd freely within and between group ranches. The community uses key grazing areas to the north of Ingiito, which they feel is very important. They have decided that no human settlements are allowed in the area, and have set up rules governing grazing patterns, including when grazing is allowed and in what place. The division of the communities' herds into two means that this area is only grazed once every two days – as the animals are taken to water on the other day.

There was an attempt by the Kaputiei Group Ranch in the west of Olgulului to block access to their land. Following a meeting about this problem it was agreed to continue to allow free movement in times of need even in subdivided areas. However the family is concerned that if subdivision does not take place the land they have registered for will be grabbed.

With land subdivision imminent Saragi family is interested in land ownership. They have found out that land in Kimana costs between 40,000 and 70,000 Kshs per acre.

3.2 Access to water

Saragi's family lives 4 km away from the nearest water source. This water source was made for the community by KWS in order to reduce the pressure on water points inside the park. Occasionally they access water a few yards away from the Kraal from a leakage on a pipeline that takes water to Meshenani Gate.

3.3 Wildlife

Saragi's family live on the edge of the Amboseli National Park do experience conflicts with wildlife. Wildlife predation common in the dry season when animals go inside the park in search of water, and in the wet season when there is little prey in the park so predators move out of the park in search of food. Hyenas commonly attack shoats especially where some are lost and stay away at night. One weaned calf was eaten this year. The family feels that spread of MCF from calving wildebeest is the most serious problem they face. MCF often forces families to move. Saragi feels that the losses incurred from attack by wildlife does not pose a serious threat to his herd especially because the family lives in a relatively densely populated area, hence wildlife do not use their area on which the family lives.

3.4 Changes in Natural Resources

Seasonality:

Inkiito community experiences five major seasons as follows:

- Short rains (October – December) *Oltumure*.
- Short dry (January) *olodalu*
- Long rains (February – April) *Nkokua*
- Cool season (May – July)
- Long dry season (August – September) *olameyu*

The family has noticed how rainfall patterns are becoming increasingly unreliable. Over the last 10-15 years the amount and trends of rainfall have drastically decreased. The rainy seasons are starting later causing loss of condition and livestock death. The short rains now used to start in October but now start in December and often only last for two weeks. The short dry season in January now lasts for up to two months – shortening the long rainy season.

The direct impact of unreliable rainfall is that livestock need to travel long distances to watering points and good quality pastures.

In addition the Amboseli National Park used to be a drought refuge area, however restrictions posed by KWS mean that accessing the swamps for grazing is illegal. However they are often forced to allow their cattle to graze at the same time as watering.

Despite these changes the family feels that their area receives more rains than neighbouring areas, this means that there is in-migration, and during dry periods people bring their livestock to the neighbourhood.

4.0 INSTITUTIONS

The table below indicates how the family ranks the institutions in the area.

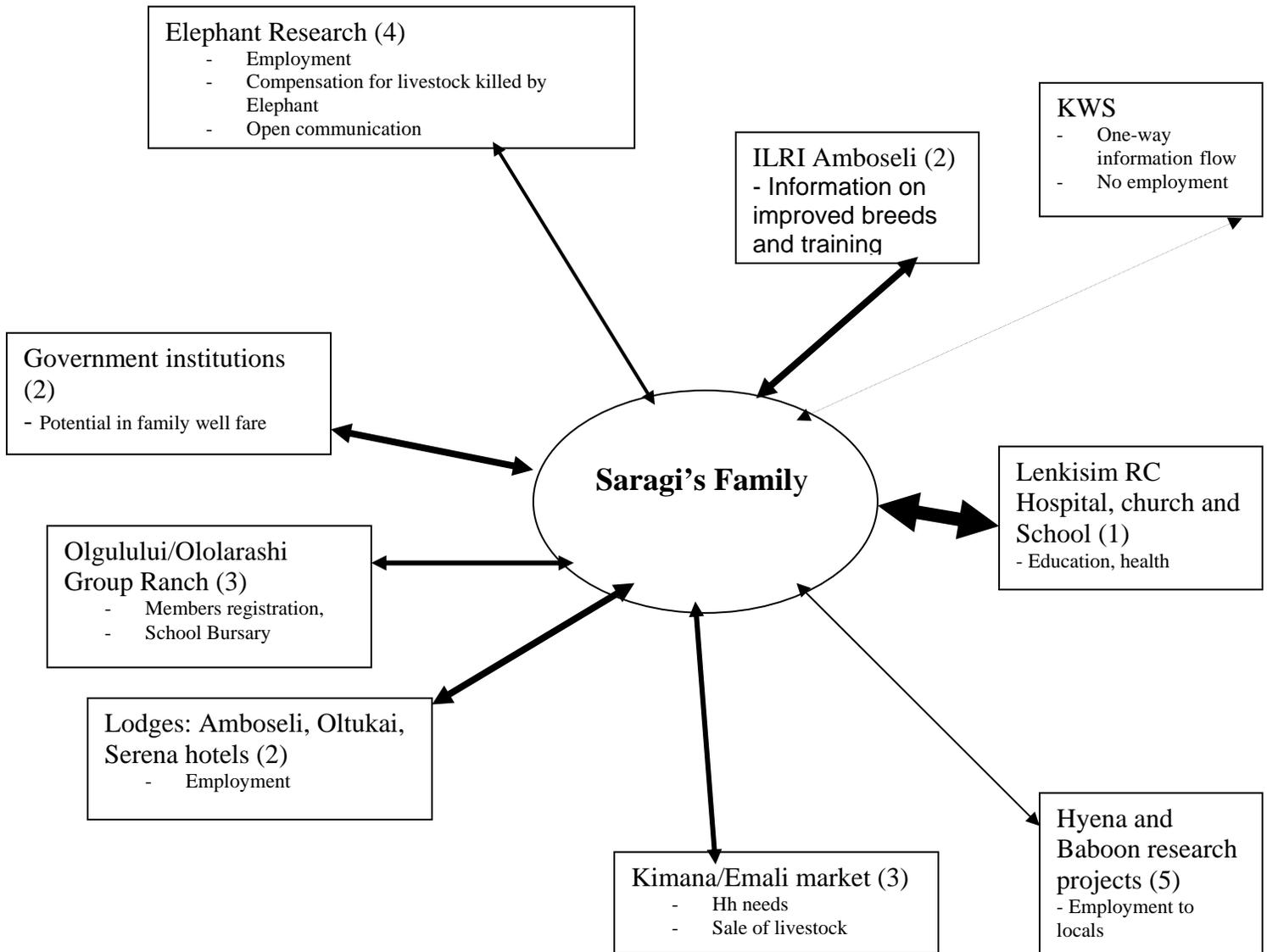
Table 6: Institutions

Institution	Rank
Roman catholic church and health centre at Lenkisim	1
Lodges	2
ILRI	
Government services	
Lalarashi Olgulului Group ranch committee	5
Kimana and Emali Markets	7
Elephant research project	
Baboon and hyena research project	8
Kenya Wildlife Service (KWS)	9



Photo: Mapping institutions with Saragi and the family

Figure 3: Institutions map showing relationship and importance to Saragi’s family



Notes:

Government

Saragi’s family is dissatisfied with the service they are getting from the government, however they are aware that it can play an influential role and is therefore ranked highly.

Roman catholic church and health centre at Lenkism

Since 1990 the centre at Lenkism has provided health services, an ambulance and mobile clinics, and extension work on health issues. They are supporting a proposal to build a school at Inkiito community and have since 2000 introduced new Christian ceremonies.

Olgulului /Ololarashi Group ranch committee

The ranch committee is responsible in managing all the resources within the group ranch and the subdivision of land. They also receive and manage part of the share of KShs. 6 million from KWS distributed to all group ranches in the area annually. Registered members who have children in secondary education or in college can be eligible for sponsorship of their fees. The group ranch also sold sand and gravel to the national park and nearby hotels. The community was concerned that these were their resources but they did not get direct benefits from the sale.

The family feels that the GR committee is only benefiting a few members of the community because there is no clearly define system of accountability for they ways in which the money they receive from KWS is spent in the community.

Kenya Wildlife Services.

KWS gives 6 million KShs to the group ranch committee each year to be spent on community development. KWS does not employ any members of the community.

KWS set up a community wildlife protection committee in 2001 to communicate with people living around the park and to provide information about wildlife outside the park to KWS. Saragi has been a member of this committee since 2002, which meets once a year. He feels that they have a big role to play but are not valued and their time is not compensated for. At the last meeting they stated that they are no longer willing to work without receiving any payments. Another meeting is planned shortly. The relationship between the community members and KWS is not good – they feel that:

- KWS is only concerned with wildlife.
- KWS does not compensate for livestock killed by wildlife
- They harass people found in the park, including children who can flee into dangerous areas
- Chasing livestock out of the park using planes before informing the community
- A water distribution line managed by KWS was put in to supply the community with water – however it is now principally an internal water source for the KWS gates and the community supply is often interrupted. They manage to benefit from the connection point when water is being pumped through the pipes.

At the national level the government can compensate 30,000 Kshs for human deaths but the process takes a long time and the family was not aware of that possibility.

Tourist Lodges

Saragi's family is aware that some members of the community are employed in the park in the hotels even though nobody from their family has ever worked in the lodges.

ILRI⁵

Through the community facilitator they have had access to information about improved livestock breeds. Sarragi has not yet purchased these breeds but a few members he knows in the community have already purchased bulls.

Elephant research project/Research oltomia.

The leader of the project is a Maasai and has established a partnership with the community. They have employed community members as game scouts who are supposed to feed information to the community about what the projects is doing.

The benefits to the community are compensation for livestock killed by elephants. They are eligible to receive 15,000 Kshs for cattle, 5,000 Kshs for goats. The project had proposed to compensate 10,000 Kshs for a donkey, although the community wants 40,000 Kshs, as donkeys are very important vehicles.

Hyena and baboon research projects/project o rkono oekenyi.

Both are relatively new projects but provide some employment to the community. *Eton aa ng'ejuko kuna tena murua kake eishorita ltung'ana le murua rkasin.*

Kimana and Emali Markets

Saragi's family rely mostly on two major markets for sale of their livestock and buying of grocery and other supplies. At least Saragi or one of the sons would go to the market once or twice a month.

Government services

Sarragi's family had contact (on community request) with district veterinary department while organising for community livestock vaccinations in the last year. No other district officials have interacted with the family. The Chief lives in a place called Endonet and the Assistant chief who is supposed to live in Inkiito community is living far away in Imbirikani.

The family is dissatisfied with services they get from the government, however they are aware that it can play an influential role in policy matters and is therefore critical institution.

5.0 THE DRIVERS OF CHANGE**1. Education.**

The family reported that education has brought about change in their family. Due to the number of children enrolled in school there are less young people who will look after the livestock. However education has also brought positive change in that those have already gone to school are likely to get good jobs and hence be able to provide for their families.

⁵ As ILRI staff were facilitating this study comments on and ranking of institutions could be biased towards ILRI

2. Off farm activities

Three young men in Sarragi's family are working in Mombasa, and have been able to increase wealth in their individual and the extended family. However, people who have gone away from their homes adapt new characters from other non-Maasai communities, which is seen as negative by the people back at home.

3. Church

Introduction of religion into some areas like Namelok has meant that many moran do not pass through all the stages of moranism. According to Saragi this is a negative change because the Moran's are no longer behaving according to the requirements of the Maa society. In the past, whatever they did was determined by the social and cultural traits.

4. Neighbors

Twenty years ago families lived together. One group of the family formed a village (Enkang) and all the close members of that family worked communally by virtue of their paternal ties. They had a tightly knit system of kinship that bound them together in all their transactions. Their living habits were based on the surroundings in which they lived and operated. However, Saragi's family reported that this has totally changed due to people becoming selfish and increase of family differences.

5. Group ranch committee

Political changes are also taking place directed mainly at protection of the rich man with little attention being made to the existence of the poor man although they are still the majority in the society. Increase of cash flow submitted by the Amboseli National park management leads to more conflicts among the Group ranch committee and the community at large.

6. Settlements

Change has also occurred in the way the families are settling. The families now have more permanent homes than in the past where movements from one place to another were common. The reasons given by Saragi's family were due to the set by the group ranch committee that one cannot move to place not allocated and there are also certain times when people are suppose to move.

6.0 THE FUTURE FOR SARRAGI OLENOOMEK'S FAMILY

The family sees the increasing population in the area as the major driver of change. There were 3,800 people registered in the GR 10 years ago. Presently, this number has risen to over 7,000 people. This is causing fears that if land subdivision is delayed the plots of land per individual will be very small. They think that if land is subdivided quickly it will avoid outsiders coming in and grabbing it.

Overall the family fears that increased population in the area might cause more competition for natural resources, threatening their livestock. As the Family expands, Nkuito thinks that at some point he might have to separate from the family. He does not see this to be in the near future because he then will have to employ herders to look after his livestock when he goes to Mombasa.

The family have also heard that the government will divert water from the Enoolturesh water supply towards the Inkiito community. This will increase the availability of water, which could open up opportunities for irrigated agriculture.

Sarragi sees the younger generation going to school and the Catholic mission supporting education in the community as a positive move. He thinks that the result will be more diversification of livelihoods and engagement in other economic activities. He is also concerned that as children go to school their sense of identity is eroded and they are less likely to take up livestock herding and other traditional roles. Because of this, he had contemplated taking one of his sons, Parsanga, who is in class 7 out of school but changed his mind as a result of Nkuito's influence. Nkuito on the other hand, sees more importance in education. Not only is he influencing his father to send more children to school but also he plans to take his two sons to an academy at Kimana once they are old enough. This will cost him KShs. 21,000 per child per year, a cost he is willing to meet.

Overall, Saragi sees the increased awareness of the importance of education. Because of the ongoing construction of a primary school in the neighbourhood, he plans to send more of his children to school. The choice of a child to attend school is based on the number of school-age children available from each of his wives. None of his daughters that live with him are in school at the moment. Saragi does not see the importance of sending girls to school, as he believe that soon or later they will be married off and leave.

Nkuito herding livestock



CONFIDENTIAL

PORTRAIT OF SAIRIAMU OLOLE PARSAE'S FAMILY

Family photo



1.0 The family

Sairiamu Olole Parsae is a pastoralist; he was born 47 years ago in Loormong’l, and is the second child in a family of ten children. He has two wives and ten children – four boys and six girls. Sairiamu belongs to the *odomong’i* clan. This is the larger of the two Maasai clans in the area. The other is the *orok kiteng* clan. He belongs to the ruling age group of *Ilkishumu* who are among the key leaders of the area. The others include *Iseuri* and *Ilkimunyak*. The family lives in *Inkiito* village of olgulului group ranch in the south –east of kajiado district.

Sairiamu did not go to school. His parents did not see the need for formal education; they opted to keep him at home to look after the cattle, which were considered to be of more value to the family and the community at large. Livestock have always been the main source of their livelihood. Besides keeping livestock, Sairiamu receives rent of Kshs 10,000 per year for 5 acres of land that he leases out in *Namelok* area.

1.1 Family Composition/Demographics

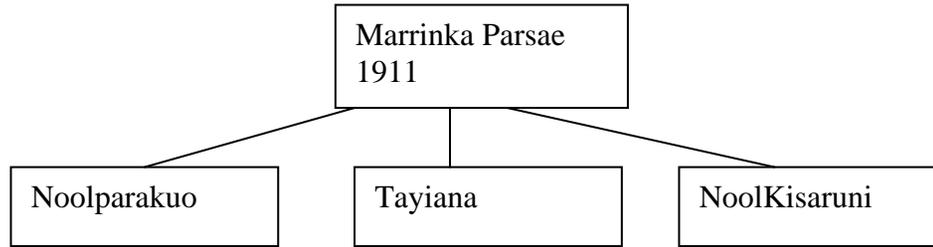
Sairiamu considers his family to be relatively small for a man of his age group within his area. Most of his age mates of similar wealth status in his locality have more wives than him. Apart from his wives and children, he lives with the two wives of his brothers Kisham and Lemukeku, and a friend who has livestock in his boma.

His wives Namunyak and Noolaisi have five children each. Namunyak has two boys and three girls. The boys are: Lekatoo (aged 17years), Lemujia (2 years), and the girls are Nambura (14 years), Santau (10 years) and Naipanoi (5 years). The second wife, Noolaisi has three girls: Soila (aged 17 years), Sumpat (8 years), and Muyantet (5 years). The boys are Lulunken (12 years), and Kasana (3 years). Of the ten children in the family, three of them are in school.

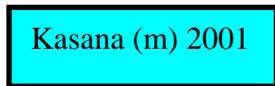
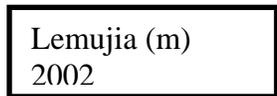
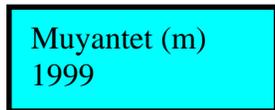
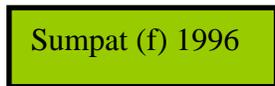
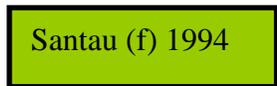
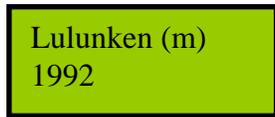
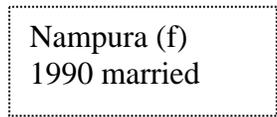
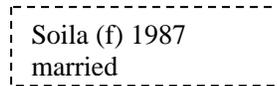
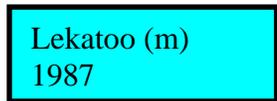
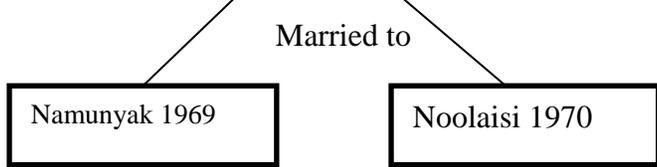
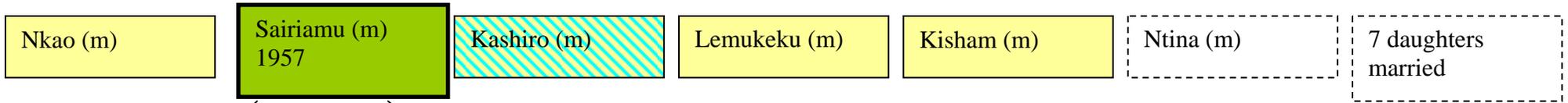
Sairiamu has six brothers: Nkao, Kashiro, Kisham, Lemukeku, Ntina. Lemukeku and Kisham are working in the coastal town of *Malindi* in the tourism industry and they periodically send money to supplement the needs of the family such as buying drugs for livestock and buying food for the family. Kashiro who is considered to be the educated member of the family works in *Mombasa* as a watchman and also assists the family financially at certain periods of the year especially during the dry season when conditions are hard for the livestock and human beings as well. His elder brother Nkao lives in *Namelok* with his family and has a farm on which he grows crops for subsistence purposes. The farming is done with the help of hired labourers. In times of hardship, he helps Sairiamu’s family with some food. Nkao’s cattle are taken care by Sairiamu at *Inkiito* where conditions are drier and cannot support crop cultivation. Sairiamu says that this is a common practice with most other families within the group ranch.

For most of the year, Sairiamu’s brothers are away, only coming home when they have leave from their jobs. His son Lekatoo studies in a private school in Kimana far away from home. During term time he lives with Sairiamu’s elder brother who lives near Kimana, but comes home three times a year in the holidays. The rest of the children live at home and go to school (in Inkiito).

Sairiamu Olole Parsae's Family Tree



The children of Noolparakuo looked after by NoolKisaruni after the death of Noolparakuo



KEY

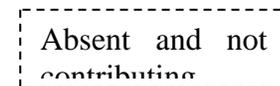
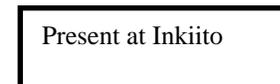
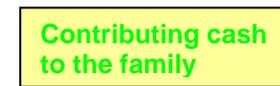
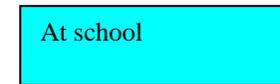
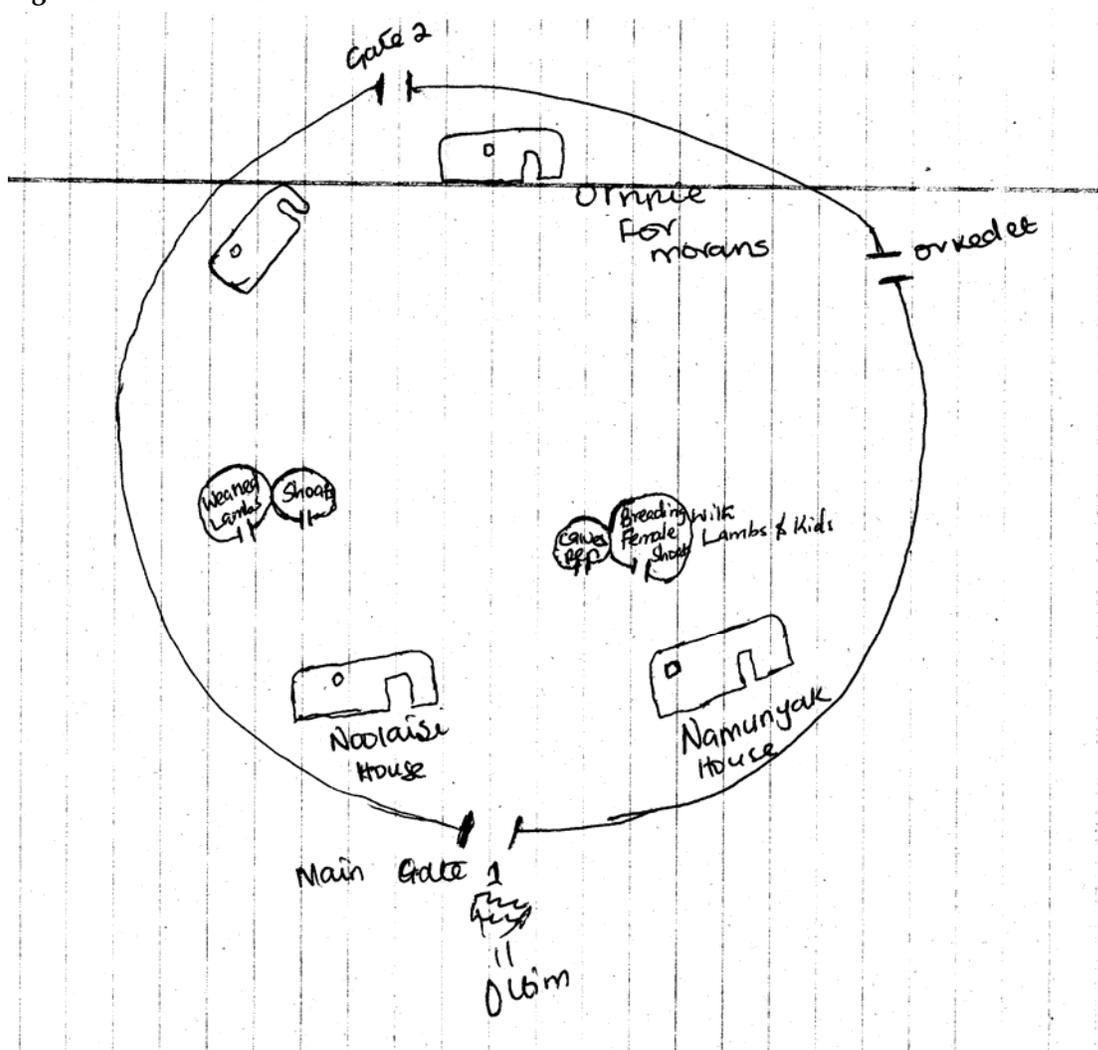


Fig 2: Sairamu's kraal



1.2 Family History

Sairamu was born in Lenkisim. In 1959 his family moved to Leremit where they stayed until 1979. Then they moved to Rissa in Namelok where they stayed until 1994. Finally they moved to *Inkiito* where they have lived for the last 10 years.

Insert map (showing movement of the family)

Drought and disease incidence were the two most common reasons for movement. Sairamu recalls that the family had to move away from *Namelok* mainly due to problems of *East Coast Fever* (ECF). It was felt that although *Namelok* had more water, the high incidence of the disease was the main reason behind high calf mortality. Also, the ever-present water was seen as the main source of worms, which were harmful to both the small as well as the larger stock. Further, the flowing water was thought to be *cold* and therefore less appropriate for livestock consumption. In contrast, water from pans, dams and salty water within the *Amboseli* area was considered to be *warm* and hence better for the livestock.

The family was also forced to move because of *Malignant Catarrhal Fever* (MCF), which is transmitted by wildebeest. The wildebeest reside both within the group ranch and also at the *Amboseli* Park, which is adjacent to *Inkiito* village. In 1974, the government created the *Amboseli* Park adjacent to *Inkiito* village. According to Sairiamu, the creation of the Park had a direct impact on his livelihood. His livestock, like those of many of his colleagues in the group ranch, had to seek alternative sources of water, natural salt lick and pastures. It also had serious implications on their livestock movement patterns, especially during dry seasons.

Besides these reasons, most other movements that the family has made have been because of severe droughts. In 1984 their family lost 100 cows, an event that causes extreme stress to his father. When they came to *Inkiito* they found they found that it was fairly conducive to livestock, and so made that their new home. That is how they settled in their current home in *Inkiito*.

Significant events in the history of the family

Sairiamu says that when he got married and got children he was very happy, this was a significant event in his family.

Sairiamu recalls back the death of his first wife who died at home while he was away on business. This was a great shock to him as he was young and inexperienced.

Another significant event Sairiamu recalls is when he was arrested in Tanzania while on business. Several Kenyan livestock traders were rounded up and all their money was taken away from them. This was a big blow to the trading business and was traumatising to him and his family. He had to sell extra cattle to restart the business.

The death of his father in 1998 was a blow to both the family and the community. He was one of the few remaining men of the *Ilterito* age group. As an elder he had played an important role of advising the younger people in the community.

1.3 Identity

Sairiamu recognises that he lives in a changing environment. He sees that external agents of change have different visions to the traditional leaders who want to maintain *Maasai* vales and ways of life. Sairiamu sees both the advantages and disadvantages in both. He strives to make informed decisions, embracing change when he thinks it will benefit the family. For example he considers modern education, improved healthcare, spiritual nourishment and improved animal husbandry as positive changes. At the same time he has observed that the *Moran* are now marrying earlier, and engaging in market and farming activities that was previously prohibited. In addition his family's diet includes more grains, and some children now go to school and wear modern clothes.

1.4 Relationships and division of labour

Labour in Sairiamu's immediate family is shared among *Namunyak* and *Noolaisi* (his two wives), the children and Sairiamu's brother *Ntina* a *moran*. The labour consists of herding cattle, mostly done by the *morans* and children who do not go to school. Women are entirely responsible for the management of the household, including cooking, fetching

water, fetching firewood, building houses and taking care of the children. Besides attending household chores, Sairiamu's wives also take care of the small stock and herd the animals when there is a shortage of labour.

Sairiamu being the head of the family is responsible for making decisions in the family and allocating duties to different members. His other daily activities include attending community meetings, visiting friends and relatives, and accompanying the animals to pastures, water and the markets. Namunyak and Noolaisi are able to make decisions about their activities, for example house building.

Sometimes the family gets help from the extended family members who in this case are his brother's wives, and two children of his elder brother who help care for the livestock. The family also has a relationship with the extended family members in Namelok who practise subsistence farming. His elder brother in Namelok sometimes supplies foodstuff to Sairiamu's family in dry times. They also work together during family cultural ceremonies like circumcision, marriage negotiations and other traditional or customary events. In his turn Sairiamu also helps his extended family, mainly married sisters and other close relatives. Sometimes even distant relatives come for help. Sairiamu is aware of the importance of assisting needy relatives (especially sisters) and he helps them whenever he can.

Sairiamu plays an important role in decision making on issues concerning his village. Membership of the *Ilkishumu* age group and *Odomong'i* clan, give Sairiamu status and leadership in the area. The family has also maintained the status it gained from Sairiamu's father, who was a respected leader, and Sairiamu is considered a key gatekeeper in the community. This means the family has access to decision makers. Sairiamu has a close friend who is in politics as a councillor and has some other key friends in leadership positions in the group ranch. This has assisted him to easily register his wife and two children as members of the group ranch.

1.5 Languages/Education

Sairiamu can speak the *Maa* language plus a little Kiswahili, which is the national language, but no English. He thinks this is a disadvantage because he cannot communicate well with resource people outside his locality, at hospitals, schools, markets and the livestock drugs shops. He is unhappy with the fact that he cannot read for himself the prescribed dosage for veterinary drugs and has to rely on either the pharmacists or other people who have been to school. This is part of the reason why he has decided to send some of his children to school.

To Sairiamu, education is important because it enhances one's ability to make informed decisions and to earn money. It may also empower people politically. He says those in the group ranch committee which distributed money from the nearby-protected area were all educated. As a result, those families with an educated member were doing better than those without. Others were working in government offices and were able to help their families to survive in bad times especially during long droughts. Such people had also bought many cattle and were seen to be a good example within the community.

The presence of the school in Inkiito improves access to education. This is supported by the church, which provides books and chalk. Besides this there are other costs associated

in accessing education such as school fees, uniform and the opportunity cost in terms of the time required and the amount of work that a particular child would have done were it at home. The loss of labour is particularly severe for Sairiamu's family who have three children in school. They have employed a herder to look after the livestock.

1.6 Health

Sairiamu's family has not had a major health complication and they attribute this to the use of local herbs such as *Iremito* that are used for the treatment of the common cold, *Olmukutan* used to treat worms in children and adults. In case of a major health problem that requires the attention of the doctors and not local herbs, e.g. the vaccination of the children, major sicknesses like malaria; the family is forced to go to a Catholic mission hospital at *Loormong'i* for treatment. The family dreads going to the hospital because of costs for treatment and the long distance involved.

1.7 Family Assets.

In addition to their livestock the family is endowed with several physical assets. They own 5 acres of land in Namelok swampy area where they lease it for agricultural purposes. He is also likely to get another 20 acres in *Osupuko* next to Mt. Kilimanjaro where his second wife and one son are members. If the area around Inkiito, where they reside, in Olgulului group ranch is subdivided they will get some land for livestock keeping as three members of his family are registered as shareholders. Sairiamu also owns a bicycle, which is used to fetch a number of items that are far away.

2. LIVELIHOODS

2.1 Introduction

The family of Sairiamu is pastoralist, depending mostly on livestock keeping for their living. This is due to a mixture of environmental, social and cultural reasons. The low rainfall in the area and lack of access to water means that cultivation is not possible. Most people in Inkiito are pastoralists as the area is conducive for livestock keeping. Many decisions about access to pastoral resources are made in consultation with the neighbourhood. Sairiamu inherited a pastoralist way of life from his parents. He considers it to be an integral part of being in the Maasai community, where the size of your herd symbolises your status.

In addition to keeping livestock Sairiamu's family leases out a plot of land near Namelok, and receives periodic remittances from his brothers Lemukeku and Kisham working in Malindi. The motivation to diversify came from a sense that pastoralism is increasingly vulnerable to droughts and changes in climate and land access. They also realise that as the family grows and more children go to school they will need more cash to cover fees especially for the more expensive boarding school that his son Lekatoo attends in Namelok. By diversifying, the family feels it can better survive the dry seasons and droughts, and are in a reasonably strong position to respond to changes in the access to natural resources in the future.

The relative importance of the three main sources of livelihoods is shown clearly in this ranking in which Sairiamu allocated a total of 10 stones between livestock, agricultural land and remittances.

Table 1: Livelihood ranking

Source of livelihood	Rank	Reasons
Livestock (60%)	1	Cultural, Subsistence and able to raise cash
Agricultural Land (30%)	2	Pastoralism vulnerable, able to respond to shocks
Remittances (10%)	3	Periodic but useful for cash needs

2.2 Livestock

Family livestock



Sairiamu's family keeps livestock for their household needs including milk (the main food of the family), meat, fat, hides (that the women sell and use as mats), and cow dung (used for plastering the huts). They also sell the animals to cater for immediate cash needs such as, school fees for their three children in school, buying clothes for the whole family, health care for sick people or when a mother delivers, and veterinary drugs.

Livestock are important culturally. They are a symbol of the family's status in the community and wider society. If you have many cows, sheep and goats, your family is respected and there is no possibility of your children suffering. At a family level, sheep are slaughtered and the fat is given to women who have just delivered, sick people, and the Moran (warriors) who use it on their skin and hair for decoration.

Sairiamu, like every male child in a Maasai family was given livestock by his parents, this gift is called *Inkishu-e-misigyioi*. He was also given some animals (number?) when he was married in 1983. He had traded in livestock since being a Moran. Successful livestock trading meant he could cater for the needs of the family without selling livestock, and reinvest any profit in increasing the size of the herd. He attributes his success in this to the skill and hard work of his wives who cared for livestock he bought while he was away trading. In 1998 when his father died he inherited 30 cows and 20 sheep. On the marriage

of his daughters Nambura and Soila he received a total of 9 heads of cattle as bride wealth. He gave one to a relative. The family has also received livestock as gifts from friends.

The family's herd includes animals owned by Sairiamu and three of his brothers. It is composed of goats, sheep, cattle and donkeys. They own:

Table 2: Livestock owned

Cattle		Goats		Sheep		Donkeys	
Milking cows	50	Female Goats	47	Female Sheep	180	Donkeys	10
Heifers	55	Bucks	3	Rams	20		
Bulls	3						
Steers	10						
Calves	50						
Total	168		50		200		10

Sairiamu's favourite bull



The number of sheep in the herd has increased dramatically. Smaller stocks multiply faster and are less susceptible to droughts. The breeds they keep (Somali Black Head Sheep and a mixed breed of goat) are well suited to the harsh conditions. Small animals are also easier to sell to meet cash needs. He also notes that the reduction in browse means that sheep are better suited to conditions than goats. Sairiamu also hopes to improve the quality

of sheep through crossbreeding. He thinks that this strategy will be enhanced by the availability of drugs to vaccinate the livestock.

Sairiamu and two of his nephews (from his elder brother) do most of the herding. The women milk the cows and care for the smaller animals around the homestead with the help of the children who do not go to school. Those who go to school also help during school holidays.

2.2.1 Mobility of the herd

Sairiamu's family is relatively sedentarised at present. They would like to stay in Inkiito for as long as it is possible. However they recognise that if sub-division of the group ranch happens and they are allocated land elsewhere they may be forced to move.

The livestock graze on the pasture around Inkiito for most of the year. However towards the end of the dry season (between September and October) it is usually necessary to move them to Inkaron (a grazing area reserved by the neighbourhood for the dry season) at Ilkarat to the north where pastures are more abundant. They stay there with the herders until the rains come. The decision to move is made at a community level.

Since the family came to their present home 10 years ago, they have made four major movements with the herd because of drought.

In [1994] and [1995] they moved 40km north of Inkiito to Imbirikani. The first time they moved with all their animals and stayed for 3 months. The second time they only took the cattle leaving behind the sheep and goats. They stayed 3 months.

When the droughts were especially severe in [1996] and [2000] they crossed the park to Olmoti, moving with the whole family, children and belongings. Olmoti is in the south of Olgulului at the foot of Oldoinyio Oiborr (Mount Kilimanjaro) where the pastures are better watered and there is more forest cover. In contrast to the community decision to move to Ilkarat in the dry season, in times of crisis the family makes an individual choice about where to go and when to leave. This is influenced by where the family has relatives or friends and the size and capacity of the family to manage the herds in times of crisis. Sometimes they are forced to split the herd for easier management. In 1996 (just before El Nino) the drought was so prolonged that they were forced to stay in Olmoti for a whole year. When the family has to move long distances there are hardships for all members. Cash needs are higher as almost everything has to be bought, market prices for livestock plummet and prices for foodstuffs rise. Animals are emaciated which lowers their market value further. It is especially difficult to arrange for the children at school who are sometimes left behind with relatives and need to be provided for.

2.2.2 Management of the herd

The family herd is owned by Sairiamu, Namunyak and Noolaisi (his wives), and his brothers Kisham and Lemukeku, whose wives live in the homestead, and Nkao. Although

his wives are able to identify 'their' cows, goats or sheep, Sairiamu makes the major decisions about the herd and flock.

The family like any other in Maasailand identifies its animals with brands and earmarks. The brands indicate the clan and sub clan that the animals belong to.

Information, livestock care and livestock production

The family of Sairiamu gets the information on livestock keeping from the community through meetings and social gatherings. Information includes types of breeds available on the market, vaccinations and general herd management. At Kimana market there is a veterinary officer who advises on new drugs and their dosage, and notifies people about outbreaks of disease in the area. More recently the family has got some general information from the ILRI Community Facilitator. They have learnt about where they can go and whom they can talk to if they are interested in finding new drugs and improved breeds. Sairiamu feels that this information helps the family to better manage their livestock. He is eager to see the outcome of an improved ram (F1), which he bought at the ILRI farm at Kapiti. The ram is a cross breed between the Doper and the Red Maasai Sheep, and he thinks that as a result the number and quality of sheep will improve. Besides, Sairiamu would like to understand how to assure access to enough water for the livestock, and how to treat livestock diseases more effectively (he had such advice before in Namelok and found it very useful).

To control ticks the livestock are hand sprayed three times in a month at home. In the dry season the livestock are taken to a water source and dipped there. The family would like to dip the animals more frequently especially during the dry season, but this is limited by the reduced availability of water. They are also vaccinated when the veterinary officers visit the area during outbreaks of Foot and Mouth Disease.

Sale of animals and the market

For Sairiamu livestock represents a savings bank. He sells livestock when they need cash and buys when the family has some extra money. Selling is most frequent in the dry season as there is little milk and they have to supplement their diets with alternative foodstuffs. He also has to sell to pay school fees especially for Lekatoo in private school. They sell direct from the homestead and at the local markets.

They sell most of their animals at Kimana market 40km away. It is closer than other markets, the community vehicle provides reliable transport there and back, and if need be they can spend a night with Maasai friends on the way. Most of the buyers at Kimana are from the area. Emali market is much bigger. It has a large catchments area and thus attracts more customers and a wider variety of livestock. As businessmen come to Emali from further away to trade, animals are often bought by outsiders who have more money for bigger markets.

Prices fluctuate according to demand. During Christmas and other holidays livestock prices rise. However during droughts prices of livestock plummet and grains tend to shoot up. Sairiamu tries to avoid selling cattle. When possible he covers costs by selling sheep and goats. In a year when needs are high, he sells up to 20 shoats and 8 heads of cattle. A range of complex factors informs the decision about how many animals to sell in a given year. The well being of the herd depends on the amount and timeliness of the rains and

incidence of disease. In turn this has a bearing on the need to buy extra foodstuffs. At the same time there are both expected and unexpected cash needs that the family has to cover. These include school fees, medical bills, ceremonies/celebrations, veterinary drugs, and foodstuffs.

The family of Sairiamu gets market information about livestock prices from community meetings at which general information is shared, and from mobile livestock traders.

Livestock exchange also takes place at community level. In April 2004 Sairamu needed a ram for breeding purposes. He was able to obtain one in exchange for a buck. This system enables people to get a specific breed or type of animal depending on special needs. By exchanging directly they cut out the middleman and reduce the transaction costs of selling and buying in the markets.

Livestock are only slaughtered when the need arises, for both ceremonies and celebrations and if people are sick. Sometimes the Morans are given a goat or a sheep to slaughter to eat and make soup to supplement the family's usual diet. At the end of the school term they often slaughter a shoats to break the monotony of cereals.

Table 3: Herd dynamics 2004

Species	Bought	Died of disease/drought	Predation	Gifts out	Born	Slaughtered
Cattle	2bulls	2	0	5 heifers	40	0
Sheep	1 ram	10	1	8	100	10
Goats	-	15	-	4	20	-
Donkey	-	1	-	-	5	-

Notes

In the last year Sairiamu has bought 2bulls from Kimana market and one ram from Kapiti farm. He lost two cows to MCF, 10 adult sheep to black quarter, 15 goats to CCP and one donkey died due to the current drought and an unknown disease. The family has not received any gifts inform of livestock but they have given out 5 heifers to his friends and relatives, 8 sheep, 20 goats and donkeys.

2.2.3 Use of milk and animal products

Namunyak and Noolaisi are responsible for milking their animals. They milk first thing in the morning and then in the evening when livestock return from the pastures. This milk feeds the children, Sairaimu and is given to any calves whose mother has died during delivery, due to sickness or been killed by wildlife.

In the rainy season when there is a surplus of milk the distance from the markets prevents them from selling it. However milk production in the dry season diminishes. This forces them to buy grains and other foodstuffs to supplement their diet.

The abundance of milk during the rainy season means that more ceremonies can take place. When they do, rich and poor families are able to contribute. Sairamu has also loaned four milking cows to more needy relatives. These are for milking purposes only and will be returned at a later date.

Women are also responsible for the sale and use of animal hides. During the dry season or when there is an epidemic, hides are an important source of income. In the catastrophic droughts of 1985 selling the hides helped the family to survive.

They are unable to sell the manure produced in the homestead. There is no market in this area due to the lack of agriculture nearby, and it is inaccessible to potential buyers.

2.3 Cultivation

Sairamu's family started cultivating 16 years ago. At this time prolonged drought had decimated livestock in the area and the family was forced to turn to farming to survive. They farmed in Namelok to the southeast of Olgulului. In 2002 when the area was subdivided Sairamu, as a member of the group ranch, received five acres. The area is suited to agriculture as there is runoff water from Kilimanjaro, perennial springs and swamp areas suitable for irrigated agriculture.

They started off growing food crops. Over time they experimented with onions and tomatoes for sale. The complexities of selling to the market and technical skills required for commercial farming meant that the cost in time and money was too high. The family was still concentrating most of their energies on keeping livestock, and had neither the labour to spare nor the expertise to focus on farming. As a result they reverted to growing rain fed food crops. As they did not have title deeds for the land they were unable to access credit. They had to sell small stock to raise money to buy seeds and other agricultural inputs. They then went into sharecropping, but this also proved difficult. They have now lease the land for Ksh 10,000 a year.

2.4 Off farm activities.

Namunyak, Sairamu's first wife, is in a women's group where she contributes small amounts of money monthly to help members in their daily lives. Unfortunately at the moment the group is not very active. Noolaisi, also sell sugar and tea-leaves from the homestead on an opportunistic basis.

They also receive sporadic remittances from Sairamu's brothers Kisham and Lemukeku who work in Malindi. The last gift was Ksh 5,000 received in September 2003.

2.5 Women's seasonal activities

Namunyak and Noolaisi have a high workload throughout the year, but it does vary seasonally. Collecting firewood is much harder during the dry season because there is less milk available and women are doing much more cooking. In the same way in the rainy season milking takes up much more time but cooking and firewood collection are less intensive.

In the dry season water needs are greater and they have to travel further to collect it. Childcare is harder as there is less milk available, and other tasks take up more time.

In general women prefer the rainy season, as there is abundance of milk that means that milking takes a lot of time but is preferable to the arduous activities of collecting firewood and water in the dry season. See chart on following page.

2.6 Men's Seasonal Activities

The men's seasonal activity is divided into five seasons, which are:

1. Short rains season (Nov – Dec)

During the short rains marketing and herding becomes lighter as pastures and water will be available for their livestock. They also move the livestock and family from their Inkaron to Imparnati and this depends whether it is a good or bad year. Going to the market becomes harder during a bad year as the livestock are moved farther away to places like Ildoinyo still they have to go to the market and buy and sell in order to buy food for their families whom they left at their permanent kraal (*Imparnati*)

Short dry season (Feb)

During this season work becomes much easier thus men take this short period to be a 'Holiday month' in order for them to collect gifts from relatives and friends.

2. Long Rains season (March – May)

Sairiamu's family does not move during this period but they stay at their kraal 'Imparnati'. During this season the men have less work to do because there is plenty of milk for the family consumption and the livestock do not go far places in search of pastures and water.

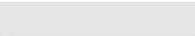
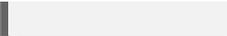
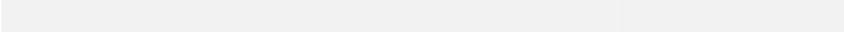
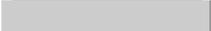
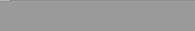
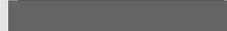
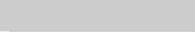
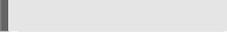
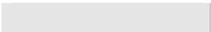
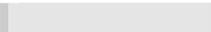
3. Cold season (June – July)

Herding and marketing activities during this season is minimal.

4. Long drought season (Aug – Oct)

During the months of August and September the Moran's visit the '*Olpul*' while the men remain at home to slaughter in preparation for the hard tasks ahead. From the month of October until the rains comes the men have a lot of work in their activities of herding and marketing.

Table 4: Women's seasonal activity calendar

Activity	Length and intensity of work			
Cleaning the sheep pen				
House building				
making gates for the enclosure				
Cooking				
Child care				
Collecting water				
Milking				
Collecting firewood				
Season	Early Rainy season (Nov – mid December)	Short dry season (Late December - February)	Long rainy season (March – May)	Long dry season (June to October)

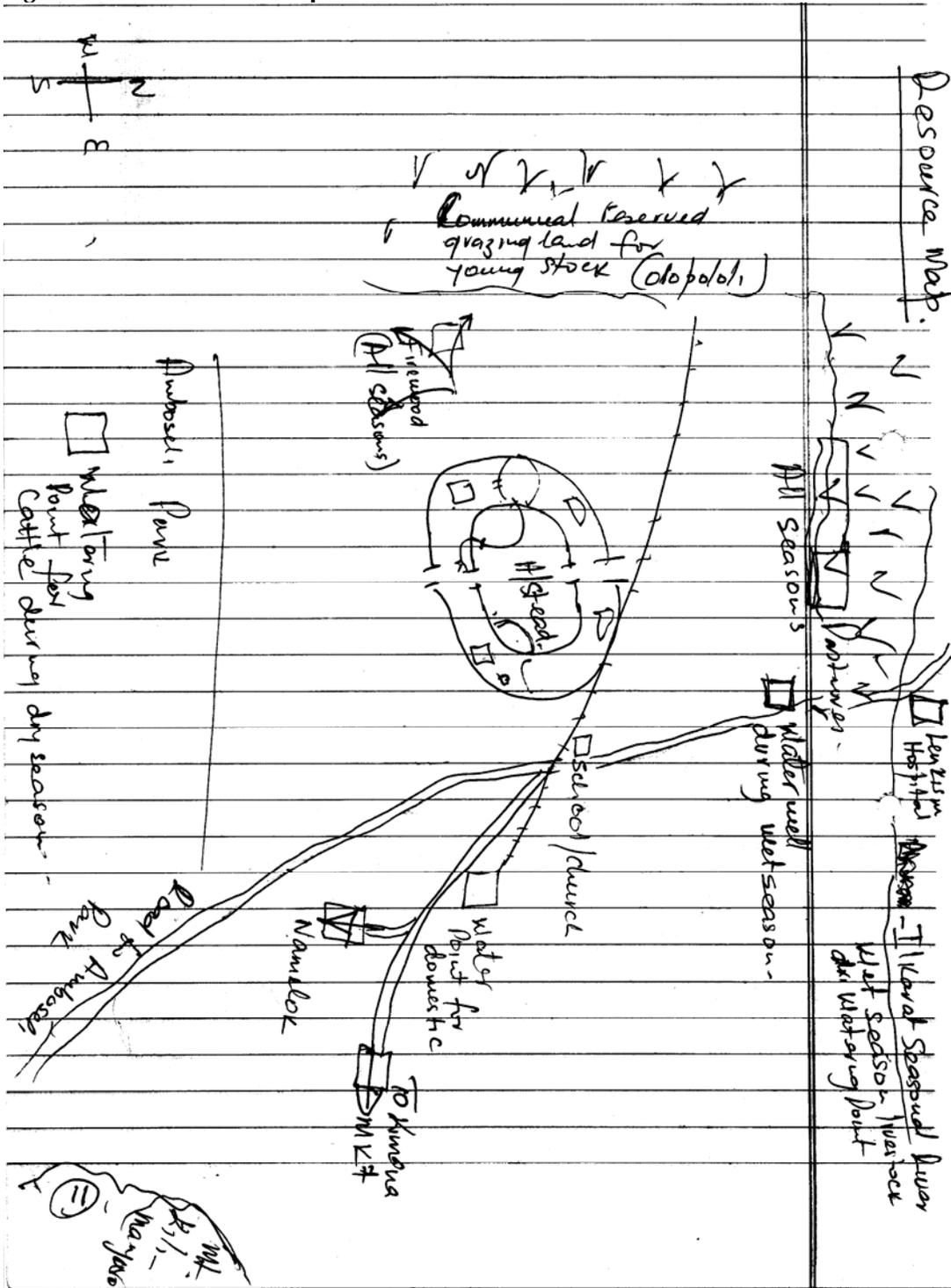
The darker shading means tasks are more intensive at that time.

3. NATURAL RESOURCES

3.1 Natural Resources

The family depends on access to and use of land, water points, firewood, pastures, and rivers for their survival. Apart from the 5 acres of farmland that they own in Namelok, the group ranch communally owns natural resources in Olgulului. The neighbourhood in which Sairiamu plays an active role manages access to the nearby pastures and watering points.

Fig 3 : Natural resource map



3.2 Seasonality of and changes in natural resources

Seasonality

Resource use and access changes seasonally. During the dry season food, pastures and water become scarce and thus accessing them is harder and more time consuming.

Longer term changes

The family has noticed that in the last five years the rainfall has decreased and patterns have become increasingly unreliable. The dry seasons are getting longer, and the rains start later and are less regular. Sairiamu says 'God only knows why the rainfall patterns are changing because no one else does'. The drought conditions have created problems for the family this year, they were forced to move to Inkaron causing the children to leave school because of the distance. Some families are less able to cope with the changing weather and are losing a lot of animals.

Sairiamu has also noticed that with the increase in sheep and goats the quality and quantity of pastures is reducing. Small stock is less mobile than cattle and are concentrated in smaller areas for longer time periods, grazing more intensively on land that the cattle have already left. They are thought to contribute more to land degradation.

3.3 Interaction with Wildlife and Amboseli national park

Human-wildlife conflicts are manifested in 3 main ways for Sairiamu's family: livestock predation, loss of livestock grazing areas, and threats to human life.

Livestock predation

Predation of livestock by lions, hyena, cheetah and leopard has been common in Olgulului Group Ranch. This is especially severe in the dry season when livestock use the park's watering points and salt licks. However it is also a problem in the wet season when the wild animals move out of the park into the group ranches in search of prey. A few years ago Sairiamu's family lost 8 goats to hyenas, this year (2004) they lost a sheep to a hyena.

Loss of livestock grazing areas

Sairiamu has observed in recent years that the number of elephants; wildebeest, zebra and hyenas have increased consistently. With the increase in numbers, Sairiamu has seen increased competition for resources throughout the year. This is especially difficult in the wet season when wildebeest and zebra migrate and graze on community land thus depleting pastoral resources. This forces pastoralists to move animals to alternative grazing areas.

The migrating wildlife host ticks which carry and transmit diseases such as ECF to cattle. Wildebeest calving areas are a major origin of MCF that is a major killer of livestock, forces herders to relocate to other areas, with all the associated impacts.

Threats to Human life

This includes attacks, deaths and injuries to herders with the livestock and women collecting water and firewood. In Inkiito a lion almost took the lives of a Moran and a schoolteacher. Fear of such attacks means people cannot continue with daily tasks

Kenya Wildlife Service

Relations between the community and the Kenya Wildlife Service, who manage the park and wildlife, are often strained. If elephants kill cattle they are consoled with funds from the Elephant Trust. A cow killed is worth Ksh 15,000. Sairiamu thinks this is not enough, and feels that the money is given to stop people from retaliating and killing the elephants rather than to compensate them.

As part of the management of the park KWS installed a water tank near Inkiito. Water is supposed to be pumped to the tank by KWS to reduce the community's dependence on the water sources in the park. However water supply is intermittent and seems to be reducing. Sairiamu blames the KWS leadership within the park for this. Although the relations between KWS authorities and the community are strained, Sairiamu says that he would prefer the park to remain open to the community, as this is where they get water and pastures for their livestock especially during the dry season. The park is also considered as a very important resource to the community as they get some income that is related to the wildlife. For example, people are employed in different hotels and lodges get some bursaries from the money contributed by KWS to the GR and also engaging in tourism related businesses.

3.4 Institutions of NRM – The Group ranch

Sairiamu has a stepbrother who is on the group ranch committee. This means it has been easier for Sairiamu to register himself as a member. He is also better informed about decisions made in the group ranch committee regarding current and future plans. Thus he has been able to register his wife Noolaisi and son Lekatoo for plots of 10 acres that the GR committee plans to subdivide near the mountain. All other residents in the Group Ranch have the same entitlements but it may take them longer to access information.

The group ranch gets Ksh 1,200,000 from the park. Among other activities, they allocate Ksh 5,000 per secondary school student per year. Sairiamu thinks that this is not a fair way of sharing benefits from the park. It has alienated the younger families who don't have children in secondary school.

The family would like the group ranch to subdivide the land. They want title to their lands, as they fear that it could be taken away from them in the same way as the government did when the Amboseli National Park was created. He recognised that there will be drawbacks if subdivision goes ahead. This includes restricted mobility and limited access to pastures and water. He thinks that subdivision would enhance growth in the area as people with land and no livestock will lease out their land to those with livestock. They could use the money to buy livestock. Sairiamu also argues that people would be more comfortable in developing their private plots. He also says that subdivision was better done before the population explodes as this would lead to people gets smaller pieces of land.

The community sees Land subdivision as the only way of getting a fair deal in land ownership. The GR committee has been blamed for selling the best pieces of land and the natural resources available in the group ranch like quarries and sand mines, without sharing the proceeds with community members. On the other hand Sairiamu says that if the committee members were not selling land at an alarming rate he would prefer the land to remain communal.

4. INSTITUTIONS

4.1 Institutions of Service provision

The following social service institutions are available to the family of Sairiamu: a primary school located 2.5 kilometres away from home, there is also another bigger school at Kimana 20 kilometres away where his son Lekatoo is schooling. There is a health centre at

Lenkism 10 kilometres away, a catholic mission of which is sponsoring the construction of their local primary school as well as employing the teacher 2.5 kilometres away from their home. Other institutions include a world vision project which assists in constructing water troughs for community livestock and sponsoring school children from poor families, a KWS office based 15 kilometres away from where they live which contributes funds for secondary school children, maintains boreholes, provides water for the community livestock and human consumption as well as keeping the park open for the community livestock to get pastures and water during very dry times. The park under KWS is also where most of the salt licks are based and thus the community can be able to access. Neighbours are also considered to be another social service institution as Sairiamu puts it that this is because they come handy in times of needs and during happy times.

The social political institutions are a group ranch committee who are in control of the money paid by the KWS office to the group ranch. They also resolve conflicts arising between community members and wildlife besides negotiating with the park warden on behalf of the community during hard times. also responsible for land subdivision and helping community members get employment opportunities at the park to work as either watchmen, game scouts and working in the lodges. There is also an administration office at Imbirikani 20 kilometres away and this is where issues affecting the community are solved.

The group ranch gets Kshs. 1,200,000 from the park. Among other activities, they allocate Kshs. 5,000 per secondary school student per year. Sairiamu thinks that this is not a fair way of sharing benefits from the park. It means alienating the younger families who don't have children in secondary school.

4.2 Markets

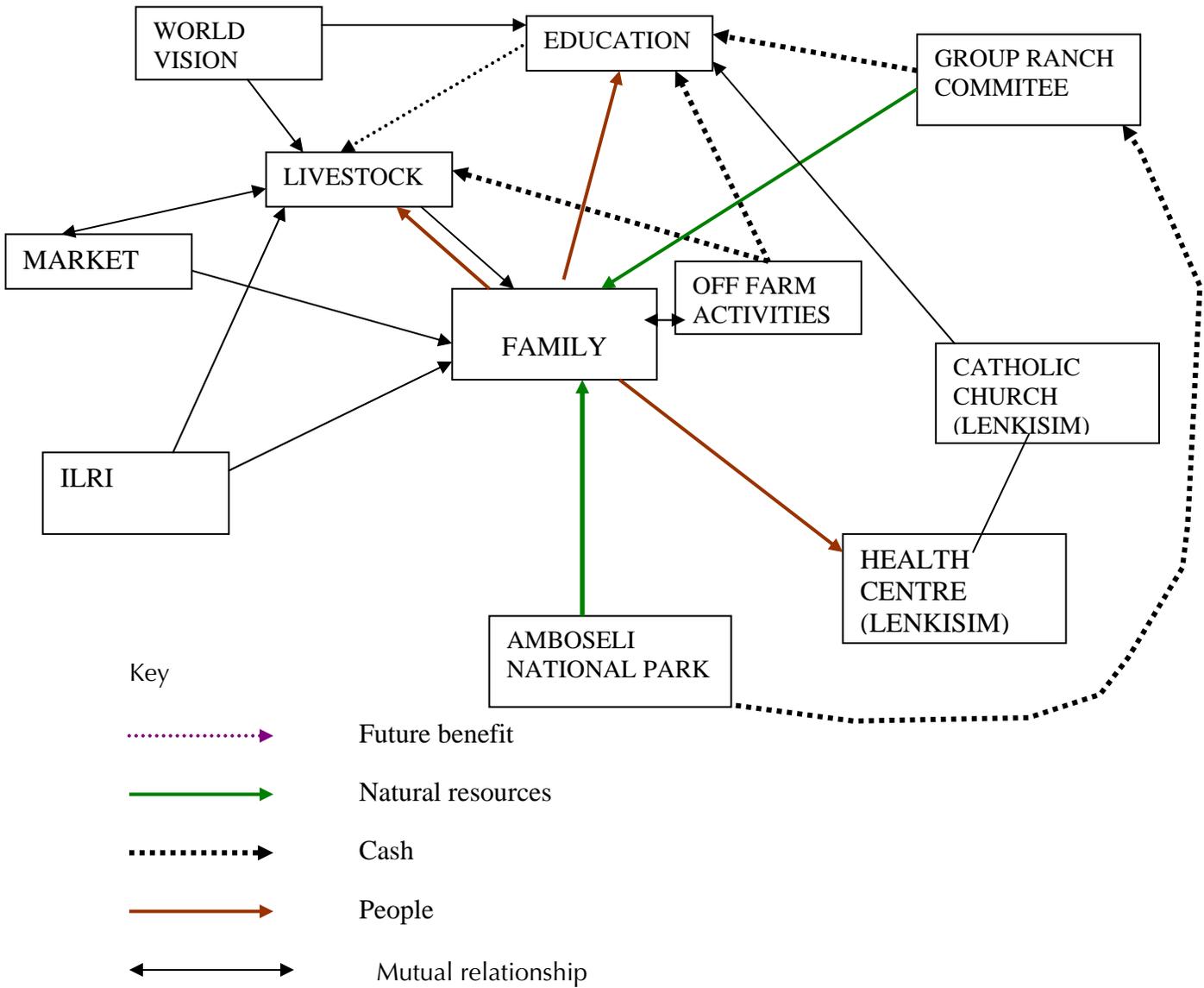
The markets at Kimana and Emali are used for sale and purchase of livestock. They also go to the market on market days to purchase foodstuffs and livestock drugs. At the market they are able to share information with community members from other areas regarding outbreaks of disease and other news. However the markets have also brought negative changes whereby the Maasai adopt a 'foreign character' or behaviour that is not in accordance to traditional Maasai society.

The family was asked to identify and rank the institutions they relate to in their daily lives and the diagram below was captured. Ranking the importance of local institutions

Institution	Ranking	Reason
School	1	Gives people skills, ability to communicate, influence
Group ranch committee	2	Access to land, subdivision
Hospital at Lenkisim	3	Real healthcare if needed
Church Mission at Lenkisim	4	Supporting education and healthcare in the area
Markets at Emali and Kimana	4	Key for accessing information, selling and buying livestock, and buying foodstuffs
World Vision NGO	6	Support to education
Kenya Wildlife Services	7	
Chief and local	No rank	

administration		
----------------	--	--

Livelihood diagram developed by the Sairiamu family



Notes

1. The family gets food inform of milk, meat and soup from the livestock, they also generate income to meet their expenses by selling the livestock and cultural importance attached by the community to livestock and in return the family provides labour and other inputs in order to increase their productivity and size of the herd.
2. Livestock are sold to finance education and in return they hope that their children will find employment and be able to invest in livestock.
3. From the markets they are able to buy foodstuff, Acaricides and dewormers for their livestock. It's also in the market that they are able to get information on prices of livestock.
4. They get cash from off farm activities, which they use to buy food, livestock and paying school fees.

Photo of handing the book to the family



Analysis of the internal and external drivers of change

Sairiamu's family, having analysed their livelihoods by 'drawing their own portrait' identified the main drivers of the changes. In order of importance, these are:

1. Drought, which has become more frequent in recent years;

2. Education, which is increasing the pace of change away from livestock keeping (reduced labour available, changes in priorities of young people) towards potential wage labour in the future
3. External contacts, usually through the markets which are useful in bringing information but also can influence people negatively.
4. The impact of the Amboseli national park, through livestock predation, competition for pastoral resources, and threats to human life. The family does also acknowledge the opportunities that the park brings

Strategic options for the future

Ole Sairiamu is strategizing on how to overcome the problems associated with increasingly occurrences of drought conditions combined with limited access to pastoral resources. One of his options is to sell some of his livestock and deposit the proceeds of this sale in a bank account. With the extra money he gets he could Sairiamu buy some land and build on it, or develop it for livestock (shallow wells, paddocks etc). He says that land and plots are not affected by droughts and diseases as livestock are.

Sairiamu wants his children to get education as he says this will open up many doors for them to diversify in the future into agriculture, developing plots and advanced livestock keeping besides getting employed. He would like to see the construction of boarding schools where school children could stay even when their families moved because of drought.

To improve livestock productivity Sairiamu suggests digging dams and wells, better livestock markets, and upgrading livestock through cross breeding.

Sairiamu's family would also like to see more community meetings and seminars to inform the community about various issues and create a space for debate.

CONFIDENTIAL

FAMILY PORTRAIT FOR KATATEI OLE NTIRRABA



2004

INTRODUCTION

The family portrait below explains in detail the life of one Katatei Ole Ntirraba his family members who they are and what they do. On the second chapter it further expounds on their livelihoods being agriculture, livestock keeping and any other means by which they depend on to survive. Chapter three talks about the resources they can access and the difficulties they face in trying to access these resources. Finally closes with looking at their survival strategies, their future plans and the external and internal drivers of change.

1.0 The family

Katatei Ole Ntirraba was born in 1934 at Loonkiito in Tanzania. He belongs to the Iseuri age group. His father, Loimutie had two wives, Nalepo and Nairesiai. Katatei has three brothers: Mutunkei, Ologela and Marias. His only sister is called Lasoi. She is married and lives with her husband far away from their home.

The family of Katatei lives at Namelok village, about 40 kms to the north of Mt. Kilimanjaro. Katatei' family consists of two wives and eleven children. The first wife is called Hannah (49 years) while the second wife is called Noolkeriai (44years).

The second wife Noolkeriai is currently away from home staying at a cultural boma near Amboseli National park. She left because of economic hardships after all the cows died in 1997.

(She first went to the nearby centre Namelok to make local beer for selling but later on after staying for a year the cultural society registered new members and she got membership. She is now staying with her youngest child Mulele in a cultural boma near Amboseli national park. She owns a stall at Serena where she sells beadwork products to earn a living. Katatei occasionally visits the home.)

1.1 Family composition and Demographics

Of the eleven children eight were born in Lenkisim except for Joyce who was born in Meshinani, and Tayit and Mulele were born in Namelok where the family lives now. Hannah has four girls and two boys. The girls are: Katei (30yrs), Leah (24yrs), Joyce (19yrs), and Tayit (15yrs). The boys are Joseph Kesire (28yrs) and Kikanae (20 yrs). All the girls are married except Tayit who is the youngest and in class three in a nearby school. Noolkeriai has four girls and one boy. The girls are: Ntitiyio (24yrs), Namujie (21yrs), Nemakarau (19yrs) and Mulele (13yrs). Kisham, the only boy, is 15yrs.

The family of Katatei shares the boma with Olouma ole Kereku. Olouma is Hannah's brother. She has looked after him since his mother died and he is considered as the first born of Katatei. Olouma has two wives Nookiseyia and Ngila but only Nookiseyia and her three children live in Namelok. The children are called Ngaurr, Nasei and Taiko. Ngila and her five children live in Serena (Amboseli) at a cultural boma where she was registered as a member in the cultural society. She sells beadwork products to the tourists who visit the cultural boma.

Katei, born in 1974, is the firstborn daughter of Katatei and the first wife Hannah. She did not go to school and is married at Lenkisim. She is a livestock keeper. Katei has two sons.

Joseph Kesire who is the first son to mzee Katatei was born in 1976. He went to school up to class six (6), but could not continue with his education due to the economical

constraints at home. Joseph decided to leave the area to look for white-collar jobs in order to help his parents and his siblings. In 1998, Joseph went to Amboseli lodge to look for work but he says that he did not achieve anything. When he came back from Amboseli he went again to work in Limuru and he was able to buy an Ayrshire calf in 2001 with his earnings.

He managed to bring the calf home with the help of his friends at work and that's why their gate is wide. Friends encouraged him to go back to school but he decided to give the chance to his younger siblings and continue to seek work to try to support the family. Joseph spent a long time looking for a job. In July 2002 he became a watchman at Ong'ata Rongai near Nairobi where he is still working. When Joseph is at home he herds the animals. He is also an evangelist who spreads the word of God to the Namelok community and especially his age mates.

Leah who is now married was born in 1980 at Lenkisim and she went to Namelok primary school up to class four (4). Leah lives in Entonet and she has two boys. Leah practices Agriculture, livestock keeping and Tourism related trade.

The second son of Katatei and the fourth child of Hannah is Kikanai who is 20 years old and married to Noonkokua. The couple has one child named Nashipae. Kikanai went to Namelok primary school up to class six (6). Currently, Kikanai is in Mombasa working as a watchman. He went there in September 2001. So far he has bought 20 shoats and 2 cows out of his savings.

Joyce born in 1985 is the fifth child of Hannah, she was at school until class two, and is now married in Namelok. She has one girl child, she is a is a livestock keeper and practices cultivation.

The last child to the first wife is Tayit who is 15 years old. She is currently at Namelok primary school in class 4. She helps her mother with household chores, collecting firewood and fetching water.

Ntitiyo who is the firstborn of the second wife Noolkeriai was born in 1980. She is married at Entonet to the east of Mt. Kilimanjaro. She mainly practices Agriculture and Livestock keeping. Namujie was born in 1983 and she got married at Kiturua. She has one daughter. She is a livestock keeper. The third child of Noolkeriai is Nemakarau who is 19 years old and also married with one son and she lives in Namelok. She is mainly doing cultivation and livestock keeping.

Nemakarau and Kisham are the only children in Noorkeriai house who have been to school, they reached class three (3).

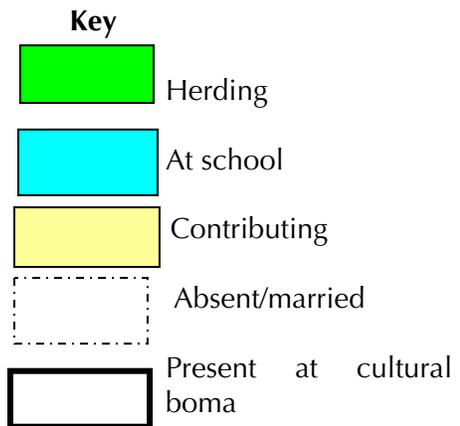
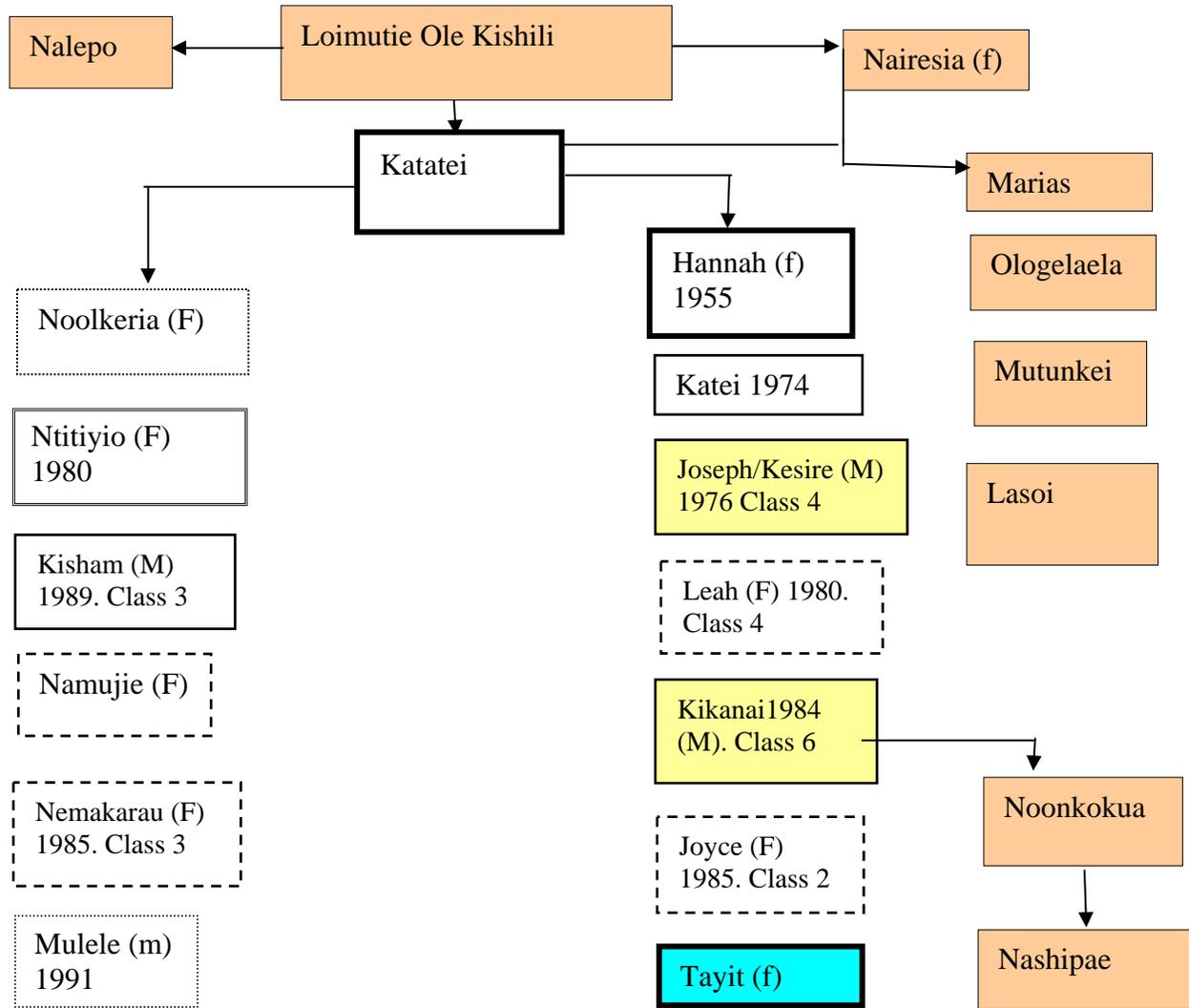
Kisham who is the only son to Noolkeriai was born in 1989. He is casually employed at Namujie's home in Namelok as a herder. After working for a period of one year he was given two shoats as payment. He is now expecting one heifer as payment for his work by the year 2004.

Mulele is the lastborn to the second wife and she stays at home with her mother helping her on the daily household chores. She is 13 years old.

The members of the family mainly meet when there is a ceremony at home. When Joseph and Kikanai take leave from their jobs, they stay at home for a month. Olouma frequently visits home because he is working near their home area. The married daughters only come back to visit their parents when given permission by their husbands. Kisham who is working as herder at Namelok comes home regularly.

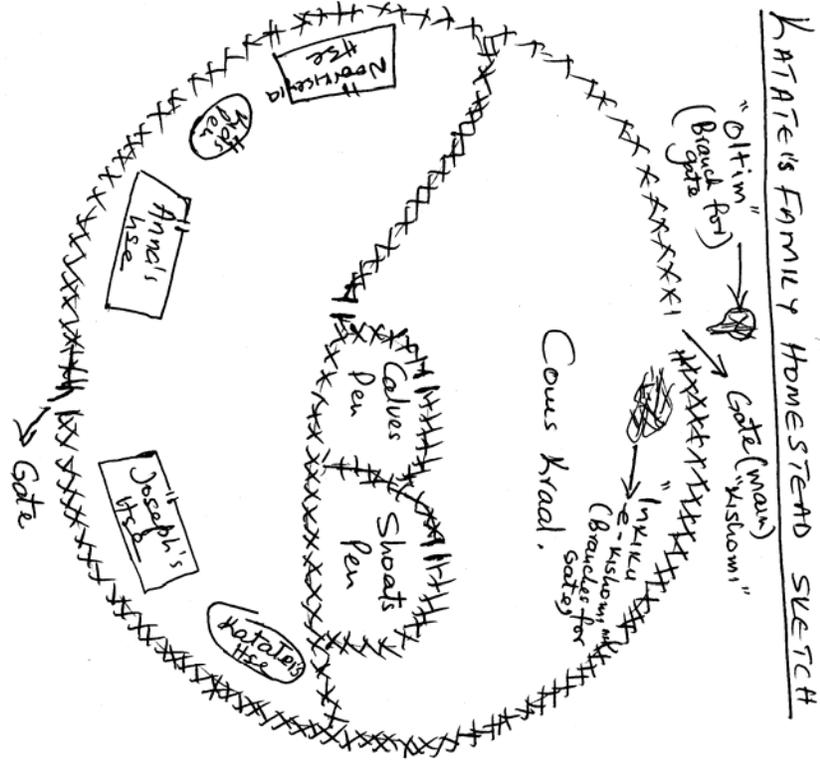
Figure 1.1 Family tree

KATATEI OLE NTIRRABA FAMILY TREE





Katatei Family homestead



1.2 Family History.

Katatei Ole Ntirraba was born at Loonkiito in Tanzania. His great-grand parents moved to Olgulului but the majority of his family remained at Loonkiito, others went to Osupuko

Looltatua and Olkonerei. They then moved from Olgulului to Ilturot-Wuasin where they lived for a while.

Even though he was a young boy at the time, Katatei remembers the World War II. Each family was forced to contribute a steer to the colonial powers.

In 1972 Katatei's father Mr. Loimutie moved to Lenkisim when the age group of Ikalikal were warriors. Katatei feels like he spent half his life at Lenkisim. This is where he was circumcised, enjoyed his moran life, his marriage and even the Maasai traditional graduation ceremony (Olgesher) to become an elder. There were plenty of pastures for livestock at this area and the family settled for a while.

Katatei also recalls the good days when he got his own family of two wives and children. Although he says that his parents brought the first wife Hannah to him when was a Moran, performing his warrior duties of protecting society and raiding cattle. He says that they could hardly talk to one another, thus Hannah did not get a traditional name from her husband. Neither did she have a best man '*Shapukerra*' which is a must to a newly married Maasai woman.

In 1984 when there was severe drought, Loimutie's family moved to Olobelibel in the Ilkankere section of the Maasai looking for better-watered pastures for their livestock. Katatei separated from his father's family at Olobelibel on peaceful grounds and drove back his livestock and family to Olokii where they stayed for an overnight and eventually at Lenkisim where they lived for two years.

Katatei family at one time moved from Loomogi to Mishinani where the numbers of cows were 100. When they moved from Meshinani they passed through Rissa with the father-in-law (Kireku) up to Namelok.

During the 1984 drought when they moved to Nchakita for greener pastures and from here they went and stayed at Naarok Lukuny where all the animals died due to a disease called Rinderpest (Olodua) and they were only left with one cow. The reason why they moved from Lenkisim to Namelok was because there was increase of deaths of cows and they also wanted some piece of land for cultivation.

The death Katatei's and Hannah's parents was a shock to them. Hannah had to take care of her three sisters and one brother. Also Hannah lost two sons and she stills remember. One son died in 1978 due to unknown sickness when they were living in Lenkisim. Another died in 1998 due to severe malaria here in Namelok.

When they came to settle in this home of Namelok, they only had three cows. A distant relative who stays in Eselenkei gave one cow and the father-in-law to Katatei also gave a cow with which they were living together at one time here in Namelok.

From 1984 to 1997 their cattle numbers declined, and following the El Nino rains in 1997 they lost their last 10 cattle to Rinderpest. Having lost everything Hannah started brewing local beer to sell. It was a time of enormous stress in the family, and some neighbours had thought she was abnormal due to her uncharacteristic behaviour, which made her withdraw from the rest of the community members.

Later on, her son Joseph persuaded her to stop brewing the local liquor as he had been influenced by the church to think differently. Since then, the family has survived without brewing or selling the liquor. Hannah thinks that they have been doing well with the passage of time. She is optimistic that they will once again be economically stable. Her optimism is based mainly on the experience she has seen in her life: some families that had a lot of livestock. *“Ore ilaisinak aare nemeyiolo aataboitata”*. Poverty may be taken to be synonymous to loneliness. Whenever one is rich, there are many people around, but when the property diminishes, the people disappear.

The family of Katatei plans to stay here in Namelok because they are already registered as members in Olgulului/Lolarashi. Some institutions like the Health centre, School, Town centre and church are near their home so they are planning to stay and only drought will make them move temporarily.

Figure 3: map of movement of the family to their current location including location of significant events

1.3 Family Identity

Economic and social demands among the Maasai community before the introduction of ‘civilized’ life were very low. Milk, blood and meat were plentiful. Unless, a family deliberately absented themselves from certain functions, which they were called upon to perform, they could not find life in any way difficult. Katatei further explained that twenty years ago, families lived together. One group of the family formed a village (Enkang) and all the close members of that family worked communally by virtue of their paternal ties. They had a tightly knit system of kinship, which bound them together in all their transactions. Their living habits were based on the surroundings in which they lived and operated. Whatever they did was determined by the social and cultural traits. Many of them acted and behaved according to the requirements of Maa society in which they lived. For instance no person would go hungry in one village if there was food in the other village (enkang) unless, he chose to do so. Equally true, unusual habitual behavior of one person tended to determine the manner in which he was treated.

Katatei’s family now identifies itself as Semi-traditional. Some cultural practices, e.g dress remain but others have changed. For example, the Morans no longer play their role of protecting the society and the family eats introduced foods rather than a diet of milk and meat. They have also modified the traditional Maasai house. Their roofs are made of dry grass and a polythene paper inside to avoid leakage during rainy seasons. They have purchased beds from the nearby shopping centre which are different from the usual Maasai beds which are made of manure and hides used as the mats. The type of house has been influenced by external factors and the availability of polythene in the nearby centres. Hannah says that these types of houses are more manageable because plastering during the rainy seasons is reduced.

1.4 Education

Katatei and his two wives have no formal education. When they were young their parents did not see the need for them to go to school. Their work was to look after the animals. Katatei says that those who were lucky to go to school were children from a mother or wife who was hated or not favoured by the husband, the children from the favourite wife would stay at home with their parents. He also says that during those days one son who went to school would represent the whole clan.

Katatei managed to send 7 of his children to primary school. None of them was able to complete primary education due to lack of resources to buy school uniform, exercise books, textbooks and pens. However all those that went to school are now literate.

Mzee Katatei and Hannah say that they can only speak the Maa language. All his other children can communicate in both Swahili and English except for Katei, Ntitiyo, Namujie and Mulele who never went to school.

1.5 Roles and Relationships

Decision making in this home has become an affair for all in the family. This has been brought about by the poor financial situation in the family. In Maasai society the head of the household, Katatei, makes the decisions, but due to his poor health he has been forced to share and consult with other family members. Kikanai who works in Mombasa owns most of the livestock, so when they want to sell a cow or the shoats he has to be informed by telephone in order to give the go ahead.

The second wife Noolkeriai runs her family independently.

Bride wealth is not shared out to the members of the Katatei family. However the benefits in terms of food are always shared equally

Relationships

Katatei says that contact with the rest of the extended family who live in other places especially Loonkiito in Tanzania has reduced over the years. Joseph says that it is not just the distance that has changed the relationships with their relatives. He thinks that the difference in wealth is contributing. Between 1998 and 2000 they had nothing, and none of their family members came to rescue them.

The family received minimal support from friends and relatives during the time of great hardship. This is partly because Katatei, although the firstborn in his father's family, was not the favourite son as he was born out of wedlock. Out of his brothers, Ologela and Marias are also suffering economic hardship, and Mutunkei is relatively wealthy but doesn't offer any significant help to the family.

Katatei further explained that long ago poor families were able to exchange a donkey for a steer to be able to cater for the a mother who has delivered and the baby who has been born. This is no longer practiced. Today people seem to put profit above social relations. If a poor man requests a mature steer in exchange for a heifer he is given an immature steer so that the donor does not lose any money. This has lead to a weakening of links between families.

Political involvement

The family of Katatei doesn't have any leadership position within the Namelok area. As a result this they were disadvantaged when land in Namelok was subdivided. They were given a portion of land where water for irrigation is not available and their original piece of land where they had always cultivated was allocated to someone else.

1.6 Health status

Mzee Katatei has been suffering from tuberculosis for a better part of his life. His sickness started in 1980. Hannah remembers that in 1990 he was admitted in the hospital for four months. He was reluctant to go to hospital as he would always relapse, mainly due to drinking liquor. He has stopped drinking although he still takes snuff. This sickness has meant he is unable to participate in work carried out by the family. Hannah also lost her last son in 1999 after a long sickness.

The family sees that value in both modern medicine from the health centre in Namelok and traditional medicines. When a member of the family gets sick s/he is first treated with herbs. Hannah explains that for children '*Engorno* mixed with *Osokonoi*' is given when they are infants until they are fully-grown, it helps them to grow. Underweight children are given '*olmilao le nkaji*' which is first sieved then mixed with water. The family treats Malaria using the roots of a certain herb '*Oremit*'. Pregnant women are treated using '*Olmukutan* herbs', and they were forced to 'fast' several days before birth to avoid complications during delivery, Katatei says that '*Kegurrrumi intuaan*'.

This has changed of late. The childcare clinic is now an important service for this family. The information on clinics was introduced to them by a mobile clinic from a Catholic Church. The World Vision Project also sensitised many on childcare information.

1.7 Family Assets

The family assets include:

1. Livestock (Cattle and Shoats)
2. Ten acres of land at the Namelok swamps (For Joseph and Katatei)
3. A radio
4. Bicycle sold later by Kikanai and bought a steer
5. Spraying pump
6. Jembe

2. LIVELIHOODS

2.1 Introduction

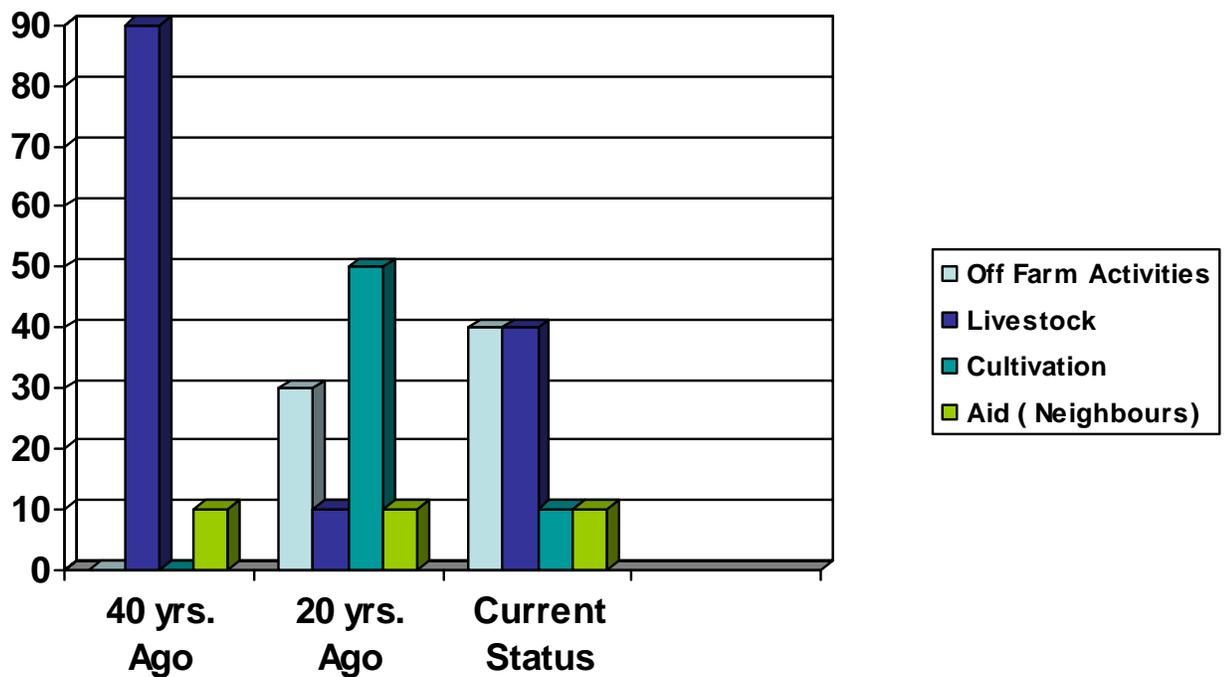
The family has cattle, shoats, a plot for cultivation and some off-farm income from their sons and relatives who are working elsewhere.

Those remitting part of their income are: Kikanae (who works in Mombasa) and Olouma who works as a Games Scout with the Kenya Wildlife Service-Amboseli. He is the brother to Katatei 's first wife, Hannah. His first wife, Kiseyia, lives in Katatei 's home.

Kikanae started working in September 2001, he comes home about four times a year. Whenever he comes, he brings a number of things ranging from foodstuffs to money to buy clothing or livestock. Joseph Kesire occasionally helps in some small things. His job as a watchman in Ong'ata Ronkai near Nairobi hardly generates enough for the rest of the family.

Whenever the sons or Olouma has some extra money, they buy food for the family. However, if there is enough food from the cultivated farm, they use the money to buy livestock, and also set aside some money for buying seeds and land preparation for irrigation.

Figure 4: Graph of Relative importance of Livelihoods



GRAPH OF RELATIVE IMPORTANCE OF SOURCES OF LIVELIHOODS IN THE FUTURE



2.2 Livestock

Katetei's family owned 200 heads of cattle before 1984. The drought of 1984/5 killed half of the herd. Since then the family herd declining until 1997 when after the El Nino rains the last ten cows were lost to an outbreak of Rinderpest.

Katetei and Hannah hope to own more cattle in future. This is based on the belief that "A Maasai's identity is not complete without cattle and Maasai culture is intertwined with the cattle". Money in a bank account may have value, but it does not show that one is a Maasai. The prestige and status of cattle may surpass material benefit. Livestock are also used as gifts-to cement relationships between friends and relatives, and for paying bride wealth. Livestock in Katetei's home also provide material benefits. Cattle produce milk, meat, and hides and for sale whenever a substantial amount of money is needed. Money may be needed for the payment of medical bills and school fees.

Katetei and Hannah are afraid that their children don't appreciate the cultural value of livestock because of their interactions with other communities. They think that the young generation believes in more cultivation. This has been caused by interaction with other communities who don't rely on livestock, climatic changes resulting in prolonged droughts which lead to more movements thus hindering 'development'. For example, they have not been able to build permanent houses and children's education has been disrupted.

2.2.1 Herd Composition

The family owns

- seven cattle (three cows, two immature steers and two calves).

- nine sheep (7 ewes, one immature ram and 1 lamb).
- six goats (four have kids, one castrate and one female immature).

Olooma's has 3 cattle (one cow, a heifer and one castrate), and ten sheep including a ram and five goats including a buck. The livestock is identified by earmarks, body and face branding and by their colour.

They keep a range of livestock species to reduce the risk of losing all their animals. Different species are better adapted to different natural/climatic conditions. For example, cattle do well in Namelok while the shoats do not. Hence Shoats are kept in a different place, but are still there in case cattle are struck by disease.

Table 1: herd composition

Species	Number
Cows	3
Calves	2
Steers	2
Ewes	7
Ram	1
Lamb	1
Goats(kids, castrate)	6
Total	22

Figure 4: Map of pastoral; mobility and pastoral resources and how they have changed

2.2.2 Livestock Diseases

The livestock are taken care of in many different ways. They are sprayed with acaricides against ticks, dewormed occasionally and injected whenever they are sick. The young calves are given extra care especially during the dry spell, they are fed soft grass to ensure they do not starve in anticipation for the rains.

The drugs used in the Katatei family to treat animal diseases include Oxytetracyclines and other drugs to treat diseases such as ECF. For MCF, there is no cure and all infected cattle are sold off to avoid death.

2.2.3 Livestock ownership and sales

Cattle are only sold when the family requires substantial amounts of money for school fees, medical fees or the payment of bride wealth. Katatei ensures that his son in Mombasa is consulted, because Kikanai bought the animals with his own money. Whenever a cow is sold, other subsidiary needs (food, clothing) are met with same proceeds to economise on

the number of cattle sold. Whenever possible, a smaller cow, a sheep, or a goat is bought to replace the sold cow. This ensures that the capital base is not depleted.

Katatei and his wife Hannah have noticed that generally cattle sales had gone up in recent times, they think this is due to the cash economy. Despite this trend they have not sold any livestock in the last year mainly because Kikanai, his son, has been providing food for the family. The cattle prices are very seasonal, depending on the supply and demand of beef especially in Nairobi. Every time there is a drought, prices plummet due to the high supply and poor condition of the animals. Without money it had become very difficult to engage in any transactions.

Milk is not sold, the main reason being there is no ready market nearby, and Hannah thinks there is danger of getting used to money from the milk and then extracting all the milk while leaving nothing for the calves.

Tuesday is Market day at the local market in Kimana. The route to the market is safe, save for periodic and unpredictable disturbances brought about by elephants, which have killed people in the area. The local Maasai dominate Kimana market. It was only in bigger markets like Emali that outsiders feature prominently. Information about the markets was mainly got from fellow Maasai during market days and the traders. The Veterinary officers who frequented the markets provided any other information about animal husbandry.

2.3 Cultivation

Since the days they moved Namelok from *Olpurkel* (the drier parts of Lenkisir), members of Katatei's family engaged in cultivation in the swamps of Namelok. They had no other options having lost most of their cattle during the 1984/5 droughts.

Hannah thinks that cultivation is an important survival strategy. Diversifying into agriculture helped to put food on the table and to bring in the much needed income. When they started in 1984, Hannah was cultivating part of her father's shamba. She harvested 2.5 bags of maize. Later, she continued with irrigated agriculture and grew tomatoes, onions and cabbages. They learnt by watching what other people were doing, which was difficult at the beginning but later on they became more skilled. Over the years, as the number of people practising irrigated agriculture has increased, the water available for irrigation has dwindled.

In the last four years, Hannah and her family have relied increasingly on rain fed agriculture. They think it is easier and less costly. However, the last time they cultivated their land, like many other of their neighbours, was in 2001. This is because there is not enough water for irrigation, and because the group ranch committee did sub-division of land in the swampy area unfairly. Some people who had been cultivating certain parcels were not given due consideration when the actual sub-division was done. Some people who were farming closer to the source of water were allocated land farther away, making it more difficult to access water for irrigation. Since then, there has been more competition for the available water. Only those closest to the springs have had a constant supply of water.

Joseph hopes to use the money he can save to dig a well so that he can cultivate his land which a bit far from the Namelok swampy area. This way he will not depend on water from the swamps, which is already limited due to increase in population around that area. He sees more advantages in investing in cultivation rather than livestock:

- *farm production (3-4 months) is much quicker than cattle which take a long time to mature before they can be taken to the market.*
- *increasing populations will limit land and livestock will no longer be able to move to search for pasture.*
- *Subdivision/privatisation of land will also restrict access to pastoral resources (browse, water etc) and livestock mobility which undermines the viability of keeping livestock.*

2.4 Off- Farm Income

The main source of off-farm income is from Kikanae who works in Mombasa as a watchman. He started working in September 2001 and he comes home after every three to four months. Whenever he comes, he may bring a number of things ranging from foodstuffs to money to buy clothing or livestock. Olouma who works as a Games Scout with the Kenya Wildlife Service-Amboseli also buys food and clothing for the family. He is the brother to Katatei 's first wife, Hannah. His first wife, Kiseyia, lives in Katatei home. Also Joseph Kesire occasionally helps in buying the Accaricides, food and sometimes medicine for his sickly father. His job as a watchman in Ong'ata Ronkai near Nairobi hardly generates enough for the rest of the family.

Also occasionally, Katatei family gets some support from the neighbours in terms of foodstuffs such as salt, sugar and maize flour. Hannah says this is normal in any Maasai home because it enhances good relations. Katatei family also gets food and money from their own relatives, especially their daughters who are married give their parents food in times of drought.

Other external support:

In 1984, Hannah was given a cow due to work done for the Isilale project. Periodically, the family also gets relief food from government.

A World Vision Project sponsored Leah and Joyce by buying uniform and textbooks. In May 2004 the same project took a photograph of Tayit and there is hope that support may come.

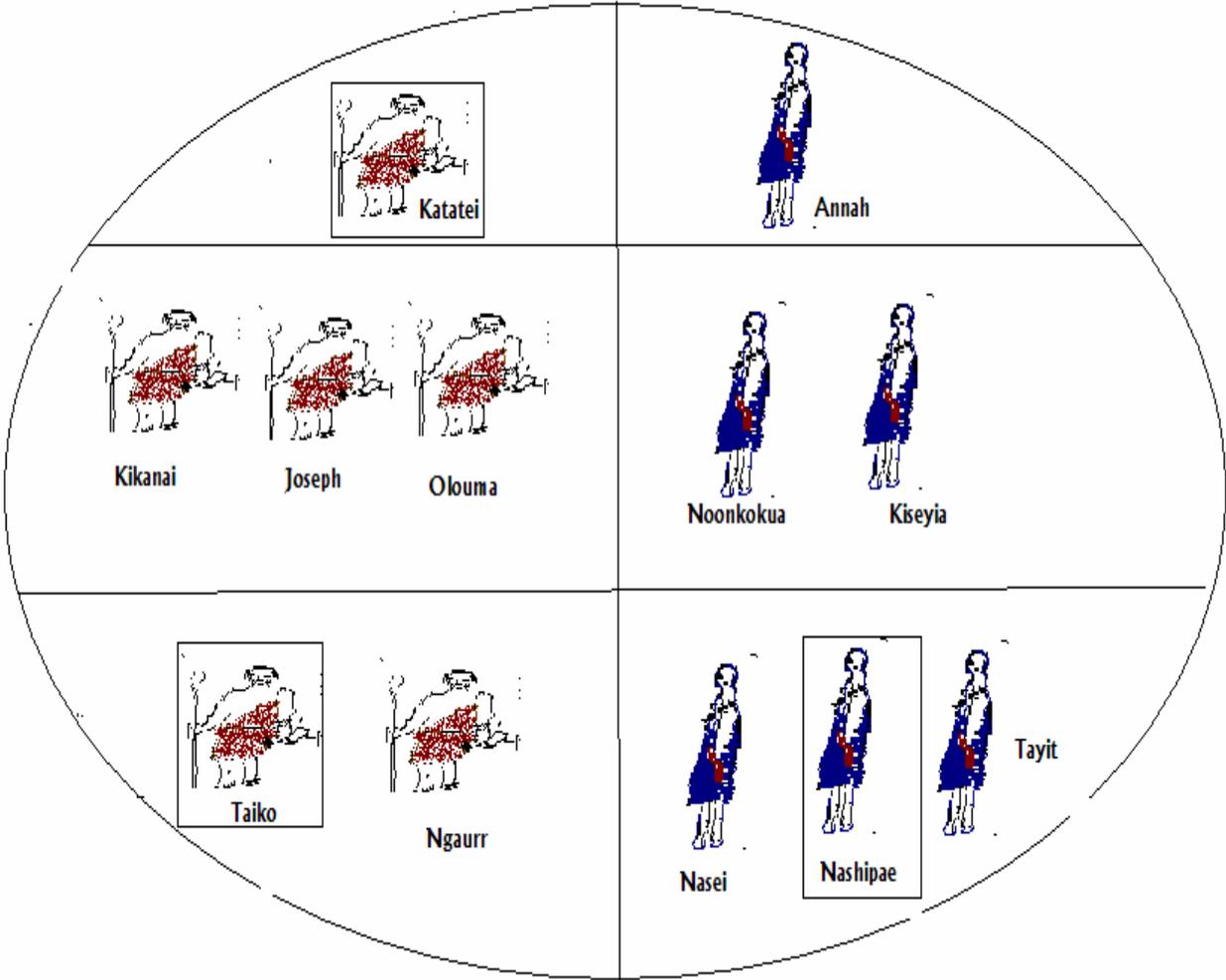
Support from the Kenya Wildlife Service is given to pupils who are in class 7 & 8 and secondary school but the support has not been given to this family because Tayit has not reached the classes required.

Labour

Labour in Katatei family is shared among the old, the adults and the children. Although almost all of Hannah's children are away from home, the first three girls are married, Kikanai and Joseph are working, and Tayit is in school. Whenever they are there they perform their duties as usual. The herding labour in this family comes from Olouma's household. The family uses mutual help available in the community. Hannah says when

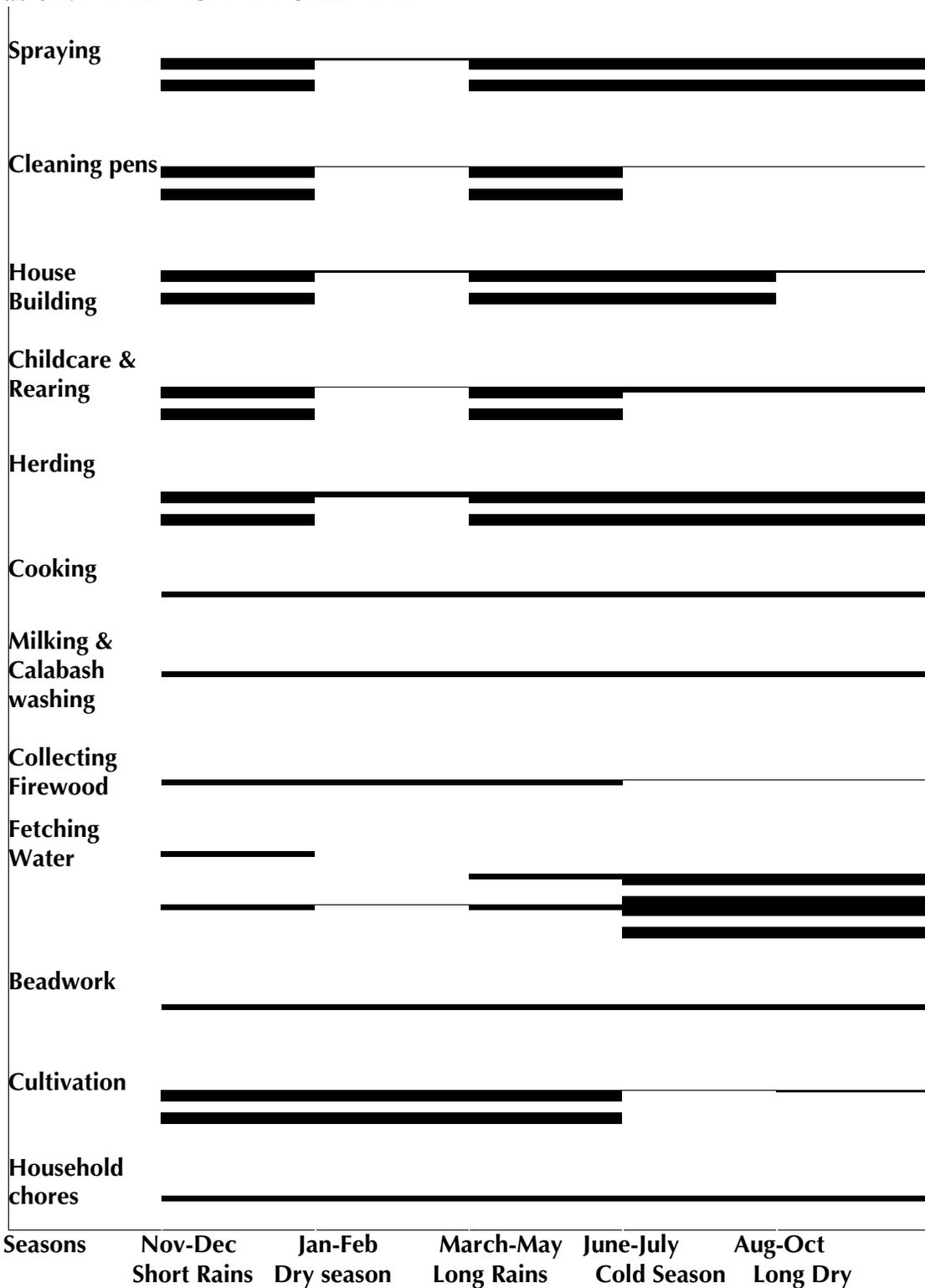
they want to build a house other women will help to collect building materials from the nearby forest. Also in livestock herding labour is shared with the neighbouring homes. The family then went further explaining different activities carried out in their daily lives as follows showing how labour is divided within the two households in this boma.

Figure 4: Labour Resource in Katatei Family



Key
[] Not active

Table 2: FAMILY ACTIVITY CALENDAR



Seasonal changes in the above Family Activities

The family identified five seasons within one year for the different activities, which are carried out in their day-to-day life. The seasons were as follows:

- 1.Short rains (Oltumure) in the months of November – December.
- 2.Short dry season (Oladalu) in the months of January – February.
- 3.Long rains (Inkokua) in the months of March – May.
- 4.Drizzling and cold season (Oloirujuruj) in the months of June – July.
- 5.Long dry season (Olameyu) in the months of August – October.

Family Activities

1.Cultivation

The family of Katatei has been cultivating a piece of land belonging to Ann’s father Kireku in the last four years. Since then they have not been cultivating due to land subdivision that pushed the piece of land they have been cultivating far away from the water source. The work is much more during the periods of planting and weeding, which is done during the seasons of long and short rains. Crop **protection** is done in the short dry season and the work becomes less during this season. During the cold season irrigation and harvesting is done in the shamba, which becomes much less and there is some irrigation during the dry spell.

2. Beadwork, Cooking and Household chores

The work of beadwork, cooking, childcare and household chores is almost the same during the year in the family of Katatei. Women mainly do this work.

3. Water Collection

Water collection becomes more intensive during the short and long dry seasons, but becomes less during both and long rainy seasons. Mainly women in Katatei family do fetching of water.

4. Firewood

Work becomes more intensive during the seasons of short and long rains for firewood collection.

5. Milking

The family of Katatei gets milk both from cattle, sheep and goats. This ensures that the family gets milk through out the year. Milking tends to increase during the long and short rainy seasons and the work becomes less during the long dry season. Women perform the duty of milking in this family.

6. Livestock Management

ECF increases during the long and short rainy seasons, thus men normally have a lot of work to do on treatment of cattle and shoats. During the dry season there is also more work because men have to walk long distances for pastures. Men from the neighbouring homes are also involved in the search of pastures for the livestock.

7. Childcare and Rearing

Washing is more during the rainy seasons and also diseases such as colds and flu tend to increase during the very dry season. Women in this family are responsible for taking care of the children.

8. House building

During the long and short rainy seasons work becomes more because the traditional houses have to be plastered to avoid leakage. The types of houses in Katatei family are semi- traditional huts since the roof is made of grass and sticks thus less work is done throughout the year. Building materials are brought from the forest by women who work on the walls of house and men work on the roof of the house. This is a change in the Namelok community because in the Maasai culture women are the one who make huts. The change has been due to the interaction of the Maa community and the non-Maasai community who come to work as labourers in this area. They called these types of huts 'Olmushaloi'.

9. Cleaning pens

Women in this family of Katatei have a lot of work in cleaning the pens during the long and short rainy seasons.

10. Livestock Spraying

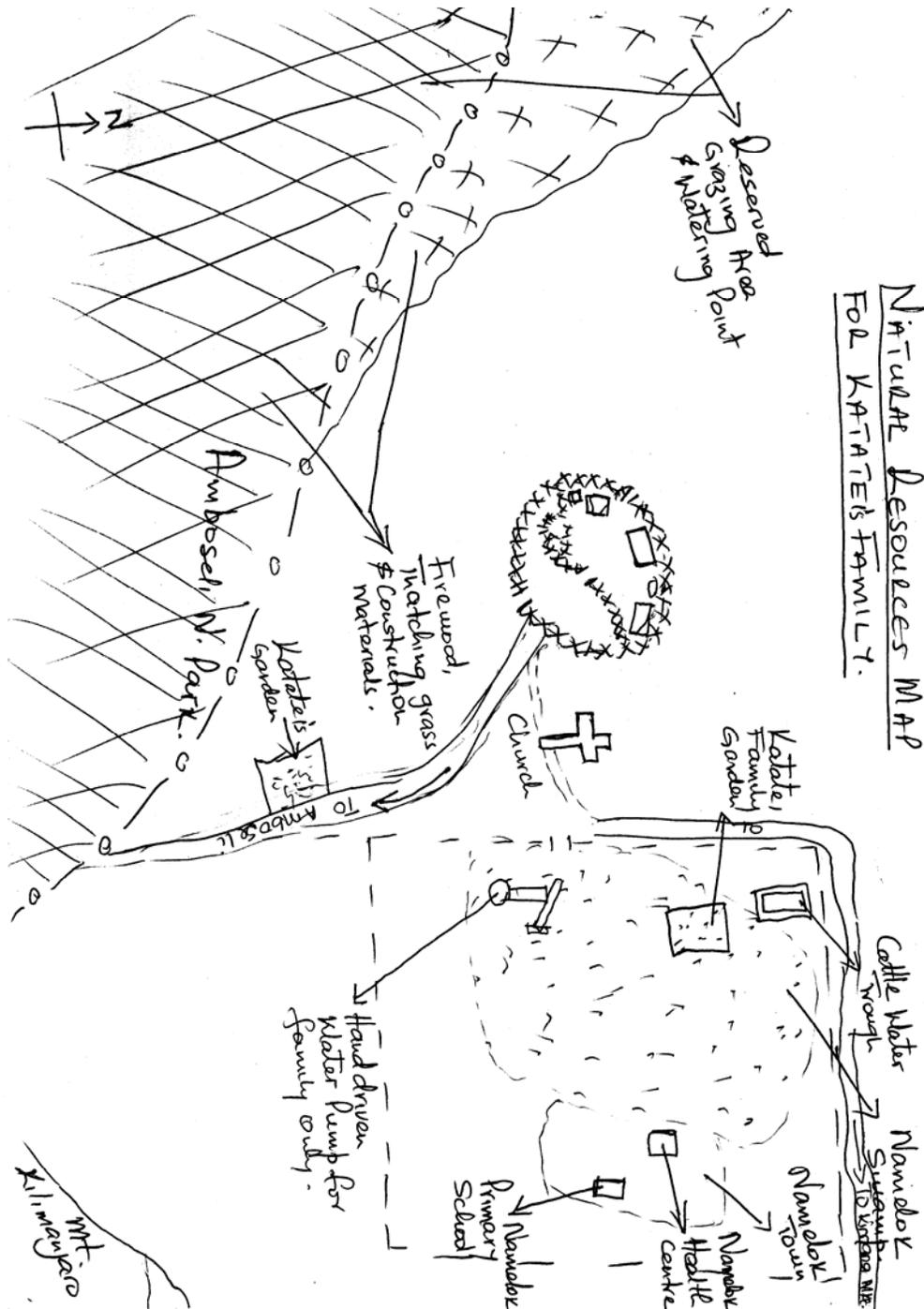
There is more tick incidence during the long and short rainy season hence making spraying of the livestock to be more frequent. Also in the dry season 'Entunuri becomes more. Men do the work but in their absence women can also do it.

3.0 NATURAL RESOURCES

Introduction

Namelok is a relatively dry area; they receive less rain than other places to the east of the Ololarashi group ranch. The area has access to Namelok swampy stream that flows from the top of Mt. Kilimanjaro and thus it has adequate water resources. Despite this they feel that Namelok is better because they can cultivate their land if more water troughs are made to enable all pieces of land in Namelok to be cultivated and this will help them make more money and food for the families.

Figure 5: Katatei 's Family Resource map



3.1 Land

The Katatei family are registered members of Olgulului/Lolarashi group ranch. Katatei and Joseph each have a 5-acre plot at Namelok and an extra 10 acres of land on the arable parts of the group ranch on the slopes of Mt. Kilimanjaro. The family felt disadvantaged in the way land allocation was done as the land they had cultivated since the late 1980s was allocated to someone else. According to Katatei there is a lot of injustice in land subdivision and the poor suffer most. Land-subdivision is continuing and the family fears that livestock mobility will be limited as soon as land is subdivided. On the other hand

private land means people are able to invest in and control the resources on that land which will enhance effective management.

3.2 Water

The Katatei family get water from a hand pump nearby home. A well wisher to the entire Neighbourhood donated the water pump. The family uses the piped water from the Olmakau spring to the swamp periphery to water their livestock. During dry spell when livestock moves to *Inkaron*, livestock get water from shallow wells in the Amboseli National Park. At the moment, the family is not doing irrigated cultivation because of water shortage. Some families would like to construct cement water channels from the source into their shamba in order to continue with irrigated cultivation. Water has also reduced due to population increase in the area. Katatei has observed that when they moved to Namelok there were only three bomas but now they are approximately 10 around this village.

3.3 Forest

The forest in the swamp has long been a key resource for the family. The forest provides construction materials, firewood, fencing braches and thatching grasses. The subdivision of the Namelok swamp into individual plots has greatly affected the use of some resources in Namelok. For example since the swamp was subdivided, some of the routes to either Namelok town or fellow neighbour's homes have been interrupted. Livestock movement in search for pastures has also been affected after the land was subdivided. Deforestation is increasing in this area due to more cultivation. Land subdivision has also lead to increase in the number of people in individual's pieces of land who are not located in Namelok area.

3.4 Wildlife

Human wildlife conflict is most prevalent with elephants and Baboons in Namelok area. The baboons, who are always present in the Namelok fenced sanctuary, frequently cause damage to crops in the shamba. The number of elephants, wildbeeste, zebras, and gazelles are increasing, elephants are particularly destructive.

Rhinos, wildogs are reported to have disappeared from this area, the family thinks Rhinos disappeared because of poaching by the local communities. Buffalo numbers have remained constant. The family notes the disappearance of some birds species like white necked crow and hawk. Numbers of the secretary bird have decreased while ostriches remain present in the area.

Human-wildlife conflicts have increased since 1974 when the government created the Amboseli National Park which protected the wildlife from poaching. As the community can no longer kill animals, and the bomas are close to the Amboseli National park they are often brought into conflict with them. If a cow is killed by an elephant they are paid Kshs. 15,000 and a goat is paid Kshsh.5, 000.

3.5 Changes in natural resources

An increase in the population has caused a major strain in the water resources in the area thus making irrigation imposible. Grazing land in the area has also reduced due to land subdivision and cultivation and thus making herd mobility impossible in the area. Rains

have also become less with time and this directly affects the growth of pastures and their availability. Growth of pastures has also been affected by the uncontrolled growth of Forbes in the area.

4. INSTITUTIONS

The infrastructure and socio-economic resources available to the Katatei family are a market at Namelok trading centre 3km away. This is where the family gets their foodstuffs and drugs for their livestock. Kimana market, a major livestock trading market, is only 20 kilometres away. The family lives 15km away from the Emali-Loitokitok road and just another kilometre away from the Namelok health centre where they are treated for minor illnesses. They visit Loitokitok sub district Hospital for the treatment of complicated cases.

4.1 Socio-political/traditional service institutions

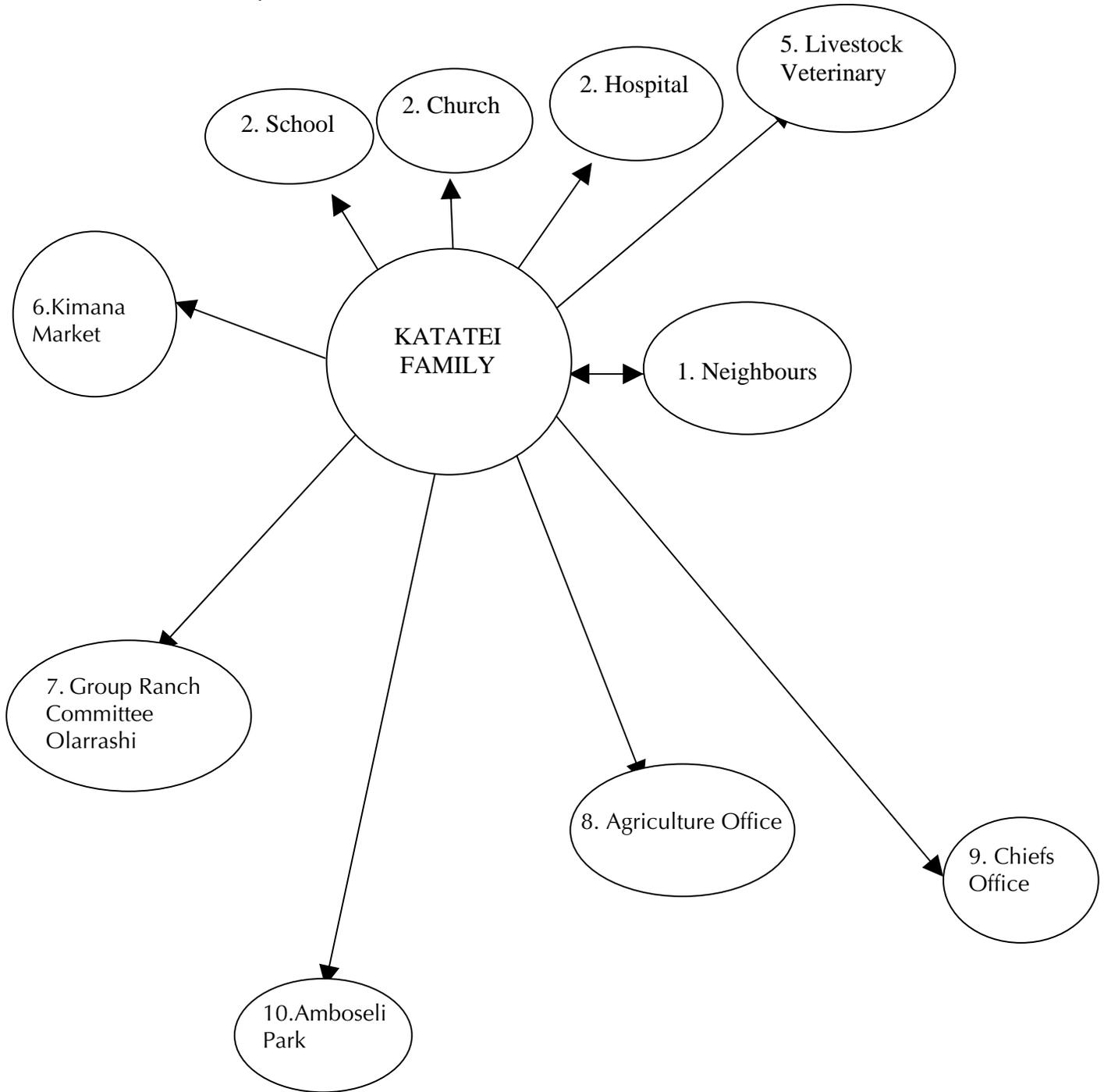
The family of Katatei Ole Ntirra mentioned the following institutions that they have access to: a world vision project based at Namelok, Group Ranch committee that is responsible for land subdivision, an agricultural extension officer office at Imbirikani, a veterinary office at Namelok. They also live 3 kilometres away from Namelok primary school and health centre where they get treatment for various ailments. There is also a church 400metres away from Katatei 's house where Hannah and Joseph are members.

4.2 Social economic institutions

The family goes to the market at Kimana 20kilometres away and this is where they buy and sell livestock, and purchase other household needs.

Ranking of Institutions

Figure 6: The family identified the following institutions that they use for various reasons and their relationship.



1. Neighbours

The Katatei family relates well with their neighbours, and Hannah values the mutual help available in times of need. Whenever there are community ceremonies or a neighbour has a function, Katatei's family help in cooking, fetching water, collecting firewood and

serving the guests. Their neighbours do the same when their home has an event or a ceremony. The neighbours also work together to herd and water animals.

2. Church

Joseph and Hannah's involvement in church has changed the way members of this family relate to each other. They are now more accommodative and care for each other and, as a family, are better able to cope with their poverty.

Joseph who attends Fountain of Life church in Namelok is planning to have a church wedding by December to marry a lady from the Meru tribe in contradiction to the Maa culture where marriage to a non-Maasai is a taboo. According to Joseph the influence from the church and the fact that he has interacted with other communities while seeking work, means he thinks his marriage will be a success despite going against his culture. Katatei has tried in vain to persuade his son not to marry from a different ethnic group. He attributes Joseph's actions to the negative influence of the church which has been seen to have a big impact on the youth and the women in the area.

Katatei rarely goes to church and when he does to goes to the nearby Catholic church where he says that things are done soberly. One other thing that makes him uneasy is the fact that the church consumes all the time needed to look after livestock. He says that a combination of "school, church and jobs were disastrous for the cattle."

Hannah visited their prospective in-laws at Meru, for dowry negotiation as she did for Kikanai and later on notify Katatei for formality. The dowry breakdown was as follows:

1. One buck and a she goat
2. Kshs. 10,000/-
3. A big bull
4. A heifer.
5. Esiret

It was Hannah's idea to have a pre-wedding to kick-start her son in the process of marriage.

1. Namelok Health Centre

When a family member falls sick in this family he/she is taken to Namelok health centre for treatment. No cost is met by this family to get access to its services.

2. Namelok primary school

Tayit who is in class four goes to Namelok primary school. There no fees, as the government has a policy of free primary education for all children.

3. Veterinary Office

The family is aware of the services that are offered in this office though they rarely use it as their herd is quiet small thus they prefer to treat it themselves.

4. Market

Katatei family uses Kimana market for sale and buying of livestock, and the purchase of foodstuffs and livestock treatment drugs. Transport to the market is not a problem in this area and for the fare they pay Kshs.75 and kshs.20 for the luggage.

5. World Vision Project- NGO

When Kikanai and Leah were in school the project used to buy them clothing and books but now everything has changed because the rich people are taking these chances.

6. Olarrashi Group Ranch

The family is not well connected to the group ranch committee due to their wealth status. Joseph further explained that the current committee members put their and their clients' interests first. Hannah says that anyone related to the committee members gets a fat portion of land. In this area there were elections going on for change of the committee members which Hannah prefer changes in age group leadership. Money issue is increasing the changes in the leadership' *Meisudoo olowuarru olkujita'* a bad man would be easily visible after a short time. This means that after the leaders are elected they suddenly change their promises to the community members after they get a lot of money.

7. Agricultural office

The family is aware of this office in Namelok centre but they don't use at the moment, as they are no longer cultivating their land.

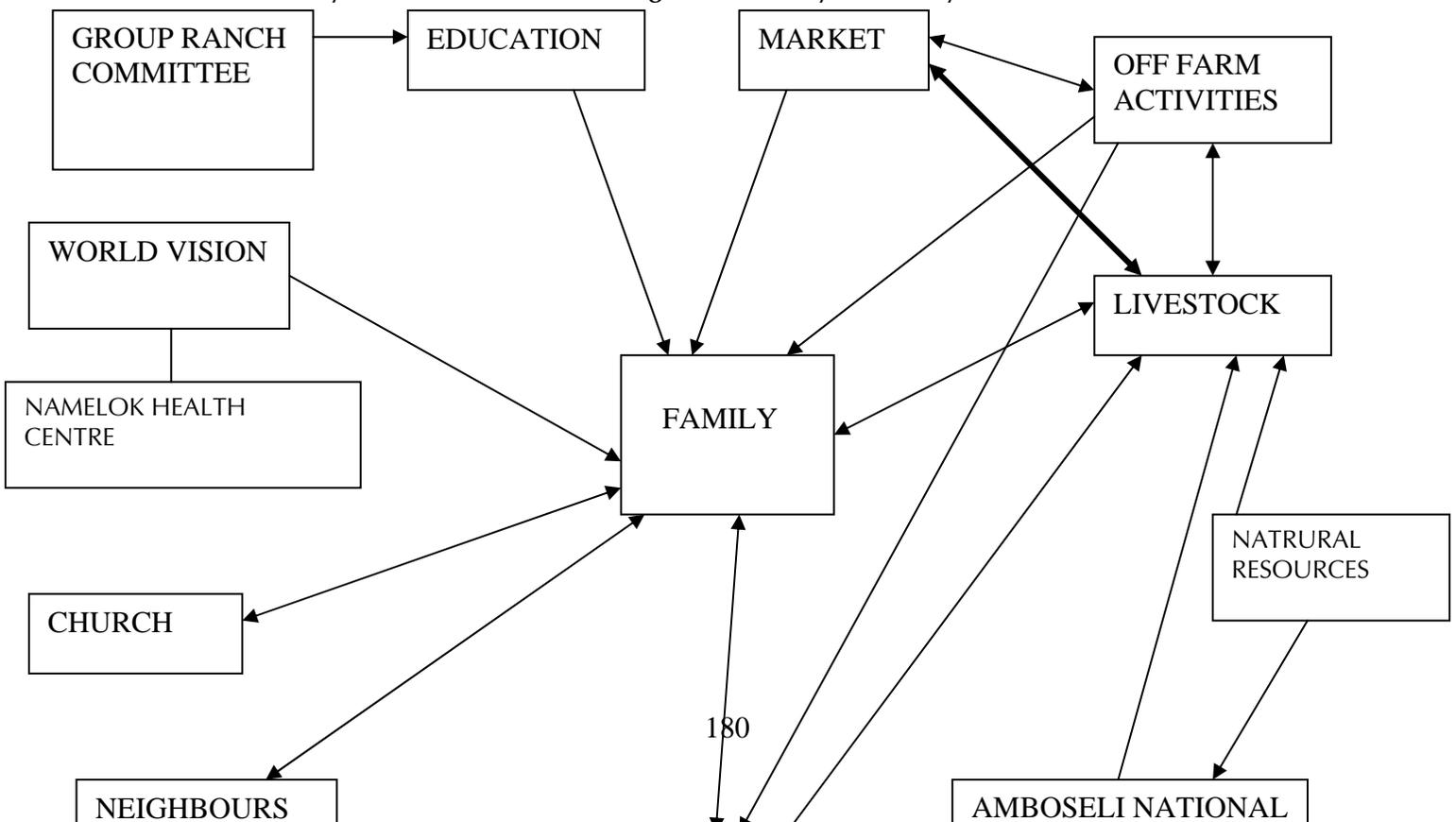
8. Administration office

The family in the past would get access to this office when Musa was the Namelok area chief. Currently they can't easily access the facilities of this office because it's located at Mbirikani, which is far away from their boma.

9. Amboseli National Park

Katatei family is aware that there is a KWS office but they don't benefit from this office because only those families whose children are in class seven and above benefit from it.

Livelihood systems and institutions diagram drawn by the family



5. MAJOR CHANGES AND THEIR DRIVERS

1. Cash economy – Katatei 's family thinks that the main differences between conditions which prevailed in Maasai society 20 years ago and conditions which exist now is the introduction of a money economy. This has created new demands and introduced changes. In the good old days the Maasai were not worried about the modern facilities such as households, clothing's and foods such as cereals. Katatei thinks that things were easier to manage through traditional transactions, primarily because there were no expenses. Although he concedes that the method was quite cumbersome.

2. Poverty - Poverty has increase in this family due to the death of livestock in the 1984 drought. Since the 1984 drought, the declining herd size has undermined their well being. This results in declining food and health security, inability to produce enough for subsistence needs, and inability to meet their social obligations (payment of dowry, slaughter of livestock for social occasions, ability to assist other families). The women further explained how shrinking of herd size limits the nutritional value of food taken in the household, which often results in malnutrition and anaemia in children. It also reduces the ability of the household afford health care, education related costs and other essential needs for the family since they have no livestock to sell. Decrease in livestock not only limits the household's ability to produce its own food but also to meet social obligations. Joseph recalls the worst years were 1998, 1999 and 2000 when the family did not have any livestock in the kraal following the outbreak of Rinderpest.

3. Change in lifestyle- Economic and social demands among the Maasai community before the introduction of 'civilized' life were very low. Milk, blood and meat were plentiful. Unless, a family deliberately absented themselves from certain functions, which they were called upon to perform, they could not find life in any way difficult. Katatei further explained that twenty years ago, families lived together. One group of the family formed a village (Enkang) and all the close members of that family worked communally by virtue of their paternal lies. They had a tightly knit system of kinship, which bound them together in all their transactions. Their living habits were based on the surroundings in which they lived and operated. Whatever they did was determined by the social and cultural traits. Many of them acted and behaved according to the requirements of Maa society in which they lived. For instance no person would go hungry in one village if there was food in the other village (enkang) unless, he chose to do so. Equally true, unusual habitual behaviour of one person tended to determine the manner in which he was treated.

4. Group ranch Committee - Political changes are also taking place directed mainly at protecting the rich man with very little attention being paid to the existence of the poor, although they are still the majority in the Maa community. In this case, when Namelok swampy area was subdivided by the group ranch committee, the Katatei family was given a piece of land far away from the water springs. They clearly blame the inefficient management of the group ranch management committee. For the Katatei family changes in land use has brought about a decline in availability of good pastures. Lack of good pastures is a major impoverishing factor. Pastures are being rapidly converted into agricultural land by small farmers with the result being less land is available to allow for wet and dry season movement of livestock, which is critical in allowing grass to recover for the next season. This compels livestock keepers to graze in the same area for the whole

year, resulting in overgrazing, decreased productivity and ill health of livestock, decreased food and income security for community members.

5. Church

Church has brought about positive change to according to Hannah because some of the traditions are not useful to them. For example Moran culture has reduced and hence more young people are going out of their homes to look for jobs in order to provide their families with the basic needs.

6. Government policies

The family thinks that the provision of free education is very useful as most children of school going age will be able to access free primary education.

6. 1. THE FUTURE

Katatei and Hannah hope to own more cattle in future, this is because the prestige and status of cattle may surpass material benefit. They would also love to see their family grow big and his sons getting better jobs so as to be able to support them in future.

CONFIDENTIAL

KIPARA LESIDAI'S FAMILY PORTRAIT



2004

INTRODUCTION

Kipara Lesidai Lembeka is 51 years old. He is an elder and a member of the Irkishumu age set. Kipara has three wives and 20 children. The family survives through farming, keeping livestock and income from a rental house in Mairowa shopping centre. The family is active in the local Baptist church, Kipara as an elder, his son Matayo who has been to Bible school and is a preacher, and Norkishumu and Naserian (two of Kipara's wives) are church elders. Kipara was also elected to be sub-village chairman for ten years between 1994 and 2004. Although he did not go to school, nor did he attend adult literacy classes started by the government of Tanzania in the 1970s, Kipara has taught himself Kiswahili, the national language of Tanzania.

1.0 THE FAMILY

1.1 Family Composition

Kipara is married to three wives: Norkishumu, Naserian and Naisula. None have had any formal education. Norkishumu and Naerian are Church elders in the Naripi Baptist Church where Kipara's family worships. The third wife, Naisula, does not have a leadership position in the community.

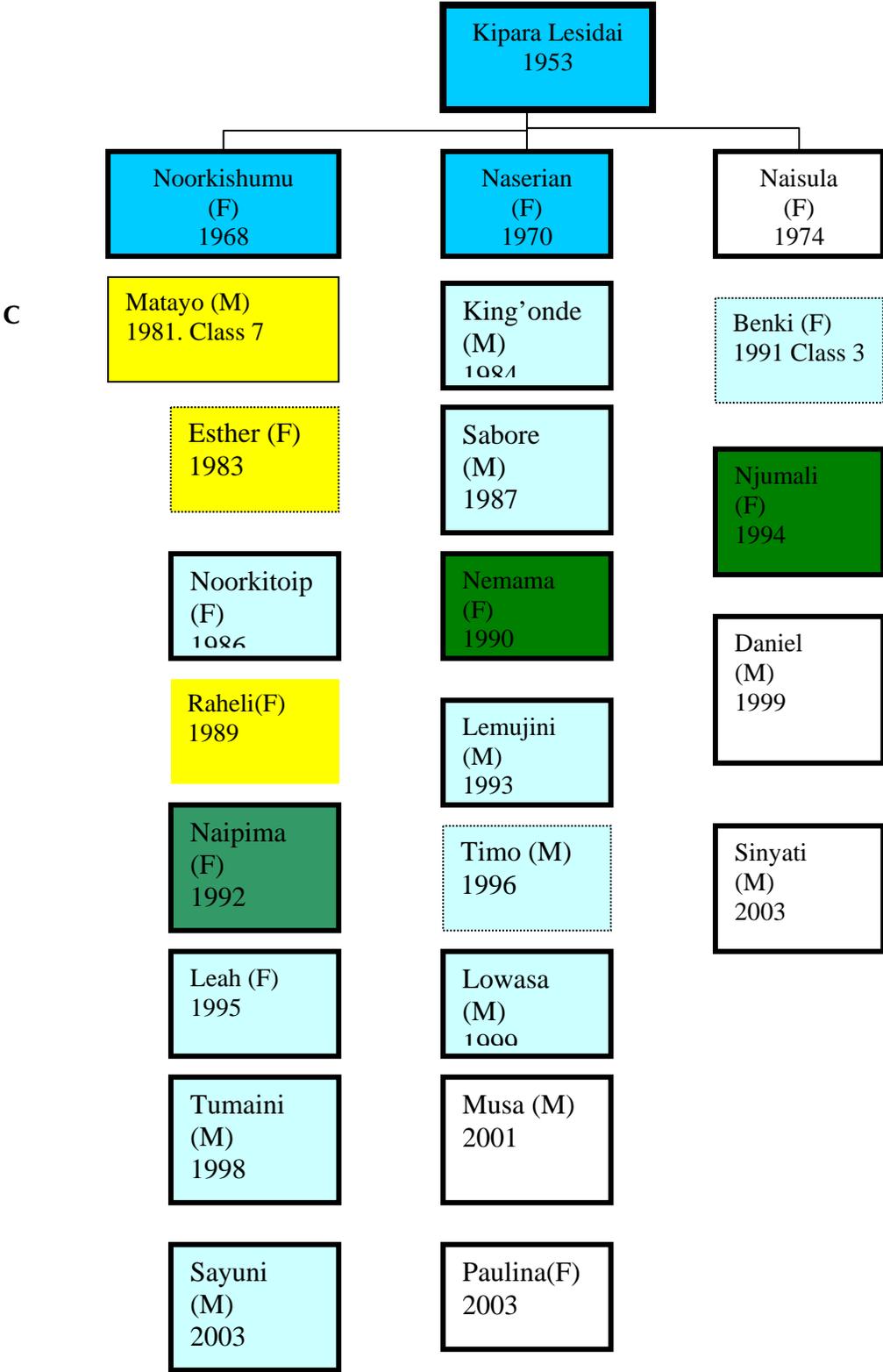
Norkishumu has eight children. Matayo (23) is the eldest. He finished Standard 7 in 2000. He has been at a Baptist Bible School in Longido for four years, at the expense of the Baptist Church. He is a preacher in the local Baptist Church, and encouraged the building of a Baptist Nursery School in Naripi, where he worked as a nursery school teacher for two years at the same time as studying. Matayo helps with agricultural work when he is at home. He has been at home for two months in 2004, but previously, he came home every week. Norkishumu's second child Esther (21) is married, she lives with her husband and young child in her parents' boma in order to cultivate a plot given to her by her father. She is not dependant on her parents, as she has her own animals. She did not go to school. Noorkitoip (18) completed Standard 7 last year. She did not go on to secondary school because she got pregnant. She is now living at home with her baby. She is not married. Raheli (15) did not go to school. Before she was married in 2004, she herded goats. Naipima (12) did not go to school. She herds goat. Leah (9) goes to nursery school nearby. Norkishumu's youngest children are Tumaini (6) who goes to nursery school and Sayuni (1).

Naserian also has eight children. King'onde (20) is Naserian's first child. He is now in Standard 7 in Engare Naibor Primary School. When not in school, he herds and helps with agricultural work. Sabore (17) completed Standard 7 in 2003, but did not pass his exams. He is expecting to go to Bible School. He plays for the local football team, helps his family with agriculture and livestock care, and works in a café once a week in Mairouwa. Nemama (14) did not go to school. She helps her mother by fetching water and firewood, and she herds. Lemujini (11) is in Standard 2 in Mairowa, but helps with herding when not at school. Timo (8) is living with his uncle in Mairowa village. He goes to nursery school. Lowasa (5) is at nursery school, and looks after lambs and kids when at home. Musa (3) and Paulina (1) stay at home with their mother.

Naisula has four children. Benki (13) is in Standard 3 at Longido Boarding School. She does not come home much, as she stays in Longido with her aunt. Njumali (10) herds, and does not go to school because Kipara decided to keep her and her stepsister Naipima as

shepherdesses of cattle and small stock. "We need someone to be a shepherd since most of the other children are attending school," Kipara argued. However, currently, Kipara would not keep any of his children from going to school regardless of their gender. Daniel (5) and Sinyati (1) stay at home with their mother since they are still young to start school.

FIGURE 1: KIPARA'S FAMILY TREE:



1.2 Family history

Kipara's father moved to the area from Sikirari, near Kilimanjaro. In this area Kipara's father was exposed to a lot of social development (maendeleo). Kipara remembers his father as a man who liked "maendeleo". Kipara was born at Lekurruki hill, on the other side of the valley from where his boma is now, and has lived in the area all his life. Like most families in those days, Kipara's father's family was nomadic. They moved from place to place, but had two main homesteads, one in Nkoiseiya, and one at Lekurruki. His father farmed, being the first person in the area to use oxen in his fields, something he had learnt in Sikirari.

Kipara married his wives in 1980, 1981 and 1992. When his father died, Kipara was allocated around 30 head of cattle. He moved to Lekurruki from Nkoiseya, where he was living at the time, to set up his own household (Olmarei). He set up an Enkang (kraal) with his brother in law, who he still lives with, and started farming a plot of land inherited from his father. He has since acquired more farmland. He has moved his Enkang twice since then within Naripi sub-village.

Insert sketch map of the family's movements

Between 1983-4 all but one of his cattle died of Heartwater disease. Two of his wives immediately started up small businesses selling beers and maize. Relations gave them some animals to survive with. Since then they have invested more in Accaracide to control ticks that cause Heartwater. Kipara was severely affected by his family's poverty and subsequent, albeit temporary, dispersal.

In 1983 their pick-up vehicle broke down and they were not able to repair because the livestock numbers had decreased significantly.

In 1996-7 Kipara had noticed how people were making money through small kiosks selling tea and foods to workers at the nearby ruby mines. He set up a kiosk which he ran for a year. He gave up because he wanted to focus on agriculture. However during this time he made 30,000 TSh a week.

In 1997 his fourth wife left the family to get married elsewhere. This was a blow to the family as they had paid 12 cows in bride price. The wife was childless but adopted one of her sister's children for which the family gave a gift of 7 cows. She also left with 15,000 TSh.

Kipara feels that as his family has grown, he has extended his relationships and become more respected within the community. However, their mothers have started to feel the loss of the labour of their daughters who have been married.

Kipara and his family often talk about "maendeleo". When asked what "maendeleo" means to him, Kipara defined it as "knowledge, knowing how and why to do things that were not part of us, like building permanent structures, farming, and educating children". People who promote Mendeleo to the community are outsiders (govt, Europeans, the church, non-Maasai who have promoted non-traditional housing), and insiders who have travelled and learnt new things often. When asked why "maendeleo" is necessary, he said it is because of the results that come from it. For example, he sees that agriculture produces additional wealth, and he is impressed by what those who are educated have done. The

family have been increasing the amount of land they cultivate, although they are still committed to keeping livestock. They have started sending more children to school, and have been investing in a rental building in Maiowa. The women commented that there were also costs associated with Maendeleo – that it was a long-term investment (costs of educations, agricultural inputs). They have not yet seen the results but are confident that they will come.

In 1992, Kipara became a Christian, having been persuaded by his wives. The whole family feel that Christianity has brought love and respect to them, and increased family unity. Kipara wants to keep the good aspects of Maasai culture, such as circumcision and age-sets, whilst leaving behind those that have become irrelevant to him such as going to witch doctors, ceremonies like the “bull of the wounds”, and drinking alcohol.

1.3 Family relationships with others

There are three Olmarei currently living in the Enkang, and a space for another Olmarei, which will come to join the Enkang in the near future.

Kipara lives with the Olmarei of his poor brother in law, Kunkat Lakeshore. He has one wife with four children, one daughter and three sons. He owns five cows, one goat and one donkey. He has four acres of land of which two are under cultivation. Kipara also lives with another distant relative, Stephen Parmao, married to one wife with two young boys and his mother. Stephen does not own any cattle, sheep or donkeys but he has three goats, and owns four acres of land of which two are under cultivation. Kunkat and one of his grown up sons who is in Std 5 do help Kipara in taking care of livestock. Kunkat’s son is only available full time during school holidays when he helps as a shepherd boy. Kunkat cooperates with Kipara’s family over the herding and watering of cattle, but not of small stock, as Kunkat does not have any. They also cooperate over fencing. When Kipara goes away, he leaves the overseeing of his livestock to Kunkat. Stephen has no livestock, so does not cooperate with Kipara in terms of livestock management. Stephen is a clan’s mate of Kipara who just moved to live with him last year. There are no direct ties between the two of them. However, Kipara has been helping him to cultivate his two acres of land with his oxen. In appreciation, Stephen has also bought some drugs for Kipara’s livestock.

The fourth Olmarei who will come to the Enkang is Olemburukoi. He has been living with Kipara’s mother in Naripi. The Enkang where they have been living is now too crowded by fields, so they decided to split and move. Olemburukoi has been allocated a shamba near here. Kipara thinks they will share herding of cattle, but not of small stock, as Olemburukoi doesn’t have any. Kipara thinks that Olemburukoi wants to come and live in his Enkang because they are in-laws and age-set mates. Kipara thinks it is good to live in an Enkang with other Olmarei because they can help each other.

1.4 Decision making/management roles

Kipara is the chief decision maker in his family, and follows an established division of labour at family level.

Kipara has given each wife a shamba. He has distributed acres according to the size of the family of each, and they have already cultivated it at least once. Kipara's moran help to plough and plant the land using oxen. Weeding by hand is done both using family labour and through mutual-help groups called "*Empesi*." The division of the agricultural land and delegation of responsibility for farming from Kipara to the women is not usual. It is partly a result of women having taken the initiative during the crises of the 1980's. They proved that they were responsible and learnt key business skills. They now occupy a much more influential position in family decision-making.

Despite this Kipara decides when to buy and sell animals, and crops. He informs his wives but does not consult them. "If she objects, I tell her that I sold an animal from another house recently, so it is their turn." The money is used for the whole family. If there is a surplus left from the money acquired from the sale of an animal or crops, Kipara buys livestock, either a sheep, a goat, or a heifer. It belongs to the house where the animal was taken from.

1.5 Relationships beyond the Enkang

Neighbours from another Enkang nearby (Olopiro's kraal) also cooperate over herding and watering animals, although only occasionally. This help is provided when the need arises. Kipara explains that these neighbours can't easily refuse his requests, as they use the well owned by his family.

Whenever there are community ceremonies or a neighbour has a function, Kipara's wives help in cooking, fetching water and helping to serve the invited guests. Their neighbours do the same when Kipara's Enkang has an event or ceremony.

Leadership position. Kipara was an elected none-salaried community leader between 1994 and 2004. He did not need to be literate to do the job of sub-village chairman, although he did need a secretary. He taught himself Kiswahili, which he thought important for his role, as he often needed to communicate with outsiders.

As sub-village chairman his major duties included supervising the division of land, acting as a peacemaker, supervising development projects initiated in his area, supervising fund-raising efforts, and promoting education for children. This government post did not come with a salary, but it did bring certain other important benefits.

1.6 Education.

Kipara and his family emphasized that formal education will help them as individuals and the society in general. "The educated are able to communicate and promote ideas," argues Kipara. Kipara also admits that he did not value education that much in the past. But recently he has come to realize that it is important for people go to school to get new knowledge. "They will be able to speak Kiswahili and to write," argues Kipara. Reading and writing is important for Kipara and he uses his elder sons who went to school to read letters and printed material for him. "Those who have good jobs today are those who were educated," Kipara emphasized.

Before Kipara came to this new realization, he did not send all of his children to school. But now he has decided to educate all his children so they know how to read and write. Changes that have occurred have shown him that it is important to become educated.

Kipara considers himself moving with the times. He sees that now many children are being educated as a way for them to see the light of development. Currently, Kipara pays at least 20,000TSh per term for his son in Bible School.

1.7 Health status

None of the family have had any health problems, and all the children are living

1.8 Family assets

A full list of the physical assets the family owns include:

1. 1 ox –plough
2. 2 bicycles
3. 2 spades - hand hoes
4. 2 modern beds with a mattress
5. 3 thermos flasks
6. 1 big pot (sufuria ya sikukuu)-1 big water container (60 litres)
7. 2 syringes for livestock treatment-
8. 1 broken dip pump
9. 2 ox yokes
10. 3 ox chains
11. 3 portable radios
12. Several torches
13. Several wrist watches
14. Pangas
15. Axe
16. Rental house at Mairouwa village
17. A permanent shallow well at Kirolukunya where his family and many neighbours draw water for domestic use.

2. LIVELIHOODS

Wealth Rank

In a wealth ranking exercise in which Kipara took part, his Olmarei was found to be between the 73rd and 77th percentile in terms of “wealth.” Therefore, with a total of 31 acres of cultivatable land, 68 small stock and 27 cattle, the community considers Kipara’s family medium wealthy.

General

Kipara feels that cultivation is his first priority, although he still wants to keep livestock. He sees that livestock can die through disease or drought, but land cannot die. Kipara’s father, Lesidai Lembeka, started cultivating land in Engarenaibor area in 1963.

Kipara recounts the increasing importance of cultivation over livestock keeping with regard to the following facts:

- Over the years the number of their livestock has been decreasing due to diseases and droughts
- Some non-Maasai (Meru from Arusha) who moved to Naripi in the early 1970s introduced farming to the Maasai people and they seemed to have a constant supply of food unlike the cattle which grow lean or dry out of milk during the drought seasons
- Farming is less prone to diseases and land is always there (it does not die like livestock in the bad years)
- Shamba is permanent unlike livestock.

Table 3: Livestock/Farmland Distribution: Livestock and agricultural dynamics

Wives	Cows	Goat	Sheep	Donkeys	Farm (acres)
Noorkishumu	13	9	2	1	7 + 8 = 15
Naserian	7	26	3	5	6 + 4 = 10
Naisula	2	15	1	1	3 + 3 = 6
Kipara	5	2	7	0	0
Total	27	52	13	7	31

2.1 Livestock

Livestock are invaluable to Kipara’s family. With livestock they are able to pay dowry when their sons are ready to marry, and to meet household needs through the sale of a cow goat or sheep. Livestock produce manure, although they don’t use it now for their shambas, “it looks like we may need to use it in our farms in the near future, especially if they are over-cultivated,” Kipara said. On milk he said, “We don’t sell milk because the women have never thought of it, but also we do not produce enough.” In the past women wore hides but now they sell them for income, and use money for other needs. Livestock are also slaughtered. For example, small stock are slaughtered for wives who have given birth or for people who are sick, or to sell to get money for family needs such as hospital bills.

Table 4: Herd dynamics (in the last two years)

Cattle	Sold	Died due to diseases	Killed by wild animals	Gifts in	Bought	Born	Net change
Cattle	2	1	0	0	0	15	+12
Goats	5	9	0	2	0	19	+5
Sheep	0	3	0	0	0	10	+7
Donkeys	0	2	1	2	0	2	+1
Total	8	20	1	4	1		

In the last two years, two male cattle have been sold to pay for a ceremony, and to buy some agricultural equipment. A total of 12 small stock have died, Kipara thinks the cause of death was diarrhoea, a leopard killed two sheep, three goats were given away to friends, and he exchanged two older bulls for four younger bulls.

2.1.1 Mobility and livestock management

Kipara's livestock usually graze within the nearby lowlands of Naripi and Loloropil, Loonjok, as well as Lekurruki Mountains during the dry season. However, this year because of insufficient grass caused by poor rainfall, his cattle moved to Larpalakai in Matala Ward, about 20 km away from Naripi. A few milked cows have been left at Naripi, grazing in the harvested cornfields. Kipara reported that it is the first time ever his cattle moved to Larpalakai.

During normal years, in the dry seasons, the livestock move between Naripi and Lekurruki. During the rain season, they move to Nkoiseiya plains located on the eastern side of Ngosuk village.

With regard to livestock movements in search of greener pastures, it is Kipara who decides when the animals are going to move, although he allocates his morans to take them. The livestock also feed on the crop residues which the family cuts from the field.

Changes in livestock mobility. In the past all the land was pastoral. In the late 1970's the government started the villagisation operation. They decided to settle people in villages, promote agriculture and education. The result was that land around villages was taken up for cultivation

Therefore in the wet season when a lot of the land is being cultivated there is no space for the animals. In the dry season the cattle now graze on the plains to the east towards Namanga until the surface water dries up. Then they move to the mountains to the north which have year round water. This means that livestock have to move more now in search of water and grazing lands, because most grazing reserved areas do not have permanent water points. When the animals move away from the permanent home, the family has to

find alternative foods as their milk supply is cut off. The whole family cannot move anymore with livestock as it did in the past before they settled permanently and sent children to school. The women commented, “we used to move a lot with the animals but are now left behind at the homestead. Moving with the animals was hard work as we had to set up houses in many different places, but at least it kept the family together. Now the animals leave but the women and children stay behind to look after the fields. This is good as it provides food but when the livestock are not there the family feels divided”

2.1.2 Disease control strategies

Recently cattle diseases such as ornilo (black water), ECF and diarrhoea have become rampant in Lekurruki or mountainous areas. The family does not know the cause.

Kipara vaccinated 4 calves in 2002 against ECF through an ILRI pilot programme. He has not vaccinated any animals since then, but plans to do so soon. He is pleased with the efficacy of the vaccine, as none of his vaccinated calves have died. However, he admits that the vaccine is expensive for the poor because one calf costs between Shillings 5,500 and 7,000 depending on the calf’s weight. “If I had the ability, I would vaccinate all my livestock, but for someone with fewer cows (poor person), it is difficult, but you can start with a few and vaccinate more when you get more money,” Kipara argued.

Alongside the ILRI’s vaccine, Kipara has also been dipping his livestock since 2000 in the Ngosuak community Dip and this has helped to minimize the chances of tick-borne diseases such as the ECF.

Kipara keeps some antibiotics for treating his livestock, and feels confident that he can treat most livestock diseases himself. He knows a livestock officer based in Mairowa is available for consultation, and will come to his Enkang if requested and sell him medicines for his animals on a private basis. However, he feels that the drugs this man sells are over-priced. The last time he consulted this livestock officer was when he vaccinated his calves in 2002.

2.1.3 Breeds

Kipara is adopting improved breeds of livestock. For cattle, he prefers Boran bulls. “I prefer to cross-breed my zebu cattle with Boran bulls because they are big, produce more milk, and in terms of disease they are not vulnerable, just like zebu if managed properly.” Kipara got Boran calves last year for the first time from a neighbour’s bull. If he hadn’t got them from his neighbour, he would still have tried to get them, because of their good quality, although he still wants to keep old stock.

For his small stock, Kipara has cross-bred his local goats with Gala breed. He says they are also bigger and produce more milk than his local breed.

2.1.4 Livestock ownership and sales

Although Kipara has divided all his livestock among his wives and children (see table 2 above), he remains the over all decision maker with regard to management of the livestock. Kipara decides when the livestock move, but the moran provides the labour to move them, herd them, treat sick animals, water them and dip them. He decides if any animal is to be sold. He tries to sell livestock from each wife in turn. “I don’t consult my wives or sons, but I do inform them. If she objects, I tell that I sold an animal *from* another house recently, so it is their turn.”

Kipara says that he sells animals when the need arises, regardless of market prices, for example, if someone is sick, the family needs food, or to pay school construction contributions. In the short rains and short dry season, the family often sells animals to buy seeds and farming equipment. Kipara usually sells castrates first to conserve his milking herd. Fully-grown steers and castrated bulls would sell for 150,000-300,000TSh, depending on the size and the market situation. A big goat or sheep would sell for 30,000 – 50,000TSh also depending on the size of the animal.

When Kipara decides to sell animals, he either goes to the market at Mairowa, or sells to a livestock trader who comes to the boma. In order to get information about livestock prices, Kipara either goes to the market himself or ask traders from the markets in Mairowa or Ilbisil. The market at Mairowa is not very good for livestock sellers. As a result, many people prefer to take their livestock to larger markets such as Longido, Oldonyo Sambu in Arusha and even Ilbisil in Kenya.

The whole family uses the money from the animals sold. If there is any left after meeting the needs for which the animal was sold, Kipara can use the balance to buy a replacement animal that money can afford. It could be either a sheep, goat, or heifer. The replacement animal will belong to the house where the animal was taken. But if the need is great than the money acquired, then all the money is used up.

Selling milk is a women's activity. None of the women in the Olmarei sell milk. They do not have any surplus to the requirements of the family, and they would not sell unless they had a surplus.

2.1.5 Conflict between farming and livestock

There is a lot of conflict although as everyone has both livestock and fields they do not demand compensation for damages done. The family thinks that they could minimise conflict by fencing off the fields and guarding them, and also by grazing their animals on the hillsides where there is no agriculture.

2.2 Cultivation

Diagram/map of different plots of land that Kipara 'owns'

Kipara is also a subsistence farmer. He inherited 8 acres of land from his father, which his father had farmed in the past, but had abandoned due to lack of nearby pasture. Kipara realised that he would lose the land if he did not farm it, which influenced his decision to move to the area. He gave 2 acres to his mother, and started to farm the other 6 himself in 1985 (Plot A).

He was allocated a 10-acre plot, also in Naripi (Plot B). He moved his Enkang in 1991 to be nearer this farm. He then obtained the 6-acre plot (Plot C) near his new Enkang (just below the road which demarcates the area where cultivation is forbidden) when he moved to his current residence. He wanted to move farms because the old Enkang did not have enough space around it to herd livestock, and often domestic animals would get into his farm. As chairman of the sub-village, he had helped to plan the building of a dam near to his old Enkang, and had recommended to the sub-village committee to open up a new area for cultivation so that people can move away from the dam, and not pollute it. He advised the community to give people with no land plots in the then empty area below his

new Enkang. One landless man was to be given the 6-acre plot, but Kipara negotiated with him and the sub-village committee so that he was able to swap this plot with an equal sized piece of land near his previous Enkang, where the landless man lives. He also applied for a plot through the land committee and was allocated 8 acres on the road to Mairowa (Plot D).

He “owns” 31 acres in total. The family is only cultivating 16 acres this year. He acknowledges that his position on the sub-village committee helped him to get the land, although this was always through open meetings. Cultivation has been hit by the poor rains, which were even worse than last year, although some other parts of Engare Naibor did not suffer as much.

Plot A contains one acre which he is not cultivating this year. This is due to the rains being short in duration this year, resulting in him not having enough time to cultivate all of the land. In fact, of the 5 acres he planted there, he expects only to harvest 2, as the other crops were planted too late.

Plot B had a portion reserved for grazing his small stock and calves (Olopololi). Since he has moved, and now has room for grazing, he will cultivate all of this plot next year. Of the six acres planted in the 10 acre plot; he only expects to harvest 1 ½ acres.

Plot C is not ready for cultivation yet. They are still breaking the soil.

He has not yet started cultivating Plot D.

Kipara is aware that his family is growing, and that he has a limited amount of land and livestock. He wants to acquire more land, so that he will have enough to divide between his sons. He feels unsure about the future. He has no plans to move out of the area though. He explained that he needs to stay near his farmland, which can't be moved like livestock.

2.2.1 Management of cultivation

Kipara has divided up his farmland amongst his wives. He divided his land, in the same way that the Maasai divide up their livestock, so that his wives would be more responsible for their own farms. He also wanted to minimise conflicts amongst the wives over farming. His wives agree that having their own farms makes them take greater responsibility for farming. The wives have a certain degree of control over the management of cultivation on their land and over the use of the harvest. They are free to manage the grain stores for family use, however, they have to inform Kipara of any sales or gifts to relatives. The wives share food, and cooperate in selling food and getting maize milled.

Kipara owns 4 pairs of oxen and two ox-ploughs, which he uses to plough his land. The family also use hand hoes. They occasionally hire a tractor to plough the land. Whenever possible they buy ‘improved seeds’ but as they are expensive and only available in Arusha, most often they use seeds from their last harvest.

2.2.2 Farm labour

Kipara's family do not usually have to hire labour to help with cultivation. They make use of “*embesi*”, which are communal work groups. Members of *embesi* provide labour for

other members, each member eventually having an embesi on his farm. The host provides food and drink for the embesi workers.

There are women's, men's, and youth embesi groups, as well as smaller groups, which rotate more quickly than larger groups. The history goes back to the year 1994 when the farms started to spread and become larger in the community. Kipara could not recall who the initiator of embesi was although he claimed that it all came about as a result of the neighbouring families deciding to cooperate to make the weeding work lighter and efficient.

Sometimes Kipara has to hire casual labourers to help with weeding, this is often when the *embesi* schedule is too tight and his turn is going to be too late. This year, because the rains were late, once they came, everyone planted their crops at the same time, and consequently needed to weed at the same time. There was too much demand for *embesi*, and Kipara was forced to pay for 9 acres to be weeded. He paid a total of 135,000TSh (15,000TSh/acre). Hiring labour is expensive for the family and often means they have to sell livestock to pay labourers.

2.2.3 Agricultural extension services

Kipara is not aware of any agricultural extension services available to him. He thinks he would make use of such services, as he feels he does not know as much about cultivation as he does about keeping livestock.

2.2.4 Factors that diminish farm output

Insects

Insects have seriously affected the bean crop in the last two years. This year was the worst. Termites are also a huge problem that affects corn while still growing in the fields. The family does not know the treatment for crops pests. Kipara admits "I have no control over insects and rain, although I hear there are some chemicals which kill insects, but they haven't reached us." This is a clear indication that there are no agricultural extension services around the community in which Kipara's family live.

Seeds

Another problem that Kipara's family expressed is lack of improved seeds. Kipara admits that his family is aware of the improved seed; however, he cannot buy it every year because the seeds are not available locally. One has to travel to Arusha, 135 km away to buy them. Kipara said this is expensive and many poor farmers cannot afford to travel that far to buy them. The seeds are rather expensive and this makes them more difficult to get. The solution Kipara suggested is if the seeds shop could be opened in Mairowa town, many people would do their best to buy there since they do not have to travel far to get them.

Unreliable rains are also affecting cropping almost every year. Last year and this year are quite bad.

Crops are also destroyed by Dikdik, Zebra and Eland.

Noorkishumu gave one and half acres of her farmland to her oldest daughter, Esther who was married by a poor husband as a way to support them.2.3 Off-farm activities
Kipara's family does not have major sources of income from salaries and wages. Most of the family income is derived directly from either farm or livestock-related products and occasionally very small businesses on market days.

Rental Property

Kipara owns a two room building in Mairowa. His father sold animals in order to pay for its construction, but put Kipara in charge of building and running it. It was built in the early 1980s. Kipara ran a shop in the building from 1985-88. He then decided to renovate the building to rent it out. The renovations were finished in 2000 and Kipara now receives 6000TSh per month from a woman who uses the building as a local beer Bar. He uses some of this money for household expenses but saves as much as possible to pay for the building of a third room.

Matayo's market trading

Matayo sells consumable goods, such as sugar, tea, soap, and rice, at the market each week. He buys goods from Longido. He has 70,000Tsh of capital, and estimates that he makes 10,000Tsh profit a week. He uses this money to buy a goat or some clothes, and makes contributions to his mother and occasionally his father. He feels it is a good thing that he is not depending on his family for his needs.

Sabore's café job

Sabore works part time every market day at a café run by the same woman who is renting Kipara's house where he earns 8,000Tsh per month. He said he uses the money to meet his personal needs and occasionally buys sugar and tea for his parents.

Table 5: Activity calender for the whole family in a year

Activity	Short rainy season		Dry season		Short dry season			Rainy season		Dry S	
	November	December	January	February	March	April	May	June	July	August	
Taking care of livestock	█		█	█	█			█	█	█	
Watering the livestock	█		█								█
Selling cattle	█		█								
Cultivation	█										
Planting			█								
Weeding					█						
Harvesting									█		
Storing the harvest									█		
Helping with milling									█		
Shopping for family food	█		█								
Fencing the farm	█		█								
Fencing homestead									█		
Government leadership	█		█		█			█			
Church leadership	█		█		█			█			

Table 6: Women activity calender for a whole year

Activity	Short rainy season		Long dry season		Short dry season			Long rainy season		Dry
	November	December	January	February	March	April	May	June	July	August
Fetching water	Light	Light	Dark	Dark	Light	Light	Light	Light	Light	Dark
Fetching firewood	Light	Light	Light	Light	Dark	Dark	Dark	Light	Light	Light
Getting building material					Horizontal lines	Horizontal lines	Horizontal lines	Horizontal lines	Horizontal lines	Horizontal lines
Plastering the houses					Light	Light	Light	Light	Light	Light
Getting thatching material								Light	Light	Light
Cooking	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Herding livestock										Dark
Taking maize to grinder									Light	Light
Cultivation	Dark	Dark	Dark	Dark	Dark	Dark	Dark	Light	Dark	Dark
Marketing farm produce										
Milking	Dark	Dark	Light	Light	Dark	Dark	Dark	Light	Light	Light
Household chores	Light	Light	Light	Light	Light	Light	Light	Light	Light	Dark
Cleaning clothes	Dark	Dark	Light	Light	Dark	Dark	Dark	Light	Light	Light
Opening and closing gates	Light	Light	Light	Light	Light	Light	Light	Light	Light	Light
Ceremonial activities	Horizontal lines	Horizontal lines	Horizontal lines	Horizontal lines	Horizontal lines	Horizontal lines	Horizontal lines	Horizontal lines	Horizontal lines	Horizontal lines

3.0 NATURAL RESOURCES

Kipara's family owns a permanent shallow well at Kirolukunya, 7 km away. The women feel that collecting water here is time consuming and takes up valuable time that could have been used in working in the farms. They also access water from the Engarenaibor community water spring, and Kuresoi shallow well. In recent years the family has noticed that water levels have declined which they attribute to unreliable and low rainfall. Surface water used to last much longer than it does now. This has a huge impact on their farming activities.

The family's livestock have access to nearby public pasture lands at Loonjok, Loloropil, and Lekurruki. Mt. Lekurruki and a range of mountains called Meto Hills form a natural forest from which the family has access to construction material, permanent water sources, firewood, herbal medicines, and wildlife such as zebras, buffalos, elands, and bushbucks.

However in lowlands most of the former grazing land has been subdivided as farmland. In order to safeguard livestock, some areas such as Lekurruki, Nkoiseya plains, and Loonjok and Loloropil Mountains have been designated as pasture lands for the community. Also in each sub-village there are designated small stock's (young calves, goats and sheep) areas called *Iloopololi* set apart as pastures for livestock keepers

Migrants who use the timber for construction are deforesting the mountain areas. Some special species of trees, such as the '*Itarakwa*' used for construction material have become scarce because of over-exploitation despite government protection.

The family doesn't think the type of privatisation going on in Kenya is a good idea. They have seen the massive inequality in land distribution in Kenya and do not want to rush into it in Tanzania.

The family recorded one positive change, which is the lessening of bush fires because of government and local authority restrictions.

Wildlife

The family sees little direct benefit from wildlife and they are not even allowed to hunt them for food. At community level they were allocated 6 million TSh which was used to build a community school.

Their perception is that the number of elephants is increasing and they seem to be moving closer to the area. Elephants are the most destructive to farmland. With regards to other animals: rhinos have disappeared, Impala have remained the same, Zebra have increased slightly, the number of Eland depends on their migration, and Buffalos seem to be decreasing.

The family wants to maintain wildlife in the area because of the community benefit, but do not want them near their land, because of the damage done to farms. In addition they think that livestock causes more conflict than wildlife, because wildlife only comes when it is dry whereas livestock is there all the time.

4. INSTITUTIONS

Socio-economic resources

The following socio-economic resources are available to Kipara's family: Market and trading centre at Mairouwa, Seasonal roads to major trading canterers at Mairouwa and Longido, Wildlife Management Office in Longido.

Social services and Institutions

The following services and institutions are available to the family: A pre school located one mile away from Naripi, a primary school at Ngoswak 3 km away and another one at Mairouwa 4 km away. Other Institutions include: a health centre at Mairouwa, a Baptist Church at Naripi, and livestock extension services at Mairouwa. At least two NGO's are operating at Kipara 's community namely, a World Vision's sponsored Longido Area Development Program and Compassion International both working through a children's sponsorship program to improve education and other development activities at the community level.

Socio-political/traditional institutions.

Socio-political and traditional institutions from which Kipara's family draws some services include: Government services such as the Ward Councilor's office, Ward office, Village Office, Odomong'i and Orok Kiteng' traditional leaders.

Ranking of institutions and resources

Kipara's family ranked all the socio-political institutions and resources available to them in the following order based on their importance to the family:

1. Kiolulukunya well and other water sources from which the family and its livestock get water. This is ranked number one because water is crucial to their livelihoods (people and livestock). During the dry season they take priority in accessing water, especially for the livestock. In the wet season there is open access.
2. Farmland (a total of 31 acres). This is ranked second because farm produce provides major source of food (maize and beans) and cash (sale of surplus in good years).
3. Livestock and pastures are ranked number three because these resources enable them to get milk, meat, and cash from sales, meet ceremonial needs and social functions.
4. Education is ranked fourth because of the realization that it is a source of modern knowledge, and future employment opportunities and personal development for those who get it.
5. Leadership at all levels is ranked fifth as it is through being a community leader that Kipara and his family are respected, feels secure and receive favours when they apply for new plots whenever an additional land is subdivided.
6. Church is ranked sixth because three of Kipara's children (Matayo, Sabore and Benki) are sponsored through the Church to receive their primary and college education. The two boys are going to bible school while the girl; Benki is

attending Longido Primary School. It took the community a while to accept the church. The church has built nursery schools in each village and this has provided some employment. Also, as the family has converted into Christianity, the new faith gives them a sense of love and unity.

7. The market is ranked seventh because it is through the Mairowa market that the family is able to sell and buy for their major needs.
8. Health facility at Mairowa is ranked eighth as it is the place at which the sick members of the family receive their treatment.
9. Wildlife management is ranked ninth because the family is aware of the contribution the hunting companies are making toward community development at the village level. Last year they received some money to support construction of Ngosuak Primary School.
10. WV/Longido ADP is ranked 10th because of several development projects achieved in Kipara's community: Three children sponsored received clothes, greetings cards from their sponsors during Christmas time, soaps and food aid during severe drought. Some members of the community (poor farmers) received agricultural equipment (oxen ploughs and improve seeds).
11. Compassion International is ranked 11th because it has begun to register sponsored children who will soon be sponsored through their high school education. In Kipara's family a total of five children have been registered recently. At the community level, Compassion has employed two high school girls to teach pre-school children at Longido Baptist Centre.
12. The natural forest is ranked 12th because although it is a bit far and located on steep slopes of Mt. Lekurruki, the family get a lot benefits from it such as construction material, medicinal herbs, water and firewood.
13. Community-Based Organizations (CBOs), and local societies, particularly the Orok Kiteng' Society are ranked last because since they contributed livestock in order to become members three years ago, they have not benefited anything from it to date. However, the family believes that in the long run, CBOs and local societies will become beneficial to the larger community of members.

5. LIVELIHOOD ANALYSIS

Womens livelihood diagram

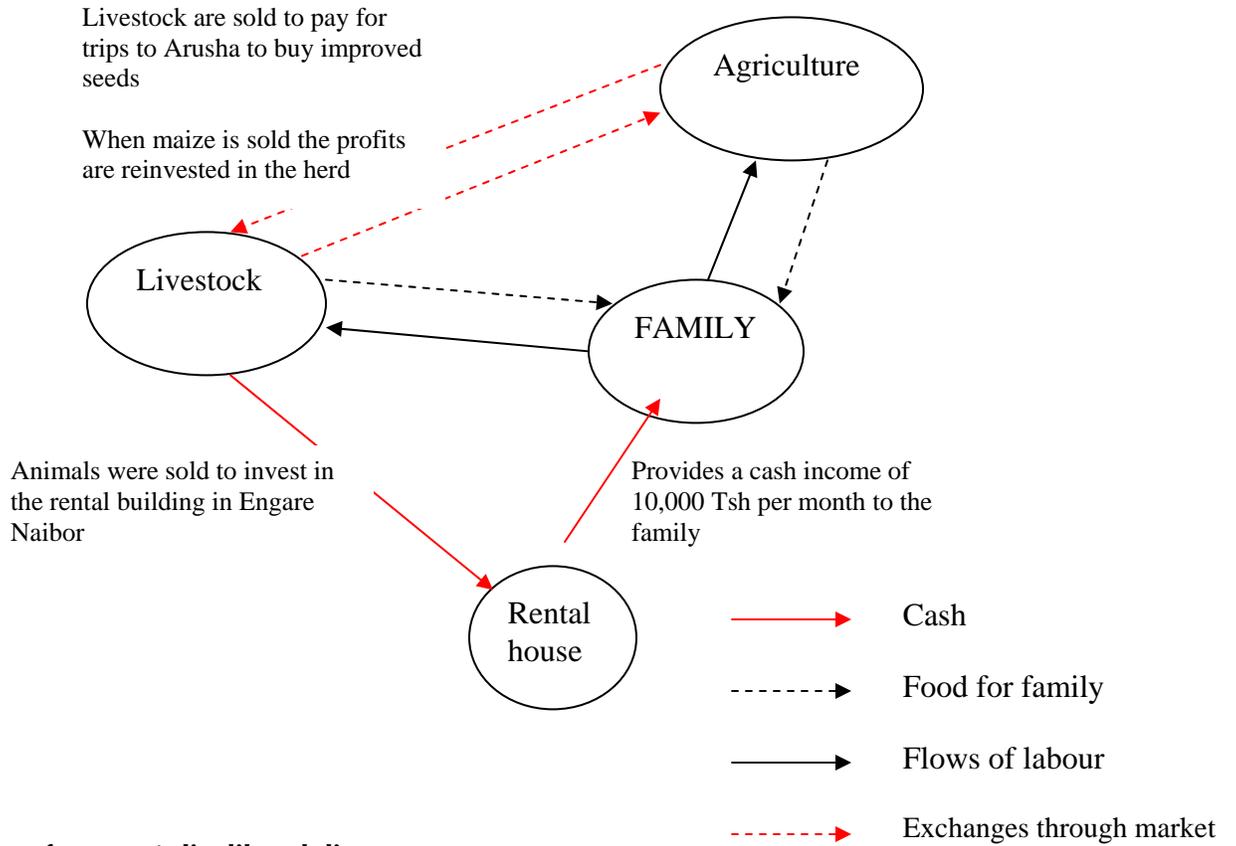


Photo of women's livelihood diagram



External influences

Church

Salvation and peace of mind
 Access to government authorities, white people, and outsiders who provide information on issues like HIV/AIDS, cultivation and childcare

School

Will provide the future doctors and vets of Tanzania. Enables them to read instructions on drugs and better treat their animals. Education leads to jobs from which income is invested in the herd.

Boma and livelihood activities

Forest

Provides fuel, construction, and fencing materials, as well as pastures for animals

Market

They sell agricultural produce and very occasionally livestock. They buy clothes, food, livestock drugs, e.g. Inputs.

They also get information from government representatives who convene meetings on market days

Organisations do animations on issues such as HIV/AIDS and livestock disease.

River

Drinking water for people and animals



Key Drivers of change for the family

1. Agricultural Expansion
2. Education and the church
3. The rental house
4. The market

Marked with white paper on diagram in photo

6. OPTIONS FOR THE FUTURE

Kipara's family sees farming as their best opportunity for survival amid overwhelming changes.

Kipara, a husband to three wives is determined to ensure that his sons do not marry multiple wives as a way to cope with new changes. The family will also try to reserve some extra land for their small stock. (That is the reason they moved to their current location so that they take advantage of the available public land near a steep slope, which they have designated as *Olopololi*).

The family hopes to expand their town house for rental and businesses in Mairowa in order to cope with new changes and financial demands in their livelihoods. In order to do this they need access to capital and are considering setting up a business there themselves to overcome the problem of collecting rent from people who are often unable to pay.

The family would like to be able to send all their children to school, but do not see how they are able to do so without generating enough income to pay labour. At present he is forced to keep some children home to look after the livestock and work in the fields.

So far Kipara's family owns 31 acres of land of which 15 are under cultivation. The first six were his inheritance from his father. Then he acquired 10 acres when the land committee subdivided new plots in 1991. Later when he moved to his new boma in 2002 he acquired another 6 acres. Recently he applied and got allocated an extra 8 acres of land, which he has not yet started to cultivate. To cope with low and unreliable rainfall, damage to crops, and difficulties in accessing improved seeds he has the following strategies: he will investigate drought resistant and short duration crops, he will invest in improved seeds by selling some livestock, and he will try to fence with thorns to protect his crops.

They are placing a lot of hope on the benefits of cultivation but acknowledge that this depends on the reliability and availability of the rains. Also hope to increase their livestock numbers especially as they do not have anyone earning a salary. They hope to do this by good pasture management through social structures, harvesting rainwater in good years through the construction of a dam, and by adopting improved breeds. Above all the family hopes that that the sons who are now in school, will get jobs in the future.

CONFIDENTIAL

THE FAMILY POTRAIT OF MELIYO MAANJA



2004

INTRODUCTION

1. The family

Meliyo Maanja, a member of *Mamasita* sub-clan part of the *Irmollelian* clan, was born in 1962. He was born in a small remote village called Sinya, 92 km East of Longido in northern Tanzania very close to the slopes and plains of West Kilimanjaro. Meliyo currently lives in En'donyo Oltoroboni sub village, 10 km east of Sinya village centre not too far away from Amboseli National Park in Kenya.

He is a first born in his father's family of three wives. He has no formal education and has led his life as a livestock keeper and petty cattle trader. He went into cattle trading in 1995 when he lost most of his herd to *Oltikana* disease (ECF). Despite this, Meliyo a young elder, remains optimistic and determined to do whatever he can to sustain his family on daily basis. He belongs to Ilkidotu (Landiis) age group.

There are 8 people in Meliyo's family including his mother and himself. He has one wife, Noonkipa who is 29 years old. Meliyo married Noonkipa the daughter of Ole Matipei and Ntaine Orguris of Ingidong'e clan from Osupuko in 1987. They have five children, three boys and two girls. Meliyo's mother, who is 63 years old, was the youngest of the three wives that her late husband married. She lives with her son's family, as he is responsible of taking care of her in old age as the last or only son according to the Maasai customs.

1.1 Family Composition

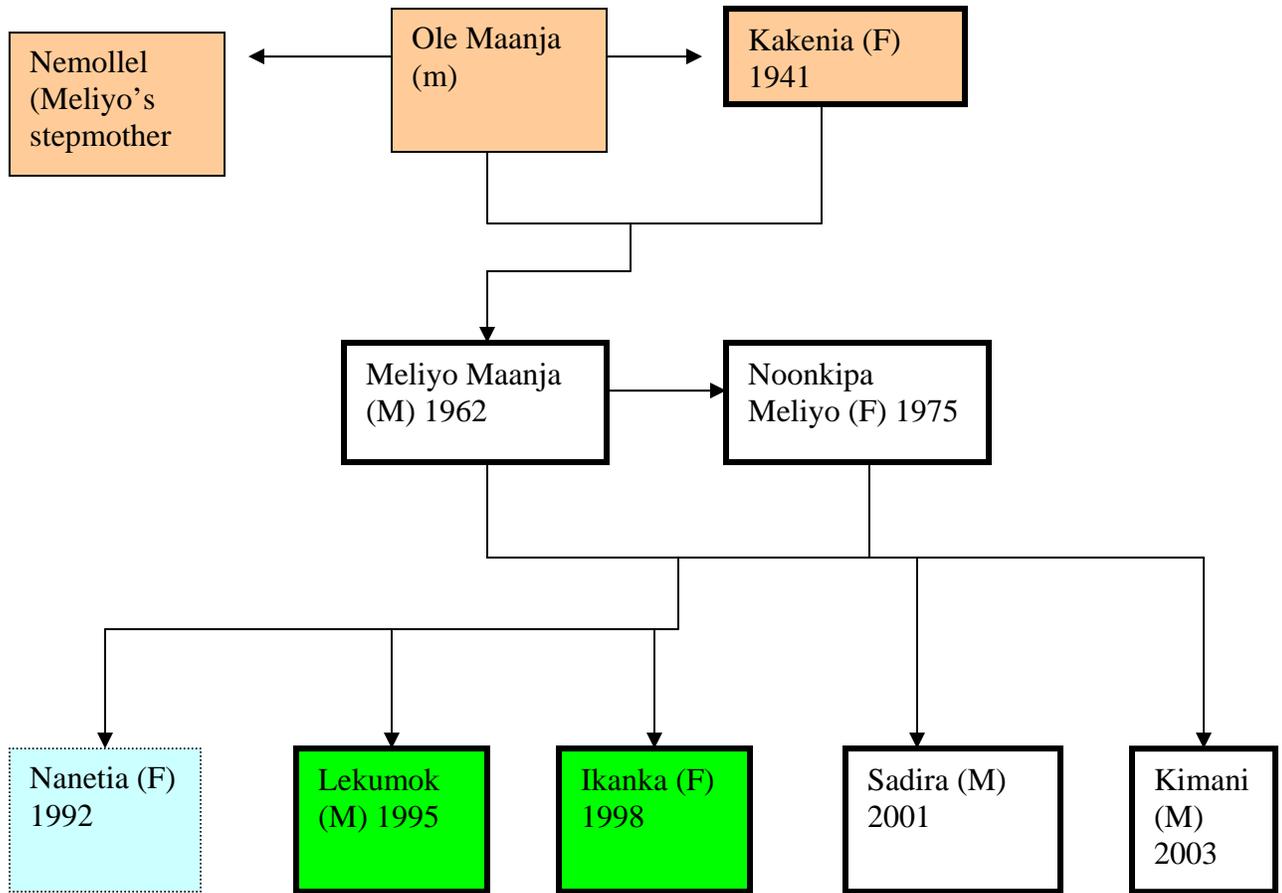
The table below shows Meliyo's family composition and demographics.

Table 1: Meliyo's Family Composition and Demographics

No.	Name	Age	Sex	Relation to others in the family	Level of education	Main occupation	Place of domicile
1.	Meliyo Maanja	42	M	Head of the family	Nil	Livestock keeping	Sinya
2.	Kakenia Maanja	63	F	Mother of Meliyo	Nil	Housewife	Sinya
3.	Noonkipa Meliyo	29	F	Wife of Meliyo	Std. VII	Housewife	Sinya
4.	Nanetia Meliyo	12	F	First daughter	Std. III	Student	Sinya Boarding School
5.	Lekumok Meliyo	9	M	First son	Nil	Shepherd	Sinya
6.	Ikanka	6	F	Second daughter	Nil	Shepherd	Sinya
7.	Sadira	3	M	Second son	Nil	Playing	Sinya
8.	Kimani	1	M	Third son	Nil	Nil	Sinya

Meliyo lives in a neighbourhood of three families within the same kraal namely, Loorkimai, Ole Nchalda, and Loonkishu

Figure 2: MELIYO MAANJA FAMILY TREE

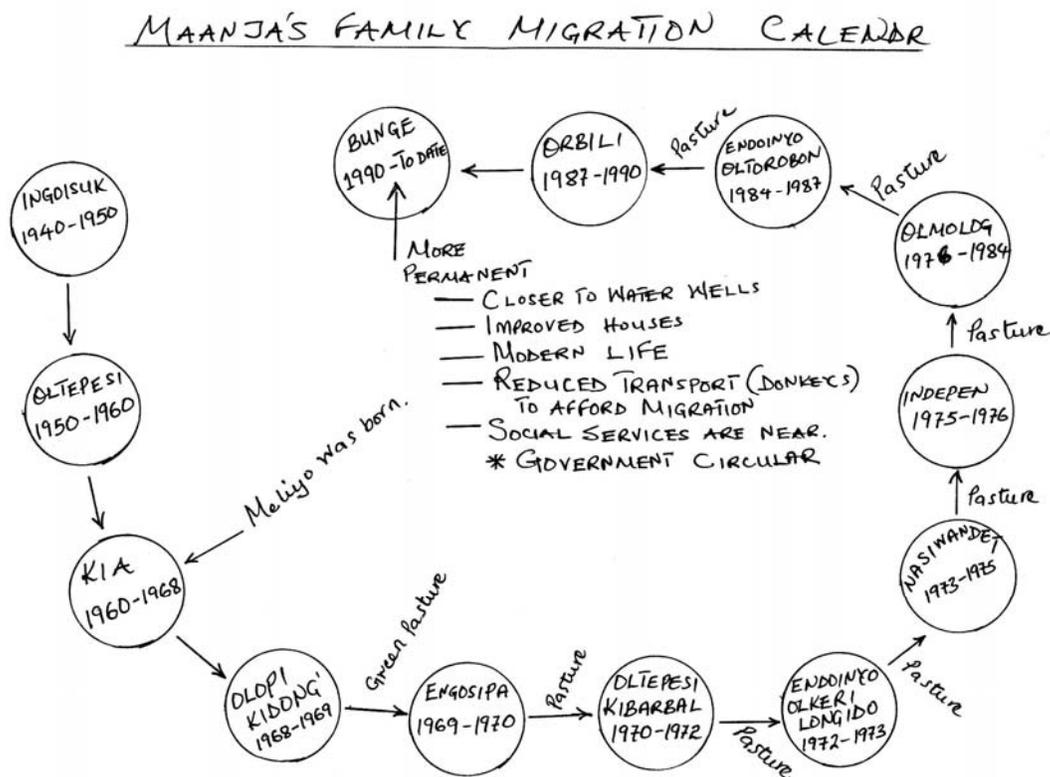


- Key:**
- At school
 - Herding
 - Away most of the time
 - Present at Sinya
 - Meliyo's parents

The first daughter Nanetia is at boarding school and the second son Lekumok stays at the grandfathers home in Osupuko (on the slopes of Mount Kilimanjaro) where he helps to look after the livestock. Meliyo is also away weekly visiting local markets to buy and sell cattle. Other family members remain at home all year round. When Meliyo is away, neighbours help his mother and wife look after the herd.

Kimaasai is the families' mother tongue. Meliyo, his wife Noonkipa, and their daughter Nanetia in school also speak Kiswahili. Noonkipa and Nanetia, who is in school, speak a little bit of basic English. Meliyo says he learned to speak Kiswahili while travelling to markets because he had to interact with the outside world. There are many non-Maasai people in the markets around the Kilimanjaro region which borders Sinya who speak Kiswahili, the national language of Tanzania. "Knowing other languages help us as a family to communicate with our non-Maasai neighbours, outsiders in markets and visitors to our community," Meliyo emphasized.

1.2 Family's history, movements, and significant events



The family of Meliyo Ole Maanja has always lived in Sinya area. The only move was a year before Meliyo was born when his parents were forced to move to Sikirari in KIA and Orng'elata area during a terrible drought that killed most of the Maasai livestock. His parents told him that they lost almost all their numerous cattle, and were left with only six cows. However, a good number of their goats and sheep survived. That year came to be known as *Alari le endii*. *Endii* is a yellow corn meal that was brought from the developed countries, particularly North America as relief food during the years following the early 1960s famine. "Our father moved us to Sikirari in search of a better place to receive food for his children," Meliyo explained.

Meliyo's parents continued to live in Sikirari until the year 1966 when they decided to move back to Sinya. 1966 was known as the year of the *Enkipaata* of the *Ilmaka* or *Ilkishumu* age group. *Enkipaata* is a ceremony to launch the beginning of initiation of a new age group. Meliyo's parents decided to move back to Sinya because it has better pastures and the land is free from cultivation therefore it is more ideal for raising large numbers of livestock.

Meliyo also recounts as part of his family history, that his grandfather had four sons: his father, Musuiyan Maanja, Orkipirei, Rumas and another one who died at an early junior elderhood age leaving behind a childless wife who went away to get remarried by another man altogether. This is unusual in Maasai land as when one gets married you are not supposed to leave that particular family whether you have a child or not. To ensure continuity of their departed brother, one of the clan members is supposed to inherit their late brothers wife.

Meliyo's father died from alcohol poisoning in 1965 when Meliyo was four years old. He left behind two wives: Nemollel and Kakenia, who is Meliyo's mother.

In 1984 drought hit again, and from his herd of 200 cattle Meliyo lost over 193. Meliyo singled out drought as a major driver of change. Whenever cattle died in large numbers, many people were forced to shift from their traditional strategies and to venture into other less familiar grounds. Some could hardly move out of the grip of poverty. The droughts also suppressed livestock fertility, so they could not multiply. Long spells of dry weather also meant that the livestock numbers were at best stagnant.

Meliyo and his mother separated from the rest of his father's family in 1989. The reason for separation is because their livestock increased and each needed a kraal of their own to look after their livestock independently. His stepbrothers had decided to move to Osupuko area where farms can be acquired but he decided to settle in Sinya with his family as a livestock keeper. However, in 1995, an outbreak of (*Oltikana*) ECF reduced his herd and by 1996 he opted to engage in cattle trade in order to sustain his family. Meliyo has ever since learned to interact with non-Maasai and has learned Kiswahili. The desire to get enlightened has made Meliyo decide to educate his children.

The movement of cattle had reduced but was still practised. During the months of August-Sept, they still moved to *Ilkung lolbili* and thereafter to Esonkoyo. During the good years they just stayed at emparnat.

Meliyo's family does not plan to move anymore from their current location in Sinya.

1.3 Family identity

Meliyo's family considers themselves traditional Maasai, however, they have decided that educating their children and adopting improved breeds of livestock will enhance their quality of life. Owning his own kraal is an indication to Meliyo of the possibility of expanding his family. The family is optimistic about their future, especially if they are able to afford to educate more of their children.

1.4 Decision-making and management roles

Roles in Meliyo's family are in accordance to the traditionally agreed upon division of labour in the Maasai social structure. While Meliyo as head of the family oversees the overall well being of his family, his wife is in charge of the household: maintaining the house, milking, cooking, bringing in water, and nursing the children. While his sons take a lead shepherding, his daughters stay around the homestead to assist Noonkipa in her daily work. Occasionally they are called upon to help in the shepherding livestock if there is shortage of labour in the family. The only change to this 'traditional' set up is that Nanetia is in boarding school.

Again in decision making the family follows the cultural norms. Meliyo, being the head of his household, has authority over the livestock and family affairs. Meliyo's mother, who lives with the family, has also to consult him before she makes any decision. On daily basis, Meliyo oversees to make sure that his wife and mother fulfil their responsibility to milk and count the livestock as well as caring for the children.

Decisions on what is to be sold when there is need to purchase for foodstuff, clothing or pay debts are made by Meliyo, however he gets suggestions from his wife and mother. In the same regard, Meliyo explains how the head of the family controls how the family's resources should be utilized. As for the case of Meliyo's family, currently, there are only a few livestock and money from his petty cattle trade to control and he freely shares the necessary information about them with his mother and wife.

1.5 Relationships

Mutual help between neighbours is also very important to Meliyo's family. Meliyo's livestock are herded together with his neighbour Nchalda's, using the same water holes and shepherds. Presently, Nchalda's son is the calves shepherd while Meliyo's cousin herds the cattle. The breeding bull in the herd is owned by Nchalda.

Meliyo's uncle and his sister's husband are neighbours. His sister's son is the designated shepherd of small stock.

Women within Meliyo's neighbourhood share a lot in their daily roles. Thatching of houses, collecting firewood and taking part in community celebrations are done together through *Embesi*. (*Embesi* means working together to help a neighbour or one in need of specific support).

Meliyo and his family maintain a good relationship with the community at large. This is important because most of the natural resources like pastures and water points in this neighbourhood are communally owned. Family ceremonies such as initiation rites of passage, circumcision ceremonies and any other related functions usually take place

between January and June. Although Meliyo's family have not had a ceremony recently, his uncle did conduct a wedding ceremony in March.

Although Meliyo belongs to a younger age group of elders called *Ilkidotu*, these does not in anyway impinge on his rights to participate in community functions nor leadership responsibilities or ownership of resources accessible to his community.

Meliyo is an appointed representative (*Enkopiro*) and assistant of his age group's overall leader (*Alaigwanani*) of East Longido in his Sinya community. The *Alaigwanani* in question is called Ole Katoi and was anointed in 1987. Ole Katoi appointed Meliyo his representative in 1988 and he will hold this position unless he commits a crime or becomes insane. From 1993 to 2002 Meliyo has been a democratically elected Chairman of his En'donyo Oltoroboni sub-village. He lost the seat to his age-mate Tiya of Laiser clan during the 2002 election but still holds leadership positions as member of village government committee and a member of the natural resources conservation committee (Mali asili).

He feels that his leadership position had linked him to the outside world "*Enkong'u naipang'a eng'en*". He had visited, together with others, some other areas such as Selous and Morogoro where they had attended seminars and learnt a lot about leadership.

1.6 Education

Education is a key strategy for the family. They see it as a vehicle out of poverty. Noonkipa supports the idea of educating all the children so they can enter the job market and earn income that can help the family. This is a change in attitude from the time of *Ilterito* roughly 100 years ago, when people kept their favourite children away from school.

However, even with just one child in school Meliyo has noticed the shortage of labour for livestock. He understands that education does not come without a cost.

No payment is made for Nanetia's education at Isinya, as the government funds it pays for most of the school needs. The parents support their children with basics like toiletries, uniform and stationeries. Most of pupils in the school are from the Maasai community, with few from other communities. The school has 430 pupils-all in boarding. Boarding school had ensured that children remain in school throughout the year even when the families move with the livestock in search of pastures and water.

1.7 Health status

Meliyo and Noonkipa's second daughter Ikanka suffers from unidentified health problem. They believe the daughter was affected by what they call *enkong'u* (evil eye) since when she was young. The implication is that someone with an evil eye might have enviously looked at her and this has had a negative effect on her health. Ikanka suffers from periodic headaches, lower chest pain, fevers, stomach upset, coughs and diarrhoea. Ikanka's ailment has been treated locally with traditional herbs but with no effect.

Meliyo and his wife would wish to take her to a reputable hospital in Moshi or Arusha for further diagnosis, but their resolve is hampered by their poverty, as they cannot meet the costs involved.

1.8 Family assets

Meliyo's family does not own much. Apart from livestock, the only other significant assets they own is Meliyo's bicycle with which he is able to help his family to bring supplies from the market or take someone to hospital in times of need.

Meliyo's family assets



2. LIVELIHOODS

2.1 General

Meliyo's family depends on livestock and supplements this with cattle trading. Cattle and goats are kept as a source of food (milk and meat), beddings (skins) and cash whenever they have a need to sell. The donkey is kept for carrying water and family belongings when migrating. Meliyo started cattle trading in 1996, as he realised that the few livestock he had were not adequate for meeting his family needs.

Meliyo started the cattle trading business in 1989, but feels he has not progressed very much. He admits that since the outbreak of ECF in 1995, which wiped out his livestock he has not moved beyond the subsistence level of cattle trading. However, he feels proud that his family has never lacked the basic needs, or had to beg from neighbours to survive.

Meliyo's livestock



The family also has increasing cash needs: Tshs10, 000.00 on uniforms, books and notebooks to his daughter Nanetia in Sinya Boarding Primary School; cash to buy grains which are now a basic food for the family whereas in the past they survived on milk and blood; and cash to buy veterinary drugs to treat livestock disease.

2.2 Livestock:

The family's livestock includes cattle, sheep, and goats. Meliyo's family keep cattle mainly for milk and also for cash in times of need. Sheep are kept primarily for meat and for sale but goats are kept for not only meat and milk but also for sale when family's cash needs arise. Donkeys are also kept for transport, especially of water and family belongings if they have to move for any reason.

Composition of the herd

Table 2: Meliyo's herd composition July 2004

Livestock		Category	Total
Cattle	Male	Immature= weaned but not full grown	2
		Calf (not yet weaned)	1
	Female	Adult	3
		Immature	1
		Calf (not yet weaned)	1
		Total	8
Goats	Male		2
	Female		5
		Total	7
Donkeys	Male		1

As indicated in the table above, Meliyo does not own any breeding bulls for his few cows. All the family's livestock are local breeds; they have not yet introduced any improved breeds of livestock.

2.2.1 Management of the herd

Identification

In accordance to the Maasai ways of identifying their animals, he brands his livestock. He uses the normal clan skin branding and earmarks. Besides marking, the family names their cattle. Livestock are also identified by their colour and unique natural marks if any such as the shape and size of the horns, ears, neck, hump, and the like.

Mobility

The family normally keep their livestock at home and only move them in search of pasture and water during the very dry seasons. The decision to move is made by the elders and warriors in the neighbourhood (those who graze together in the same kraal). The easiest time of the year for Meliyo's family is from March to June, during the rains, when there is plenty of green pastures, milk and enough water for people and their livestock. During the dry season between July and October the most demanding job in the family is searching for pasture and water for their livestock.

In September particularly, there is normally movements of livestock in search of pasture and water until the next rains come. "These days, the family does not move, only the livestock and the shepherds," Meliyo said. Mostly, they move their cattle to Orbili for the long dry season in search of pasture and water while they move to Oldenja during the short dry season. Since Meliyo does not have grown up warriors and shepherds to move with his livestock during dry times, he relies on his neighbours' warriors and grown shepherds do it for him. "That's what good neighbours do to each other- helping each other in need," Meliyo, said smiling.

Cattle movements have changed due to the emergence of ECF on the mountain slopes in the last 20 years. The incidence of *ECF* in the mountain slopes had also restricted movement further. Furthermore, there had been increased cultivation, which had eaten into traditional pastures.

Apart from livestock diseases the family does not think their community has been affected by any new land uses on their traditional grazing land. This is because Sinya is an arid location thus cultivation does not have room to interfere with livestock grazing patterns at any given year.

Livestock Disease

To control diseases in livestock, Meliyo's family dip and inject animals to keep at bay various livestock ailments. Meliyo gets advice on livestock drugs from a vet stationed at the market-Isinya. Early this year Meliyo spend a total Tshs.13, 000.00 on treatments on his small stock for a dreadful lung disease called *Orkipei*. However, they have not adopted any vaccination strategies apart from the occasional vaccines brought by the government

extension services such as vaccines for Rinderpest and Anthrax. These are only carried out whenever there is an anticipation of an outbreak.

Meliyo argues that there is no clear system in place to advise livestock keepers in his village, even though they do have a veterinary officer. However, the Catholic Church has recently introduced a veterinary drugs store where livestock keepers can buy the common medicines they are already familiar with to administer to their sick animals. Mostly this small shop sells injection medicine such as Terramycine or Oxytetracycline, Acaricide and de-worming solutions or tablets.

Labour

Meliyo's family does not incur any labour costs since his neighbours with enough shepherds are graciously covering him as they graze together all year round.

2.4 Livestock ownership

Meliyo explained that he is the primary owner and decision maker of his livestock. In accordance to the Maasai customs, the overall ownership of the herd is entrusted to the head of the family who manages and makes all the necessary decisions on behalf of and sometimes in collaboration with his grown up sons or wives. However, with livestock products such as milk and meat as well as skins and hides, wives are in charge as primary owners and distributors of food and home making affairs in the family

2.5 Benefits from other livestock products

The family does not benefit anything from the plentiful manure that accumulates inside their kraal all year round. As for milk, the family drinks it and even if there were surplus as would be expected during the rainy season, there is no ready market for selling the milk, as the area is very remote. Cowhides are basically used for making sleeping mattresses but skins from goats and sheep are used for both making leather outfits and sold by women for their personal use income whenever they go to the local market on Tuesdays.

Meliyo's family only sell their animals if there is a crucial need in the family. After all they do not have that many livestock to off-take.

2.3 Livestock trading

A decrease in the herd size forced Meliyo to venture into livestock-related trade. Meliyo's family does not have enough cattle of their own to trade, and there are no credit facilities available to support those who had lost a lot of their livestock to go back into business. Therefore, in the past year, Meliyo have sold one bull and one heifer to raise capital to go to local markets to buy livestock for resale as a small business to sustain his family. Meliyo says his small or petty livestock trading business helps his family to buy food, meet their basic health expenses and buying clothes and school supplies to his daughter in boarding school.

The primary market from which Meliyo would buy cattle for resale is Sinya market, which operates once a week every Tuesday. Whenever he buys, he inquires from other traders about secondary markets prices such as Engarenairobi, Naibilye, and Maiko in Kilimanjaro and Arusha regions respectfully and Ilbissil and Emali in Kenya to be able to decide where to resell his livestock for profit as much as possible.

Meliyo relies on the word of mouth from other livestock traders to get market information. These traders are normally from different markets that he meets in his village market every Tuesday.

As far as sources of capital for trading go, Meliyo depends on his own small herd to generate the necessary capital. He also knows that the best time of the year to buy cheaply and sell for profit is at the beginning of the short rains season (Irkisirat). He could buy adult female cows for TShs. 60,000 to 80,000, castrated adult bulls for TShs. 150,000 to 170,000. Steers during season also could be bought for TShs. 30,000 to 40,000. Goats price also fluctuate between TShs. 15,000 to 25,000 in the local market such as Sinya and could be resold for TShs. 30,000 – 50,000.00 in Maiko.

The impact of market related policies that affect Meliyo's cattle trade are minimal. At first the government used to charge TShs. 300 per goat and TShs.1, 000 per cow as taxes whether you sell or not but this regulation was scrapped in mid 2003.

Buyers of Meliyo's cattle are numerous. Sometimes he resells his livestock to local cattle traders who want in turn take the animals to secondary markets. Occasionally he sells to outsiders who come to buy at the local market. If he fails to sell at the local market all together, he opts to drive his livestock to one of the secondary markets where his buyers are a variety and prices are a bit more competitive depending on the time of the year as well as demand and supply forces in the market. He does not always drive cattle to the market himself. At times he hires someone else, which costs him Tsh. 2000: Isinya-Maili Tisa, Tsh 1500: Maili Tisa-Ilbissil, Tsh 3000: Isinya-Namanga. Some people drive their animals to Emali and Ilbissil depending on where market prices are better.

In a week he might buy and re-sell a maximum of four cows and six goats. Meliyo also states that he "has never faced security problems such as burglary after selling livestock."

Meliyo analysis of livestock trading is that it has been useful in contributing to their livelihoods but inadequate in meeting some of his family's needs for example, paying hospital bills.

2.4 Cultivation

Meliyo's family do not carry on any cultivation activities due to the fact that the location they live in is very arid and the soil is saline. Beside, they live in a game controlled area which is full of wild animals such as elephants, zebras, giraffes, wildebeests, impalas and many more within the kraals environment thus making cultivation quite unpractical.

Figure 2.6 diagram of men's activity calendar

Fencing Boma				
Caring for Livestock				
Herding				
Government Leadership				
Watering livestock				
Seeking food for the family				
Selling Livestock				
Activity	Short rains Dec - Feb	Short- Dry season March	Long rains April- July	Hot dry season Aug-Nov.

Notes:

The men's seasonal activity calendar varies slightly from that of women in that men's' tasks tend to intensify more during the dry season. Activities like watering of livestock and herding become very hard during the dry season, as they have to move their livestock from place to place in search of pastures and water.

Seeking food for the family is done all year round at small scale while fencing the boma is also done regularly all year. For the Government leadership the leaders do at least once every month so Meliyo has to attend these meetings since he is a committee member.

Fig. 2.7: Diagram of women's seasonal activities

Washing clothes				
Herd Management				
Collecting Fencing Branches				
Firewood collection				
Feeding Young Stock				
Child care				
Cooking				
Milking				
Cleaning sheep pen				
Cleaning household				
Housing repair				
Cleaning calabashes				
Fetching Water				
Activity	Short rains Dec - Feb	Short Dry season March	Long rains April- July	Hot dry season Aug-Nov.

Notes:

Some tasks like cooking, fetching water for the household, feeding young stock intensifies during the dry season. This is because there is less milk for the family consumption hence food which is bought from the Sinya market intensifies the work of cooking. This also leads to fetching of more water and it becomes relatively hard, as the distance to the water source is far as the nearer sources dry up during the dry season.

Milking, cleaning calabashes, cleaning shoats pens, house repair and washing clothes intensify during the wet season.

2.5 Off Farm Activities and remittances

No one in Meliyo's family earns a salary or brings in wages from employment.

There are no remittances accrued directly to Meliyo's family, but the Tembo Campsite owned by Kibo Company and the Northern Hunting Company contribute a total of TShs.35 million per year to Sinya community by contributing to social amenities such as

bore holes maintenance, construction of additional dormitories to Sinya Primary Boarding School and a Motorbike to the village Chairman.

2.6 Small businesses

The only small business Meliyo's family relies on is the petty cattle trade that the household head runs on a subsistence basis. However, occasionally tourist who come to Tembo camp decide to visit Maasai bomas. Since the beginning of this year there has been one visit to Meliyo's kraal from tourists. They paid a total of TShs. 15,000 for the whole Boma and another Tshs. 10,000 for photographing his wife separately when they entered her house where she was nursing her newly born baby boy Kimani who is now one year old. However as Meliyo understands this is very unreliable business.

The women see the advantages of having tourists in the area. They hope to earn cash from selling beadwork, but recognise they need more secure markets if they are going to make any profit. They also have an idea to set up small scale businesses near the nursery school to sell items demanded by tourists and those who work in the tourist industry. They also hope some people will find direct employment in the camps. The disadvantage is the link between tourists and wildlife and the threat wildlife poses to people. Elephants have killed several people in recent years.

2.7 Redistribution mechanisms

Having been faced by severe drought, which has persisted for the two consecutive years, Meliyo's family received some relief food (grain) during the dry season of last year from FAO (World Food Organization). As for this year, the family is not sure where their next supply of relief food will come from. The national cereals board and the government food reserve are still working on the logistics for issuing relief food this dry season.

3. NATURAL RESOURCES

3.1 Natural resources

Land: Meliyo's family does not own any land privately. All land in Sinya village is still communally owned as people graze by following established patterns such as small stock pastures, wet season pastures and dry season pastures.

The family does not see any reason why they should want to own land privately.

Since there wasn't enough land for everyone, it was better to share what was available on a communal basis. There was also the possibility of some people getting barren land where it was difficult to eke out a living. The common sharing was also important in that it ensured flexibility to exploit pastures over a wider area without restrictions.

However, Meliyo's family owns a private well, which they dug last year jointly with their close neighbours.

Access to other resources.

- Pastures: The community has subdivided grazing lands into specific segments for particular livestock such as calves (*Olopoloi* or *Olokeri*).

- Wildlife: Sinya, especially En'donyo Oltoroboni where Meliyo's family live is endowed with lots of wild life which attracts tourists. That is where Tembo Camp is located. The benefits generated are for the whole community. One disadvantage of some of these animals is that the elephants are notoriously destroying trees hence causing environmental degradation. Also seasonal roads made by campers' trucks as they trek the land terrain doing game drive and site seeing is destroying a lot of grass thus reducing grazing land.

Wildlife

Money that is being contributed by the wildlife-related investors does not come directly to any individual but to the community at large in the form of services rendered. Meliyo however explained that there is no clear system to provide information to the people in the community about these funds. However, his understanding is that the Tembo camp and Northern Hunting Company do deposit cash money in the Village Bank Account in Arusha if they did not provide any direct support services to them. The Micro-finance Bank, Arusha Branch manages the account through the village finance committee, which appoints chairperson, secretary and treasurer.

The wildlife-related revenues have been beneficial to the family and the community at large. Families no longer had to sell their cattle to raise money for certain community projects like building local schools and maintaining the borehole. Meliyo prefers this system whereby money is paid to the community in general rather than to an individual. He fears that individuals will misuse money, but a committee ensures that the money is well distributed in ways that benefit all. However he does think that those who are politically connected are more likely to access help from the village leaders, and get more support from money accruing from wildlife-related activities.

So far there are no hurtful restrictions imposed on family by the presence of these wildlife agencies other than the need to protect wildlife at any cost even if they cause damages to family's resources. Then family's concern in this regard is based on the realization that at the moment there are no laid down procedures or laws for compensation whenever a wild animal such as an elephant or lion kills a human being or livestock. They would like to be compensated for livestock lost to wildlife, however a series of meeting have not yet yielded an agreement. Meliyo hoped that a meeting in November 2004 in Parliament would clarify the way forward to resolve compensation issues. One of the area representatives is expected to attend the meeting.

Meliyo also described about a proposed new program called WMA (Wildlife Management Area) which he said his village is divided regarding accepting it. While some believe it will benefit only a few, some villagers' think it is not going to benefit them at all. Therefore, if they had a choice, they would rather remain with the present companies that contribute money directly to meet social services in the community or by depositing money into the village account. It sounds that it is not yet clear how the WMA will operate differently to the hunting and camping companies that are already operating in Sinya village.

Beside these wildlife-related ventures, there are also development agencies doing development in Sinya village at the community level, which does not benefit individual families directly as narrated by Meliyo's family. Currently there is a World Vision's project, which is supporting construction of more classrooms and teachers houses for Sinya's

Boarding school. This organization has contributed TShs, 25 million toward the school improvement projects. The Catholic Church besides constructing a veterinary drugs store, are also engaged in a Nursery School construction project, which is at its final stages. The school has already started to operate and presently it has enrolled a total of 45 students.

4. INSTITUTIONS

Government

The effects of government were felt through circular and other policies that were passed down through the village office. An example was given as the policy restricting the movement of people in a 'haphazard' way. People could only move their cattle at certain times and then drive them back to their villages where the government had invested in infrastructure and other social amenities.

The government was credited with the work related to education. It had ensured that there were schools for the people.

Social economic resources:

Sinya market- situated at Ildoinyo sub village, 10km away from En'donyo Oltoroboni where the family lives. The family experiences both positive and negative effects from the growth of the market. Positive changes include easy access to information, availability of goods and services. Also the market had brought about more interaction with outsiders hence bringing about change through new ideas. The proximity of the market also helped in saving time that had been spent travelling to far away markets. Those markets were now visited only when the local one could not absorb the livestock, or when the prices dictated otherwise. The family gets market information through other traders in the market and through local barazas. The market is seen as a source of information that brought about change in the community. However, the influence on the moran especially had been negative. They spent a lot of time in the market many engaging in trade and care less about cattle. The livestock are suffering most due to lack of hitherto easily available labour.

Access to roads- Namanga road which links them to better health facilities, shopping centres and livestock markets; Tingatinga road which links them to their Ward's administrative headquarters and Engarenairobi market, Longido road which links them to their Divisional administrative headquarters, health facilities and secondary school and Olopuku road which links them to the Ilmolog local market.

Tourism facilities- Tembo Camp and Northern Hunting Company that bring tourists who contribute income that goes toward improving their community's social services as well as providing employment to some individuals in the community. However, there is a problem of many vehicles criss-crossing the area and hence damaging the environment, and destroying pastoral resources. Measures to stop the trend had not been successful so far as driving is seen to be necessary to track the animals for photographs and also to shoot. Meliyo thinks the resources regenerate if the tour drivers complied with set rules. Malignant Catarrhal Fever (MCF) was also cited as a problem disease transmitted by the wildebeest. The local people had set aside some land for the wildlife so that in future there would be room for it. There was a plan for the village to ensure planned settlement.

Services:

The following social services and public institutions are available to Meliyo's family for their use:

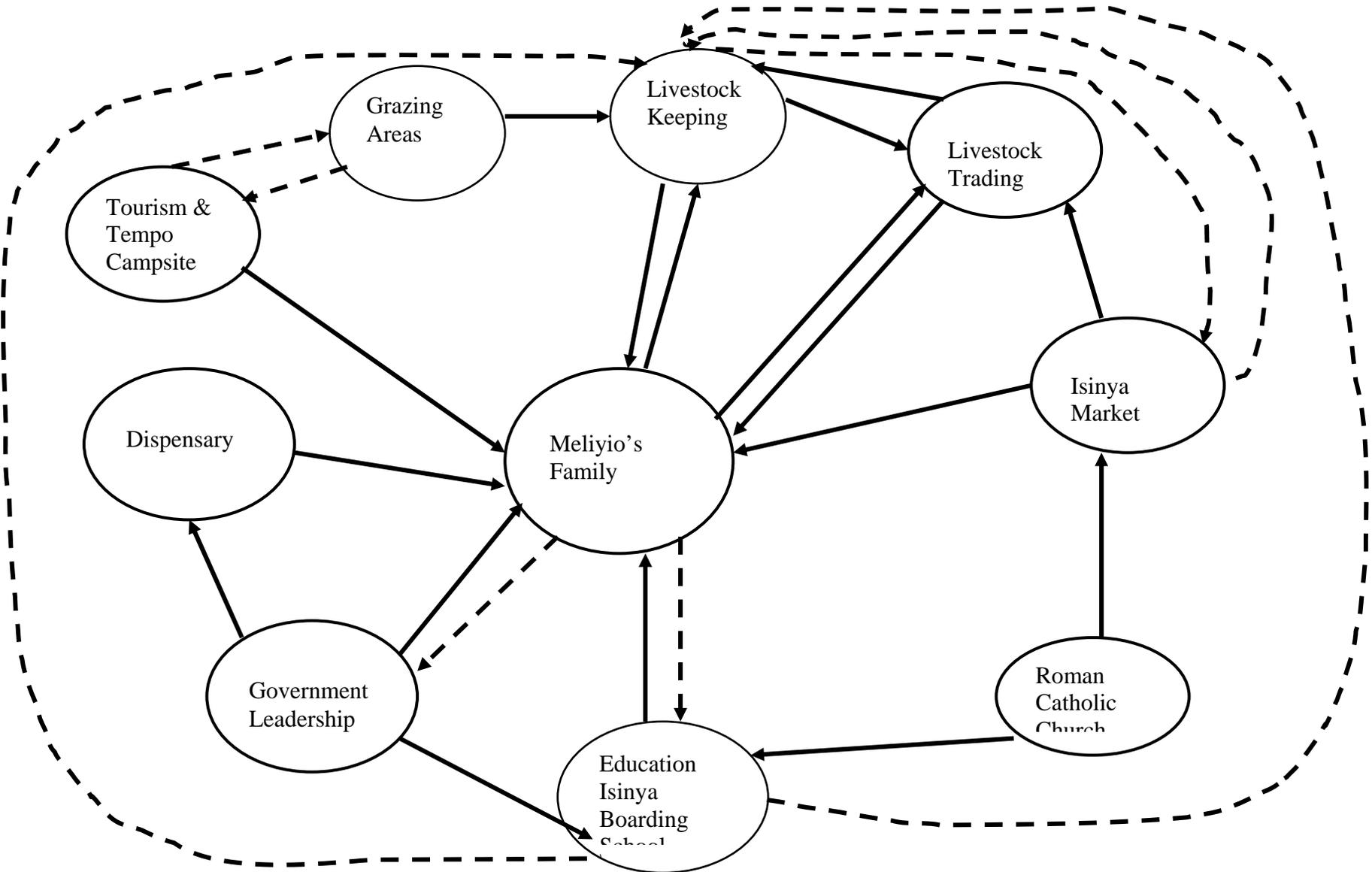
- Sinya community clinic where the family members receive basic health care at minimal cost of TShs. 1,000 per person per visit whenever necessary.
- Sinya community nursery school and En'donyo Oltoroboni sub-village nursery school where family pre-school children could receive their preparation before they join primary school. The Catholic Church built this.
- Sinya Boarding Primary School where one of Meliyo's daughters attends school.
- Livestock services. The village have a livestock extension services doctor and a veterinary drugs store which the Catholic Church built.

Socio-political:

- Information: The community does not have a systematic information accessing system. Nevertheless, through the current access to mobile phones, for those who do have, they have access to the outside world.
- Political voice: The Chairman and the Village Executive Officer are the spokespersons of the community and acts as chief mediators between community members and the outside networks.
- Traditional institutions: These are prominent in Sinya since each age group has their own leader. The village government works closely with them for traditional leaders are highly respected in the community.

Some of the costs associated with accessing resources include the travelling time to water points, market, health services, school given that Meliyo's family lives 10 km away from the village centre. Also since they dug their own well which is barely two km away from their home, they still suffer regular labour costs caused by elephants who destroy their cattle troughs and sometimes the well itself especially during the dry season.

DIAGRAM OF MELIYIO'S FAMILY LIVELIHOOD SYSTEM



5. Major agents of change in Sinya

1. Isinya market- Livestock Keeping

The market has brought about positive and negative changes towards Meliyio's family and the community at large. The positive change is the availability of necessary commodities at a near distance, and the flows of information to the community. They also attribute better health care and decreasing mortality rates. The negative changes are that there is less manpower as everybody goes to the market during the market day and they leave behind cattle without anyone to take care of, it has also enhance the rate of demand for new things. Cases of theft had also been reported because other communities do also come to this market.

2. Education

Attitudes towards education Maasai communities have changed. During the times of Ilterito, the favourite children were kept away from school, and they ran away from development e.g. roads, and towns. Now households are embracing education as a way out of poverty, and see how flows of information accelerate change both at household and community levels. The presence of a government run boarding school in Sinya is perceived as an opportunity for improving the quality of education since students do not have to walk long distances on daily basis to school or move away with the family in times of severe drought. Meliyio's family are investing in education, but also recognise that livestock are affected due to shortage of labour. This is because one of Meliyio's children is in school and thus there is shortage of labour in the family.

3. Drought

Meliyio singled out drought as a major driver of change. Whenever cattle died in large numbers, many people were forced to shift from their traditional strategies and to venture into other less familiar grounds. Some could hardly move out of the grip of poverty. The droughts also suppressed the possibility of cattle to be on heat, so they could not multiply. Long spells of dry weather also meant that the livestock numbers were at best stagnant.

6. Plans for the future

The family feels they are better off than before. They are a small unit as opposed to the past when he had many dependants, including his siblings, some of whom had already left for their homes (e.g. girls married off).

The family is therefore hoping for a brighter future especially if they are able to send all their children to school. With full awareness of their level of poverty, they still hope that the future years bring more rain and if the current care they give to their livestock works, they will see an increase in the size of their herd, which is the primary source of their livelihoods. Meliyo also hopes to expand his cattle trading, and to use the profits to buy livestock to increase his herd.

The family is not intending to move from the home in the next 20 years. Factors that normally led to moving to another home are: increase in the size of a family, increase in the wealth of a family especially livestock (both these increases could lead to a home becoming the talk of the village, "*Inkutukie ooltung'anak*" hence a bad omen!).

Meliyo thinks that he may get a plot for cultivation at Osupuko in future, but this is not a priority. He would only venture into cultivation if he had some money to spare to hire labour to work the fields on the mountain slopes. Since his children are all-young and will go to school when they attain the right age, he does not expect them to provide labour for cultivation. However, he stresses that the herd is their top priority, they form part of their identity and they cannot live without them.

He has also identified 2 opportunities to do business in the area in the future. First, he thinks there is a market in the area for cereals, veterinary drugs, Maasai linen etc. Noonkipa (Meliyo's wife) would assist in setting up a small business to sell these items. She is willing to venture into the trade if the capital was available, and Meliyo is eager to involve her in future. Access to credit is the major constraining factor in setting up such a business. Second, Meliyo hoped that in future he could build a permanent house that he could rent out in Isinya so that he could get income from it. This was his priority number three.

Meliyo may marry a second wife in future if he is economically stable. The added advantage of a second wife is social status and the increase in available labour. Noonkipa agreed with this, and said she would not mind having a co-wife, who could assist her during times of difficulties and help her to manage the household.

The final opportunity Meliyo saw was the association with the local leadership. His leadership position had enabled him to be more exposed to the outside world. Through seminars and workshops, he had learnt a lot. He hopes that more 'maendeleo' (development) would come as a result of more education. Maendeleo for him means more education for all their children.

CONFIDENTIAL

FAMILY PORTRAIT OF SAITOTI OLE NINA



OVERVIEW

Saitoti Ole Nina lives in Ilmolog village located 89 Km away east of Longido town on the western slopes of Mt. Kilimanjaro. The Ilmolog village is situated on high grounds that are favourable for cultivation of various crops such as maize, beans, wheat and potatoes. Just 3 Km away above the village is a forest reserve as well as a Park called Kilimanjaro National Park. Ilmolog village centre at Eluai sub-village is home to a mixture of tribes. These are people who may have been attracted by the high potential for good climatic conditions and fertile soil for farming. Currently, there are several white settlers and business firms such as Tanzania Breweries Ltd who carry out large-scale commercial farming of wheat, flowers, varieties of beans, and dairy cattle.

The indigenous people of this area are the Maasai people who still practice their traditional cattle rearing occupation as well as a significant amount of cultivation. Primarily, they grow maize and beans as well as wheat although it is more or less at subsistence scale.

Ilmolog village has three sub-villages namely, Eluai, Enkatani and Mushaloni with a total of 127 kraals and 300 households. Eluai is the centre of the village where a small town with various socio-economic and political institutions and services have been developed. It is in this sub-village where you find a mixture of tribes such as the Chagga, Meru of Tanzania, Pare and the Maasai cohabiting.

1. THE FAMILY

1.1 Family Composition

Saitoti Ole Nina is, a member of *Inkidong'i* sub-clan, which is part of the *Orok Kiteng'* moiety. He currently lives in Eluai sub-village with his immediate and extended family members including his mother, divorced sister, and widowed sister in law. He was born in 1951 in Loonkiito (Longido) village in Monduli District, Arusha region in northern Tanzania. He belongs to the Ilkishumu age group and he is the third born in a family of five girls and two boys. He is the son of Lenina Ologuris and Kumolosho. His father had another wife, Kunene who is a mother of five sons and three daughters. His grandfather, Orguris was made a great chief by the colonial government in the region, which extends from the western slopes of Mt. Kilimanjaro to Monduli. He was among the leaders used by the colonial powers to create the present border of Kenya and Tanzania along the Kilimanjaro and Arusha regions.

Saitoti married his two wives in the year 1975 and 1982 respectively. His first wife Naramatisho (40) has nine children and his second wife, Rhoda, 38 (separated), has five children. He also lives together with his mother Kumolosho (66) his sister Noolosiyo (38) and his late brother's wife, Noorkishumu (37) Saitoti is the overall caretaker of his mother, Kumolosho, his sister Noolosiyo and her seven children, as well as Noorkishumu her sister in law with her six children. This does not mean that he provides for them but simply he is the near family member consulted whenever the need arises. Except for his immediate family, the extended family members living with Saitoti are independent and provide for themselves. While Kumolosho and Noolosiyo live in the same house, Noorkishumu lives in her own house.

Saitoti lives in a neighbourhood of one of his stepbrother called Lekina. The primary languages spoken in Saitoti's family are Maa and Kiswahili. All the members except Kumoloshu speak Kiswahili. Saitoti has primary school education, which he argues enables him to interact with non-Maasai communities. This helps him in transactions such as buying his family supplies in the market and agricultural inputs.

The table below shows Saitoti's family and immediate relatives composition and demographics.

Table 1: Saitoti's Family/Relatives Composition and Demographics

No.	Name	Age	Sex	Relation to others in the family	Level of education	Main occupation	Place of domicile
1.	Saitoti Lenina	53	M	Head of the family	Std 7	Cultivation and livestock	Eluai
2.	Naramatisho	40	F	1 st Wife of H/H	Std 2	Housewife	Eluai
3.	Rhoda	38	F	2 nd Wife of H/H	Std. 6	Housewife	Eluai
4.	Naara	26	F	1 st D of W1	Std. 7	Housewife	Enkatani
5.	Maanu	22	M	1 st son of W1	Std. 7	Watchman	Nairobi
6.	Joseph	19	M	2 nd son W1	Std. 7	Mill machine attendant	Eluai
7.	Laloi	16	F	2 nd D of W1	Nil	Housewife	Mushaloni
8.	Shokut	13	M	3 rd S of W1	Nil	Shepherd	Eluai
9.	Papaoti	10	M	4 th S of W1	Std. 3	Student	Eluai
10.	Titolai	8	F	3 rd D of W1	Std. 1	Student	Eluai
11.	Narisyoi	6	F	4 th D of W1	Nil	Shepherd	Eluai

12.	Regina	1.5	F	5 th D of W1	Nil	At home	Eluai
13.	Elizabeti	19	F	1 st D of W2	Std. 7	Housewife	Eluai
14.	Monica	16	F	2 nd D of W2	Nil	Housewife	Eluai
15.	Mbarnoti	12	M	1 st S of W2	Std. 6	Student	Eluai
16.	Nkaai	10	M	2 nd S of W2	Nil	Shepherd	Eluai
17.	Angalai	8	M	3 rd S of W2	Std. 2	Student	Eluai
18.	Kumolosho	66	F	Mother of H/H	Nil	Housewife	Eluai
19.	Noorkishumu	38	F	Wife of late HH's brother		Housewife	Eluai
20.	Toto	24	M	1 st S of # 19	Nil	Shepherd	Eluai
21.	Lazaro	21	M	2 nd S of # 19	Nil	Shepherd	Eluai
22.	Maama	10	F	1 st D of # 19	Nil	Shepherd	Eluai
23.	Ndiito	8	F	2 nd D of # 19	Std. 2	Student	Eluai
24.	Olamaiyani	2	M	3 rd S o # 19	Nil	At home	Eluai
25.	Noolosiyo	38	F	Sister of H/H	Nil	Housewife	Eluai
26.	Lekedoki	12	M	1 st S of # 25	Nil	Shepherd	Eluai
27.	Siletian	10	F	1 st D of # 25	Nil	Shepherd	Eluai
28.	Susana	7	F	2 nd D of # 25	Nil	Shepherd	Eluai
29.	Naanyu	5	F	3 rd D of # 25	Nil	Shepherd	Elluai
30.	Kadogo (twin)	3	F	4 th D of # 25	Nil	At home	Eluai
31.	Laiser (twin)	3	M	2 nd S of # 25	Nil	At home	Eluai
32.	Mbalelo	2	F	5 th D of # 25	Nil	At home	Eluai

Fig. 1.1: SAITOTI FAMILY TREE

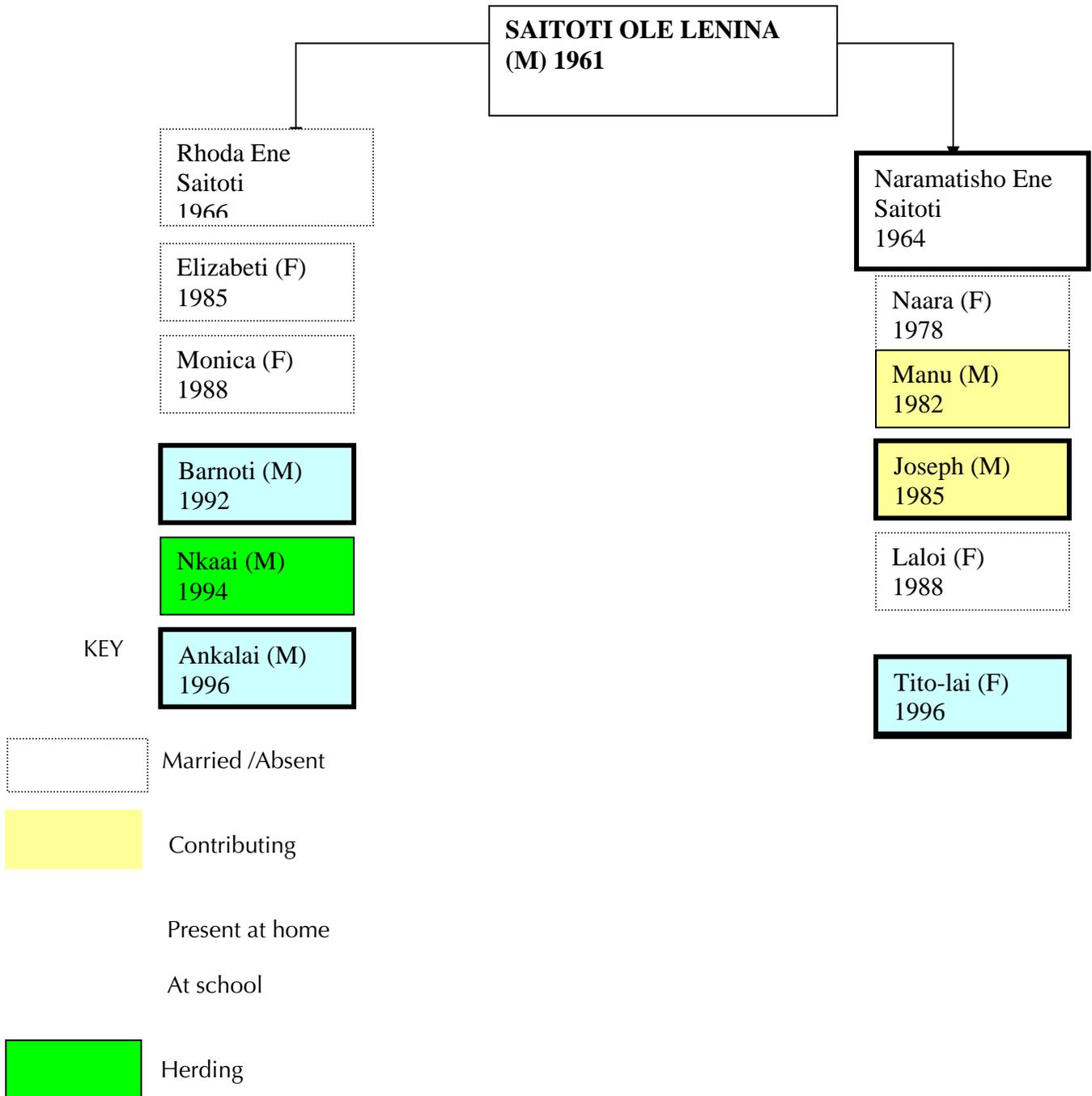


Fig. 1. 2: Insert the diagram showing Saitoti's Kraal layout here

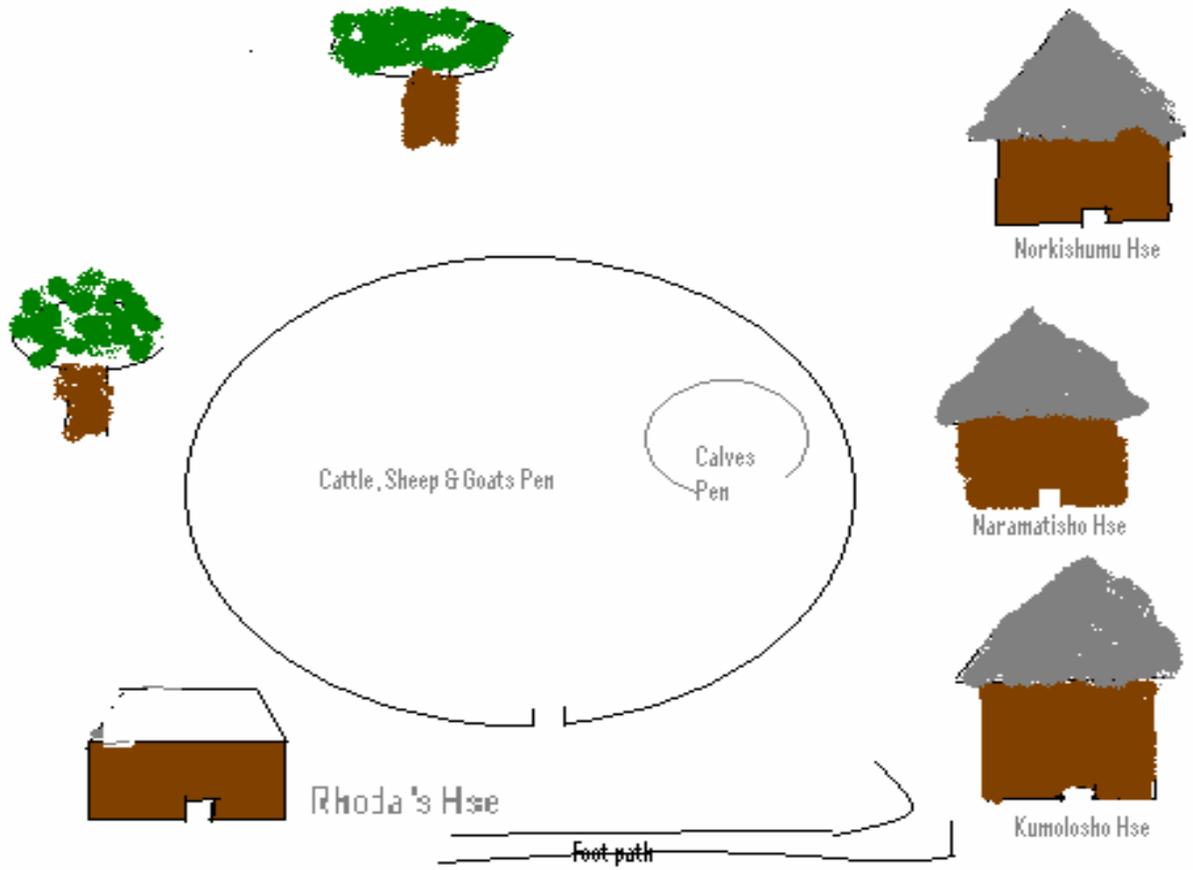


Fig. 1. 3: family photograph



1.2 Family history

The family of Saitoti Lolguris moved from Longido to Sinya in 1952. They moved because of a severe drought. They stayed at Sinya for two years, then they moved from Sinya to Ilmolog (Eluai sub-village) in 1954 because they found it to be drier than Longido. In Sinya they did not have access to regular supply of water for domestic and livestock use especially in the dry season. Saitoti says they had more than 400 heads of cattle when they moved from Longido to Sinya. When they moved to Eluai, the climate was not favourable to their cattle so death mortality increased due to the prevalence of ECF. They had about 400 cattle when they moved to Eluai. They moved from Eluai to Mushaloni sub-village of Ilmolog in 1956 due to the need to change settlements to acquire a new kraal since the former accumulated too much manure. They moved again from Mushaloni to Eluai in 1969 for the same reasons. They have been living where they are currently for the last 50 years.

Saitoti's family of origin has changed their kraals several times within Eluai sub-village between 1952 and 1979 before his father died. His father died in 1980 due to TB in a kraal just half a kilometre north of where they live currently.

Saitoti and his immediate family have no plans of moving anymore from their current settlement but his sons might move, especially if the village government allocates them their own pieces of land to cultivate in the future as they become mature men.

One of the significant events that Saitoti recalls in his family history includes the severe drought of 1961. During this year they had to move to Oloomoni area upper the slopes of Mt. Kilimanjaro where they lost nearly all their livestock. About 400 cattle died and they were only left with two cows- one bull and one female cow. The reasons these cattle died was because of poor pastures and unsuitable water for livestock consumption. Leaves from the treetops would fall into the water and when the animals drink they develop fatal complication that lead to death.

One of the shocks of the 1961 drought according to Saitoti is that people were dying and only donkeys were left because the donkeys were more resistant than cattle and could feed on various leaves. The family got food AID from the government and people survived by hunting zebras and elands. Although nobody died in his family, Saitoti related that several people he knew died from starvation during the 1961 drought.

Another shock remembered in Saitoti's family history is another drought in 1973. His family had to steal pastures from the NAFCO farms owned by the white settlers. This resulted into killing of livestock and people from merciless settlers who would shoot to kill livestock or shepherd upon spotting them in their farms. Saitoti knows two families that had their shepherd shot to death by settlers during that drought.

Another significant event in Saitoti's family history is his inheritance of his father's *Enkidong* (a divine gourd used by Oloiboni in treating clients). His father was supposed to hand over the divining gourd to him before he died. But this did not happen because his father did not die a natural death, he died suddenly. Therefore, according to the tradition, he is not supposed to start using the divining gourd officially before his kinsmen bless it at a ceremony that is planned for and performed by Saitoti's family. Saitoti says he has not been able to hold this ceremony because of family problems. Following his father's death, he spends a long time attending his brother who also became ill and died a year later after his father. Saitoti was devastated and never bothered to prepare the ceremony to bless and start using his father's divining gourd.

Nevertheless, he says he can use the gourd unofficially. For example, in 1984, he used this *Enkidong* in Moipo for two months where he was invited to conduct some divining and healing functions. His wife said during that time he brought home one sack of maize.

Saitoti says he plans to hold the *Enkidong's* blessing ceremony later next year. He explained that the ceremony involves the slaughtering of a brown choice-male goat which is roasted on the alter build in the middle of his kraal. He will dress in black and an enclosure is built around the altar and male only sits with him under the shade from early morning to the evening. While he sits with his kinsmen inside the enclosure, the invited guests will come to celebrate by eating and drinking. Other animals such as a cow or several goats are slaughtered and various foods are served for the rest of the community to celebrate. Alcohol is brewed in large quantities to accompany the ceremony. The blessing

of the *Enkidong'* is performed by the kinsmen in the presence of all the man's family toward the end of the day.

Fig. 1.4 Map of movements of the family to their current location including locations of any significant events.

1.3 Relationships and decision-making

The cultural ties that bind different members of the family to specific roles and responsibilities according to age and gender restrict the relationships and decision-making in Saitoti's family. For example, Saitoti as the head of his family supervises the management of livestock and farming activities. He does go to the field and plough the land with oxen together with his sons regularly during the farming season. His brothers consult him whenever they have family ceremonies such as circumcision, weddings and other family rights of passage.

At the community level, Saitoti shares a lot with his neighbours. The households he leads as a 10-cells leader depend on him to represent them at the village council. He is also the one consulted whenever they have issues to be discussed or settled with at the community or village level. He shares in livestock pasture management meetings with his neighbours as well as community meetings and ceremonies. Saitoti's family is fully integrated with their community through social functions and communal jobs such as voluntary works (digging trenches to lay pipes, road maintenance, school functions, etc).

Saitoti argues that being a member of an age group does not bring any personal gains or privileges with regard to various socio economic and political resources. However, because Saitoti is a practicing traditional and spiritual healer/diviner (*Oloiboni*), he is fully recognized and given respect by the entire community.

1.4 Education

As indicated in table 1, most of Saitoti's children are either attending or have completed Std. 7. However, he has never had any of his sons or daughters attaining higher education. His children never went beyond primary education because none of them performed well at the National exams to go to high school. Saitoti said he is not able to afford to send any to private schools for further education.

Saitoti plans to educate all his children, at least through elementary education, which to him is "*maendeleo*" which he claims to be the "key to good life."

1.5 Family identity

The family of Saitoti is in transition. Clothing styles are changing, he has stopped ear-piercing for his children; his warrior sons would eat modern foods like Chapati, dress in western clothes and practice cultivation contrary to old Maasai traditions. Before cereal grains were introduced to the family in early 1950s when the non-Maasai moved into the area, they use to drink fresh live cattle blood in times of shortage of milk, which was the staple food.

Concerning their identity in the future, the family sees itself as a semi-traditional family in transition toward modernity. This is due to the mixing with non-Maasai communities,

adopting new faith/belief (Christian), and practicing cultivation as the number one priority over livestock.

1.6 Health status

The health status of Saitoti's family is fairly fine. However, his aging mother and his first wife suffer from frequent backache and respiratory-related health problems. Naramatisho has been suffering from these ailments since her childhood and this has had an impact to the family since she is the sole breadwinner in her own household. Saitoti claimed that the best treatment he prefers is treating with local remedies. For example slaughtering a goat or lamb so that the sick may be given soup mixed traditional healing herbs such as *Olkokola* used to treat STDs and back and leg pain. *Orkonyil* used to treat backaches and bones pain. *Oloisuki* used to treat chest pain, coughing and pneumonia. This particularly is used to treat children.

He also supports use of modern medicines for common illnesses to his family members. They live a kilometre away from Ilmolog government clinic. However, for major and complicated illnesses he would take his family members to referral hospitals such Kibongoto or KCMC in Kilimanjaro region. In most cases, Saitoti prefers to follow up with modern treatment by giving his sick family members traditional therapies like soups mixed with herbs for complete cure after the hospital treatment.

2. LIVELIHOODS

2.1 Introduction

Saitoti's family depends primarily on farming and a little bit of firewood sales by his first wife on market days. Two sons also engage in some income earning activities. Manu who is a watchman in Nairobi brings home some income every end of the year when he comes home on holidays. Joseph who is a local private mill attendant within Ilmolog village brings home at least Tshs.15, 000 every month which help to offset some of the family's financial needs.

Given the fact that Saitoti's family is very poor and does not own much livestock (only two goats), different family members such as his wife and sons have opted to engage in off-farm activities in addition to cultivation as a way to support their livelihoods.

Fig 2.1: Table showing ranking of livelihood activities

<i>Source of livelihood</i>	<i>Rank</i>	<i>Reasons(s)</i>
<i>Livestock</i>	<i>3</i>	<i>Only have two goats</i>
<i>Cultivation</i>	<i>1</i>	<i>Main source of food</i>
<i>Off-farm income</i>	<i>2</i>	<i>Supports financial needs</i>

2.2 Livestock

The herd composition and ownership in Saitoti's family is not a big issue. This is primarily because the family does not own much livestock. They only own two female goats with two female kids. However, inside his kraal, his relatives (i.e., his mother has four cows and 12 shoats and his late brother's wife has 19 shoats.

Photo of herd



Fig 2.2: Table of herd composition

Livestock		Category	Total
Cattle	Male	Immature= weaned but not full grown	0
		Calf (not yet weaned)	0
	Female	Adult	0
		Immature	0
		Calf (not yet weaned)	0
		Total	0
Goats	Male		0
	Female	Adult	2
		Yong female	2
		Total	4
Sheep	Male		0
	Female		0
Donkeys			0

As indicated in the table above, Saitoti does not own any cattle, sheep, and neither donkey except two adult female goats with two female kids.

According to Saitoti, he has not noted any change on the grazing areas. However, he tells of a positive change with water situation because through a World Vision sponsored project, the community has access to portable clean water for both people and livestock outside their kraals. He also noted that there is less movement of livestock from one place to another in search of pastures due to the presence of water near the village and also due the decline of sizes of herds in the area due to ECF.

Fig. 2.3: Map of pastoral mobility and pastoral resources and how they have changed

Saitoti explained that although he does not have that many livestock to manage or treat from various diseases, he is aware of the common livestock diseases around the Ilmolog area, for example, ECF, lung disease, diarrhoea, and occasionally anthrax. He reported that families, which own livestock, treat them with medicines such as Injectable antibiotics, de-wormers, and dipping, although his own family does not use these medicines frequently because of the small size of their herd. According to Saitoti, the government provided a vaccine for anthrax during this year (2004) whereby each kraal had to pay a small service fee of Tshs.1, 000.

Saitoti admits that there are numerous benefits to be gained by keeping livestock. For example, oxen are used for ploughing the land, livestock provide source of cash, cultural function (ceremonies) and manure is useful in the fields. Saitoti farms with borrowed oxen from his in law.

Saitoti's son who works in Nairobi has been trying to help his family restock. During the month of December last year, he bought three goats but Saitoti has already sold one in order to buy food for the family.

The primary markets that Saitoti uses include Ilmolog, Sinya and EngareNairobi. This is where he would get information about livestock prices. Sources of information regarding market prices are: personal involvement, exchange of word of mouth (eating news), and through cattle traders- both Maasai and non-Maasai who comes to these markets.

2.3. Cultivation

Saitoti's family started cultivation in the year 1965. The reasons they gave were: Saitoti learned farming skills in school and introduced it to his family. More learning of farming came to Ilmolog community through interaction with non-Maasai immigrants. The decrease of livestock due to droughts and diseases also forced the Maasai of Ilmolog to adopt farming as an alternative livelihood option.

Overall, Saitoti's family owns 15 acres of land, which belonged to his late father. The sons of both of his father's wives will subdivide this piece of land any time they deem necessary. At the moment each of them is just cultivating a piece they could manage. For example, Saitoti and his family are cultivating four acres in which they grow maize and beans.

The kind of agriculture that is practiced in Saitoti's family is primarily subsistence farming due to financial constraints for there is no shortage of land. They normally buy seeds from the nearby market to plant whenever they lack grain from the previous harvest. Saitoti also recalled that at one time in the year 2001 he grew one acre of wheat.

Women in Saitoti's family have been given full responsibility over the plots of land allocated to them, but according to his first wife, the use of grain is controlled by the household-head. He can sell the grain any time without their consent. Naramatisho owns one acre of which she is cultivating only half of it because the other half has been given to Saitoti's friend to cultivate. Saitoti himself is cultivating one acre, which use to belong to his second wife.

The family also noted the decrease of rainfall during the last one year and thus they harvested little grains from their fields.

Fig. 2.5: Photo of family farm



Fig. 2.6: Map of agricultural resources – where fields are, what is grown.

2.4 Off Farm Activities

In Saitoti's family they have two sons who earn wages every end of the month from employment. Manu who works in Nairobi as a watchman brings home some foodstuff at the end of the year. He bought three goats at the end of last year and gave the family a total of Tshs. 20,000. Joseph who is present in Eluai is a mill machine operator and he receives a salary of Tshs. 15,000 monthly. Joseph buys foodstuff to his family occasionally when he gets his salary.

Small businesses

The only small business Saitoti's family relies on is the petty firewood selling that Naramatisho runs on daily basis (six times a week) in order to sustain her big family. She can only bring one load per day. She sells one load of firewood at Tshs. 800, which can only afford to buy two packets of maize flour.

Fig. 2.7: Diagram of women's seasonal activities

Washing clothes				
Firewood collection				
Herding livestock				
Child care				
Cooking				
Milking				
Cleaning sheep pen				
Ceremonies				
Feeding babies				
Cleaning household				
Housing repair				
Beadwork				
Cleaning calabashes				
Collect Household water				
	Short rains Mid Nov – December	Short Dry season Jan-mid Feb.)	Long rains Late Feb – Late July	Hot dry season Aug-October

Notes:**Dry season**

Difficult tasks during the dry season include cooking, Herding and fetching water. Cooking increases during the dry season, due to lack of sufficient milk for the family.

Water collection becomes is less intensive during the short and long dry seasons because the family lives just a half kilometre away from where they fetch water.

Long Rainy Season

Women in this family of Saitoti have a lot of work in cleaning the pens during the long and short rainy seasons.



Men's seasonal activities

Time management with regards to farming activities in Saitoti's family is classified as follows: They grow in two seasons. The short rains (October – March) and the long rains (April – June). During short rains, the family plants short-term maize called Katumani and beans. During the long rains they plant longer-term maize called Kilima and beans. They sub-divide the land into two pieces- one for short rains cultivation and the other for long-rains cultivation. The table below shows the family time management in cultivation activities.

Fig 2.8.1: Short rains farm activity calendar

Activity	Month(s)
Ploughing and planting	October to November
Weeding	December to January
Harvesting	March

Fig.2.8.2: Long rains farm activity calendar

Activity	Month(s)
Ploughing and planting	December to January
Weeding	February – March
Harvesting	July - August

The family said that during the months of May and September Farm work is minimal and these are the only times of the year they are less busy.

3. NATURAL RESOURCES

Saitoti's family owns part of the 15 acres of land that is owned by the whole family (Lenina family), which they had inherited from their late father. They don't have any lease document from the government but he explained that the government and the village council recognize this piece of land to be their family share. Saitoti's family sold a half of an acre plot in the year 2002 for a price of Tshs. 250,000.

The community owns access to other resources such as water for both livestock and human consumption and it's available to Saitoti's family just half a kilometre away

3.1 Wildlife- livestock- human interactions

3.2 Changes in the natural resources base

The community at large controls grazing areas for their livestock, however Saitoti explained that there are no any major changes that have occurred on issues regarding pastures.

3.3 Climatic changes over time

4. INSTITUTIONS

4.1 Introduction

Saitoti's family accounted for the general resources available to them as follows.

4.2 Socio-economic resources

- Ilmolog market- situated at Eluai sub village, ½ a kilometre away from where Saitoti's family lives.
- Access to roads: Ilmolog road which links them to better health facilities, shopping centres and livestock markets; and it also links them to their wards administrative office and village council office.
- Tourism facilities: The family is not aware of any benefits from the wildlife management projects.

4.3 Socio-political service institutions

The following social services and public institutions are available to Saitoti's family for their use:

- Ilmolog community clinic where the family members receive basic health care at minimal cost of TShs. 1,000 per person per visit.
- Livestock services: The family can easily access the livestock extension services available in Ilmolog centre where there are two veterinary doctors.
- Church: The family attends the catholic mission church but other churches are also available at the Ilmolog centre such as Lutheran, Seventh day and a Mosque.
- Political leadership involves both the traditional leaders who include the clan leaders and the chiefs of age groups. The government leaders include the heads of village council and the ward's administrative council.
- NGO: World Vision is the only non-governmental organisation available to the Eluai community and they have done a great job in bringing clean water closer to people and their livestock.
- Ilmolog community has two nursery schools, and a primary school where the family school-going children receive their education. The family reported that there is no any payment made towards the school tuition and feeding programmes so they only have to worry about buying uniforms and books to their children. The government runs the primary school while the community runs the nursery school.

Fig. 3.1: Table Showing Ranking of Institutions and reasons

Institution	Rank	Reason(s)
School	1	- Education for better future life - Helps in old age
Hospital	2	- Helps health
Church	3	- Spiritual nourishment
World Vision	4	- Provided tap water to the community
Settlers plantations	5	- Grazing areas during drought seasons
Village council office	6	- Access to government services
Vet. Extension services	7	- Takes control on issues related to livestock



Fig. 3.4 Photos of family resources

5. CONCLUSION

5.1 Survival strategies

Analysis of internal and external drivers of change

5.2 Future plans

The family plans to increase cultivation because they still have land, which is not ploughed, but only if they get surplus grains from the next harvest because they will have some to sell in order to get money to use on this land. Saitoti plans to educate all his children to a higher level of education because he is thinking of seeking support from the government's bursary scheme. However, Naramatisho is not very optimistic about a brighter future for their family. She reported that there might not be any development in the near future: "We are not likely to advance because the size of our family is overwhelming for such a poor household as ours."

CONFIDENTIAL SIMANJIRO PORTRAIT

FAMILY PORTRAIT OF MOHONO OLE SARIKA

INTRODUCTION

The family of Mohono ole Sarika lives in *Munishoi* part of *Lenaitunyo* sub-village of Emboreet village in Simanjiro District, Manyara Region of Tanzania. They belong to the *Ilmamasita* sub-clan of *Ilmolelian* clan. Mzee Mohono was the son of the first wife of Ole Sarika and his mother was called Napae. Mohono's mother had five children, two sons and three girls. His brother lives with his family a kilometre away from where Mohono's family lives and two of his sisters are married in different places but he lives with his younger sister at his home. This family depends on livestock as their main source of livelihood and they also practice rain-fed agriculture. Besides this they receive some remittance from their four sons who are working at Mererani mining area doing gemstone business.

1. THE FAMILY

1.1 Family composition /demographics

The family of Mohono ole Sarika is composed of his five wives and twenty-nine children. Besides this he takes care of his younger sister Titolai with her family of ten, also looks after his late brother's family who add up to thirteen people. One of his daughters who left her matrimonial home also lives with the family and she has two children. Elizabeti Lasoi is the first wife of Mohono and she has four sons and five daughters. Her first child is Kasaine and he is married to four wives and they have six children. The second borne is Meneneng' who is married to one wife and they do not have any children. Kurambe is the third borne and he is married to two wives and they have two children. Her daughters are Kikesei, Kameo, Nkatitei and Paulina and they are all married in different places. Tumas and Neema are still at home.

The second wife is Maria Sikiyo and she has eight children, seven sons and one daughter. The first-born is Olokera who is married to four wives and they have six children. He also works at Mererani. The second born is Meela who has one wife and three children. Her other two sons are Olosioki and Kaayu who are married to one wife each and they have no children. Sampuana and Lenkooyia are still at home. Natoiwuoki was given too Sikiyo's sister in law to assist her in taking care of her livestock.

The third wife is Annah Neleng'on and she has four sons. Ntoika finished his class seven education at Emboreet primary school and is now herding the family livestock. Malipe is in class five at the same school. Leyian and Saning'o are at home as they are still young. The fourth wife is Paulina Moinan who also has three boys and one girl. Terenko looks after the family livestock at Loiborsiret while Moisari is in class two at Emboreet primary boarding school. Tumpatoi and Ranoi are at home as they are still young.

Mary Ng'eendoi is the fifth wife and she has three sons and one girl. Lomunyak and Sabore are at home herding the family's small stock while Sereti and Laanyunkishu are still young.

All members of the family speak Maa but there are a few members who are multilingual. Meneneng' who has secondary education can speak both English and Kiswahili while his brothers who are in Mererani speak Swahili only.

1.2 Family history

The family of Mohono Sarika's father lived in Terat and this is slightly before he separated with his father's family to go and establish his own homestead. His elder brother was the first one to separate with the rest of his extended family and when Mohono and his family moved to Kondiri???? He separated with his father's family and moved to Oloiborsoit in the year to (*olodonkujit*) in search of better pastures and water for his livestock. In the year (*Olari lolakera*) the family moved again to a place called Makami and they stayed here until (*peenya seuri nkiri*) and they went back to Oloboresiret in the year (*olng'eshher loseuri*) then they moved again to Loorkuman in Emboreet in the year (*b4 peeuni rkishumu*) and then they went to Lang'eluni in the year (*one year after pee uni Imakaa*) and from there they went to Empararang'et in 1979. After this they moved to Emunishoi in 1980 then back to Loorkuman in the year (*loorkaranga*). Also moved to sukuro in the year (*olari emurati rinkishi*) then to Emunishoi. The family went to Loorkuman and then to loosikito and back to emunishoi where they are currently living and before this they have changed the boma 5 times. The family has stayed in their current boma for the last seven years. All the above movements were in search of water and pastures for their livestock. The family of Mohono is not planning to move to another place as they say since the formation of the village system in Tanzania (villagillization in 1974) and crop cultivation, the family has to stay in the same place but incase of a drought their livestock migrate with the morans to some other areas leaving the rest of the family and sometime small stock behind.

Significant events

Mzee Mohono considers his big family as a significant event as he says it is with great effort that he has been able to make and unite such a big family all alone.

The whole family sees that when they started cultivating in 1999 is a significant event as this enabled the family to have food security even in times of drought.

The family considers death of family members, major livestock diseases and droughts as bad events and an example is during the 1998-2000 drought when the family lost 300 cows to ECF and this were considered as a big shock to the family. However the family was left with a herd of about 400 cattle. The family rebuild their herd by using drugs to treat ECF and restocking through remittance from gemstone mining at Mererani.

Figure 1.4 Map of movements of the family to their current location including location of any significant events.

1.3 Family identity

The family of mzee Mohono considers themselves as still traditional in the way they dress, how they interact with other communities i.e. no member of the family has married from another community but all are married to maasai. However the family is in transition to modernity as some slight changes have occurred in their eating habits as the family now eats more grains as compared to the past when people depended solely on livestock and livestock products. Mzee Mohono wives would like to change to modernity though the mzee is still conservative and they hope that their sons who work in Mererani will enable this change.

1.4 Education

The family of mzee Mohono recognises the importance of education in the society as they said that those with education are the ones in positions of leadership in the society. Amongst the twenty-nine children in the family only nine of his sons have attended primary school. Out of this only one made through class seven and only one managed to go to the pre-secondary school but could not as he had serious health complications. Mohono did not see the importance of educating his children beyond primary level as he felt that the costs involved was too high and the labour required for his livestock imminence. None of the girls from Mohono's family have been to school. He had few girls in his family and believed in the rationale that a boy returns the investment to the home whereas a girl is expected to leave home to marry and to bring bridewealth

1.5 Relationships and decision-making

All the decisions in this family are made by mzee Mohono and in his absence he assigns his two elder sons, Olokeru and Kasaine his role of overseeing that all goes well in his boma. He decides what to sell and he does not consult any of his family members, not even his sons who are the ones responsible for buying the livestock and ones the livestock come into the boma they no longer belong to them but to mzee Mohono.

Relationships

The whole family has a good relationship with each other and they assist each other in all the activities of the family. The whole family is binded together by mzee Mohono by centralised system of governance. The family also has a good relationship with the neighbouring community and they share resources and responsibilities in times of need. For example during ceremonies like circumcision, women assist in cooking, fetching firewood and water and also the men contribute in terms of money and livestock gifts. Muhono also has a good relationship with his *Iseuri* age mates who are active traditional decision makers and responsible for teaching cultural knowledge.

Political and social links

Mzee Mohono was appointed to be a clan leader (*alaigwanani lengaji*) three times a post he declined and the village chairman once and he says that he refused this, as he wanted to have more time to take care of his family. At one time after he refused to be the village leader and he decided to migrate to another place and in his absence someone decided to burn his homestead to revenge for his refusal to take the post. However one of his sons Meela is ten-cell leader and he is responsible for his father's homestead and his second wife Sikiyo is a leader of the women's guild in church.

1.6 Health status

All members of mzee Mohono family are healthy and they occasionally suffer from the common ailments like malaria, common cold, typhoid, pneumonia and for the children they occasionally suffer from diarrhoea and worms and all this are treated by the use of herbs or by going to a catholic owned health centre at Emboreet village.

When an illness exceeds the health centre and the natural herbs, mzee Mohono opts to take the patient to a traditional healer (loibon) though his wives are against it as they have converted to Christianity.

However, one of their sons Meneneng' is epileptic, a situation the family says has had a big impact on their economy as they have used lots of money in bid to give him proper

treatment. Recently Meneneng' collapsed and fell into the fire and he received severe burns on his lower abdomen a situation that saw his right leg amputated. This was done at a Lutheran owned hospital in Selian, Arusha and later he received more care in a centre for disabled in Monduli.

1. LIVELIHOODS

2.1 Introduction

The family of mzee Mohono depends on three major livelihood activities for their survival. Being a pastoral people they depend heavily on their livestock of which they get from them food, cash when they sell and the livestock also have a cultural attachment to the family as they are used to pay for dowry and are also given to relatives and friends both as gifts and social security.

The family also does some cultivation and this is done in small scale. They decided to go into cultivation in 1998 after their livestock decreased because of an epidemic in the area and the 1998-2000 drought. They realised that it was only through cultivation that they would be able to cater for the food needs of their big family without depleting their livestock. However mzee Mohono says that if his family were not very large they would not have gone to cultivation. The motivation was also gotten by seeing the other people at a place called Olokii (in Arumeru district) doing well in it and they would sell their livestock at the end of the year and go buy grains from them, due to the long distance involved and the inconveniences on the way, the family opted to grow their own food as land was available.

The other livelihood activity to the family is the remittances they receive from their sons who are involved in the gemstone business at Mererani mining area. Minerals like Tanzanite, graphite, green tourmaline, green garnet, rhodolite and blue sapphire are found at Mererani. Due to the great amounts of money got from the mining business, a lot of social and economic change has happened in Mererani town and it has become a 'a gold rush town' to all. One of their sons Olokera started the business in 1998 and his brother Kasaine in 1996 and they were motivated by seeing people who were considered to be very poor and after getting into the gemstone business started buying lots of cattle and developing their homes. Since his sons Olokera and Kasaine went into the gemstone business they have been able to buy in total number of 300 cows and 500 goats and besides this they have been able to marry more wives, get more friends and the money got is also used for cultivation back at home. Olokera says that the highest amount that he has ever received from the gemstone mining business is Tshs. 10 million, about Kshs 769,230 or US\$ 100,000 (exchange rate of \$1 for Tshs. 1000 and this he invested back to livestock.

Figure 2.1 Table showing ranking of livelihood activities by the family

Sources of livelihood	Rank	Reasons
Cultivation	1	-Supplements for livestock -More reliable during times of drought as livestock at times get wiped out by drought.
Livestock	2	-Get food and cash when sold -Cultural importance
Gemstone business	3	-Money comes in lump some -Not reliable
Honey harvesting business	4	-Exchanged for livestock -Not reliable

Notes:

A relative who lives with the family does the honey harvesting business and he started this in 1998. The honey extracted is sold to outsiders who in turn give him livestock. However he says that the business is not reliable bearing in mind that bee keeping is not a commercial oriented enterprise. The only setback is that there are naturally few trees in the area and opening fields has resulted to excessive tree cutting. Subsequently there is less honey.

2.2 Livestock**Herd composition, Ownership**

The family's herd is composed of cattle, sheep, goats and donkeys. All the livestock in the family is owned by mzee Mohono and his sons but the final decision concerning the livestock lies on him regardless of who bought the livestock. Mzee Mohono ability to control all the livestock resources in the boma has assisted him to keep his family closely binded together and also has some extra dependants on him without feeling the financial strain.

Figure 2.2 Table showing herd composition

Type of livestock	Number
Cattle (Bulls 6, Steers 7)	400
Goats	80
Sheep	90
Donkeys	8

There are wet season grazing (pastures) and dry season grazing areas and these are set aside by the village government in conjunction with the land use plan developed for pastoral lands. During the dry season known as *Inkaron* the family's livestock taken to place called *koitumet* and as the drought increases they are taken to *Loibosiret* where pastures have been set-aside for the dry season.

During the wet season the livestock is mainly grazed around the *boma*, then at nearby place called *Loorkuman*, *Lang'eluni* and *loosikito*.

There is a communal place 11 kilometres away from where the family lives and this is where they get water for their own consumption and their livestock during the dry season. This comes with a cost as they have to contribute some 45 litres of diesel per month and the price of litre is between Tshs 600-1,100 to run the engine of the machine that pumps the water. There is also the problem of congestion as the whole Emboret community depends on the same water source. On land, the family lives on land allocated to them by the village government and but they don't have a title deed for the land

Livestock diseases

The livestock diseases with major impact on cattle include Contagious Bovine Pleuropneumonia- CBPP (*Orkipie*), East Coast Fever –ECF, Babesiosis (*Olodokulak*), Trypanosomiasis (*Endorobo*) and Foot and Mouth Disease (FMD); others with less impact includes Malignant Catarrhal Fever (MCF), Heartwater (*Ormilo*) and Anthrax. The major Goats and sheep diseases are Contagious Caprine Pleuropneumonia (CCPP), Mange (*Emukuji*), Anaplasmosis, and Diarrhoea conditions and worms infestations. The management regime for the named diseases includes use of chemical drugs bought in *Mererani* by the *Mzee Mohono morans*.

The family does not have any improved breeds in their livestock and this is because they find that the local breed is doing well according to them and fear that the improved breeds might not stand the many livestock diseases in the area and the climatic conditions. The family gets food in terms of milk, meat and blood from their livestock, they also sell the livestock and get money for meeting other family expenses, the women also sell hides and skins when animals are slaughtered or they die, besides the hides are also used as bedding materials in the family.

On livestock trading the family buys and sells their livestock at a secondary market at *Meserani* and another one at *Sukuro*. None of the family members is in the livestock trading business. When there is an outbreak of diseases, the government sends veterinary officers to vaccinate the community livestock and this is the only external support they count on.

Figure 2.4 Herd dynamics (in the last one year)

Species	Bought	Died of disease/drought	Predation	Gifts out	Gifts in	Born
Cattle	6	160	10	10	None	100
Shoats	None	80	10	30	None	100

Notes:

The family lost 160 cattle to various diseases like CCBP, trypanosomiasis and FMD, they also lost 10 shoats and 10 heads of cattle to wild animals like lions, hyenas and snakes. The

gifts out were either given to poor relatives and the rest to their friends to cement their relationships.

2.3 Cultivation

The family started cultivation in 1998 to provide food for the family. They practise subsistence agriculture where they plant maize for their own consumption. Their crops depend on rains as there is no water for irrigation and they also depend on hired labourers who are mostly none-Maasai who come to look for labour in the area. For tilling their land they hire tractors at the cost of Tshs. 14,000 per an acre and when it comes to weeding the labourers are paid Tshs.5, 000 per acre. Last year the family had 24 acres of maize and they managed to get 93 bags after harvesting. All of it has been stored for the family consumption and the rest is to be sold and the money used to till the land in preparation for the next season. The family did not plant any beans as they do not do well in this area and fungal diseases also affect them.

Figure 2.5 Photo of family farm

2.4 Off farm income

No member of the family is on salary/ wages, they depend on remittances they receive from their sons who are in the gemstone business. However the remittances are not reliable as the success of the business depends on ones luck to by a precious stone (Tanzania) as at times they loose their money to con men who pose with poor quality or fake gemstones that are worthless when it comes to the time of reselling.

The family also has a grinding machine owned by their elder son Kasaine in partnership with two other friends and this assist the family when they want to grind their maize flour though the monetary proceeds go to the owners.

Figure 2.6 diagram of men's activity calendar

Cultivation				
Livestock treatment				
Herding				
Ceremonies				
Watering livestock				
Off farm activities (mining)				
Social meetings				
Activity	Short rains Dec - Feb	Short- Dry season March	Long rains April- July	Hot dry season Aug-Nov.

Notes:

The men's seasonal activity calendar varies slightly from that of women in that men's tasks tend to intensify more during the dry season. Activities like watering of livestock and herding become very hard during the dry season, as they have to move their livestock from place to place in search of pastures and water.

Social meetings and going to the mines are activities that are done throughout the year depending on the need and the situation at the mines for those working at Mererani. Ceremonies are normally held during the long rainy season as there is less work for men due to the availability of enough pastures and water for their livestock and there is plenty of milk for the family.

Cultivation related work is present through out the year, during the short rains they prepare land and plant, then during the short dry season and long rains they take care of the crops as they are eaten by wild animals and this goes on until the crops are ready to be harvested where labour intensifies again during the long dry season.

Fig. 2.7: Diagram of women's seasonal activities

Washing clothes				
Herd Management				
Collecting Fencing Branches				
Firewood collection				
Feeding Young Stock				
Child care				
Cooking				
Milking				
Cleaning sheep pen				
Cultivation				
Grinding Maize Flour				
Cleaning household				
Housing repair				
Harvesting				

Cleaning calabashes				
Collect Household water				
Activity	Short rains Dec - Feb	Short Dry season March	Long rains April- July	Hot dry season Aug-Nov.

Notes:

Some tasks like cooking, fetching water for the household, grinding maize flour, feeding young stock intensifies during the dry season. This is because there is less milk for the family consumption and therefore they have to rely on grains that lead to more grinding and more cooking. This also leads to fetching of more water and it becomes relatively hard, as the distance to the water source is big as the nearer sources dry up during the dry season.

Milking, cleaning calabashes, cleaning shoats pens, house repair and washing clothes intensify during the wet season.

1. RESOURCES

There are no major changes in the land tenure that have affected the family of mzee Mohono. This is because the village government has authority to allocate land to the particular people in a village who have come of age to be registered. The family has 14 sons who are registered plus their father and each is entitled to 50 acres of land in different places in Emboreet Simanjiro. Not all 50 acres per individual is cultivated at a time.

1.1 Wildlife-livestock – human interactions

The family's homestead is situated on the Northern corridor of wildlife movements and this brings major interactions between the family, livestock and wildlife. Since the last one year the family lost 10 shoats and 10 cattle to wildlife. This was lost to hyenas, lions and also snakes.

Conflicts are also seen to escalate as now the family is practising cultivation. Generally wildlife movements could now be restrained by large-scale farms and this could become a nuisance /threat to crops and people. Warthogs, hyenas, zebras, birds and worse of all elephants eat their crops.

Wildebeest and gazelle (*inkoiliin*) also transmit deadly livestock diseases like MCF and *enoonkoiliin* (an eye disease that affects goats).

The family has observed that with time livestock numbers have been decreasing while wildlife numbers are increasing. This has been attributed to human population increase, outbreaks of livestock diseases like CBPP and major droughts lead to a decrease in livestock. Wildlife numbers are increasing and some remaining constant as they are free to migrate to other places in times of droughts and a reduction in hunting activities by the resident and foreign hunters. There has been noted an increase in buffaloes, elephants and zebras. The other species like wildbeeste, gazelles depend on the season at hand.

1.2 Changes in the natural resource base

There has been a notable change in the natural resource base in the area and the family attributes some of these changes to an increase in human population, cultivation and the negatives effects of this to the ecosystem.

Woodlands have been decreasing as the need for cultivation increase; people tend to clear more forests. This directly impacts on the availability of pastures and increased conflicts as some of the grazing routes have been changed to allow for cultivation to thrive. Livestock diseases like ECF are also on the increase in the area a situation the family doesn't know why.

The family has observed that Loibosiret river water content has decreased a situation they say has been contributed by the closure of some dams that were supplying it with water and this is due to lack of maintenance of the dams by the community.

The community has also been able to create some water catchments areas like Enkiteraand Loliopa dams and this have been built on the drought refuge areas.

1.3 Climatic changes over time

Rainfall is bimodal and in the past the wet and dry seasons were of similar durations but the pattern is said to be changing towards later and shorter rains.. The rainy season, which used to commence from September to November, has now been replaced by the dry season thus making the rainfall pattern unreliable. There are no major floods in the area as rainfall is limited and soil is porous in nature.

4. INSTITUTIONS

Introduction

The social –economic resources available to the family of Mohono are a primary markets at Sukuro and a secondary Meserani. There are the seasonal roads leading to these markets. The social service institutions are a health centre at Emboret .A primary boarding school at Emboret and a livestock-training institute (SAHVTC) at the same place. They also live a few metres away from a shade that they use as a church, agricultural services at Emboreet and a veterinary officer at the same place. Two members of the family are also in leadership positions. Their eldest son Kasaine is the newly elected member of the village council (government) leader and Sikiyo is the leader of the churchwomen group

4.2 Social economic resources

The family gets access to the Sukuro market that is about 20 Kilometres away from where they live by the use of public vehicles but it becomes relatively hard during the rainy season as the roads become impassable. The only other option available to them is to walk to the market and the distance involved and the presence of wild animals makes it even harder.

4.3 Socio-political service institutions

The family gets health services at a health centre at Emboreet 11kilometres away from their home and at the same place there is a primary boarding school where nine of their sons received primary education. There is also a veterinary officer but the family does not use his services more frequently as they say the cost involved is high.

Figure 3.1: Table showing ranking of institutions and reasons

Institution	Rank	Reason
Village government	1	The family recognizes that it is through the village government they were able to get agricultural land and it is also the same village government that issue policies that enhance development in the area.
Church	2	Family gets spiritual nourishment, the evangelist also trains people on development matters, proper childcare and how to improve their agricultural yields.
Market	3	-This is where the family sell/buy livestock and food stuff for their consumption.
Hospital	4	-Sick family members get treated, but they also dread the cost involved
Primary school/Simanjiro Animal Husbandry school	5	This is where their children get knowledge/their son Meneneng' was trained
Agricultural extension officer	6	Having embraced in cultivation as a livelihood means they think this is an important office though currently they are not using its services
Livestock services	7	Due to their livestock keeping on getting wiped out by diseases like ECF and CBPP they are almost losing confidence in this office

Traditional institutions	8	This office has the power to determine the politics of the day though the family does not use it
--------------------------	---	--

2.0 CONCLUSION (Shall be captured well after feedback process)

2.1 Survival strategies

Losing of 300 heads of cattle to ECF in 1998 - 2000 marked a turning point to the family's livelihood means. Since then they have derived survival techniques to survive the hard times. The first survival technique was by getting into cultivation so as to get food to support the family during drought and supplement the selling of livestock.

Their two sons also went into the gemstone business to get some extra cash to rebuild the family herd and also cash to meet other family obligations. Moving of their livestock to various places in search of pastures and water is another survival strategy to ensure they are not wiped out by droughts and diseases. To overcome wildlife related problems to their crops they burn the holes where they suspects warthogs live so as to kill them. They also build scarecrows to scare away wild animals. Hiring of employed labourers to watch over their fields at night and fencing is the other strategy to try and reduce wildlife- crop conflicts.

Internal and external drivers of change (to be captured in in-depth during the feedback).

Family mentioned that the drivers of change in the family are droughts and livestock diseases, impact of the gemstones business in peoples lives which assisted them to rebuild their herd and is also seen in the lifestyle of their sons who are working there, church as is clearly seen that most of the family members have Christian names, village government which enabled them to get land for cultivation also outsiders who the family emulated in doing various things like agriculture and the gemstone trading.

2.2 Future plans

The family would wish to educate more of their sons to ensure that they get employed and probably help the rest of the family members. Would also want to increase their pieces of land under cultivation so as to get more food to sustain the growing family. Mzee Mohono would want to have more livestock so as to be able to sustain his family. Generally, the family's' future plans are more directed from outside – the family want to do what other people think is the best. The word 'maendeleo' looks like being defined from outside.