

Report on the Participatory Rural Appraisal completed at Kongit

sublocation: Kongit location Kaptama division

Mt. Elgon Integrated Conservation and Development Project

The Project Management Unit, Kitale, Kenya

2000

Keywords: natural resource management, conservation, development, agriculture, land use, livelihood, Participatory Rural Appraisal, Mt. Elgon, Kenya.

Acknowledgement

The Project Management Unit of the Mt. Elgon Integrated Conservation and Development Project would like to express its gratitude to Mr. Benard Owuori whose conscientious and diligent efforts made the compilation and completion of this report possible. We would also like to thank the officers from the various partner agencies for their participation in the PRA fieldwork.

Table of Contents

List of Tables

List of Figures

0. Executive Summary

1. Introduction

1.1 Objectives

1.2 Methodology

1.3 Time Schedule

2. Background Information on Kongit Sub-Location

2.1 Secondary Data

2.1.1 Size and Location

2.1.2 Climate

2.1.3 Topography and Attitude

2.1.4 Soils

2.1.5 Agro-Ecological Zone

2.1.6 Farming Systems

2.1.7 Land Use

2.1.8 Land Tenure

2.1.9 Main Source of Income

2.1.10 Labour

2.1.11 Demographic Information

2.1.12 Water Supply

2.2 Institutions in the Sub-Location

2.2.1 External Institutions

2.2.2 Local Institutions

- 3. Livelihood Analysis
 - 3.1 Overview of Socio-Economic Trends
 - 3.2 Agriculture and Livestock Production
 - 3.2.1 Agricultural and Livestock Production Constraints
 - 3.2 Income-Generating Activities
 - 3.3 Ecotourism Activities and Ventures
 - 3.4 Income and Expenditure
 - 3.5 Division of Labour
- 4. Land and Resource Use
 - 4.1 Mt. Elgon Resource Trends
 - 4.2 Values of Trees and Uses to the Community
 - 4.3 Forest Resources Use and Conflict
 - 4.4 Land Tenure
 - 4.5 Human/Wildlife Conflict
 - 4.6 Stakeholders and Their Relationship
 - 4.7 Land Resource Management
- 5. Problem Identification, Analysis and Ranking
 - 5.1 Problem Ranking By Social Group
- 6. Cap - Community Action Plan
- 7. Conclusions and Recommendations
 - 7.1 Conclusions
 - 7.2 Recommendations

Appendices

- Appendix 1. Multidisciplinary Pra Team
- Appendix 2. Pair wise Ranking of Marketing Constraints
- Appendix 3a. Livestock Production Constraints Matrix
- Appendix 4a. Activity Profile (Women)
- Appendix 4b. Activity Profile (Men)
- Appendix 4c. Activity Profile (Youth)
- Appendix 5a. Indigenous Forest Tree Species and Their Uses
- Appendix 5b. Criteria Ranking Matrix for Exotic and Indigenous Trees
- Appendix 6a. Women Pair wise Ranking Forest Resources
- Appendix 6b. Men Pair wise Ranking of the Forest Resources
- Appendix 7a. Forest Resources Conflict Matrix (Women)
- Appendix 7b. Forest Resources Conflict (Men)
- Appendix 8. Impact Assessment Diagram of Wildlife Damage and Soil Erosion to Farmland
- Appendix 9. Intensity of Damage by Wildlife - Pair wise Ranking
- Appendix 10. Transect Walk across Kongit Sub-Location
- Appendix 11a. Farm Sketch from Upper Zone
- Appendix 11b. Farm Sketch from Middle Zone
- Appendix 11c. Farm Sketch from Lower Zone
- Appendix 12a. Group 1 (A) Pair wise Ranking of Identified Problems
- Appendix 12b. Group 2: Pair wise Ranking of the Community Problems (Men)
- Appendix 13. Options Assessment Charts*

Appendix 14. List of Pra Participants

Appendix 15. Cap Implementation Committee Members by Village

Appendix 16. Checklist Used For Pra Team Members

List of Tables

Table 1. Socio-Economic Trend Matrix

Table 2. Agricultural Constraints Matrix

Table 3. Ranking Of Non-Agricultural Income Generating Activities - Women And Youth

Table 4. Resource Availability Trends

Table 5. Value of Forest Resources through Pair wise Ranking

Table 6. Land Conflict Matrix

Table 7. Summary of Problem Ranking By Social Group

Table 8. Ranking Of Problems Combining Responses of All Social Groups

Table 9. Problem Analysis Chart

Table 10. Community Action Plan, Kongit

List of Figures

Figure 1. Administrative Boundaries - Mt. Elgon District

Figure 2. Survey Map of Kongit Sub-Location and Surrounding Area

Figure 3. Kongit Resource Map

Figure 4. Institutional Analysis Diagram

Figure 5. Seasonal Agricultural Calendar

Figure 6. Income and Expenditure Pie Chart

Figure 7. Human/Wildlife Conflict Calendar

Figure 8. Stakeholder Analysis of Mt. Elgon Forest

0. EXECUTIVE SUMMARY

Kongit sub-location is found in Kaptama division of Mt. Elgon district, about 5 km northeast of Kapsokwony district headquarters. It is reached by driving on an all-weather gravel road, which turns onto a poor seasonal feeder road system, impassable during the wet season. The sub-location borders the Mt. Elgon Forest Reserve to the north and northwest.

The area rises to an elevation of 2,200 m above sea level on the southern slopes of Mt. Elgon. Kongit sub-location is suitable for agricultural and livestock production because of the high bimodal rainfall ranging between 1,400 and 1,800 mm per annum and its rich fertile volcanic soils. Inhabitants practice mixed farming, cultivating both cash and food crops, and keep livestock and chicken.

Residents of the sub-location, on average, own between 2.5 -5.5 acres of land per household. Land adjudication is complete but only few people have title deeds. There are a number of landless people in the sub-location and others who lease land temporarily on a seasonal basis. The Saboot community

predominantly inhabits the area with about 607 households. There are a number of external institutions working within the community in collaboration with local institutions.

PRA Mission

This community was chosen as a pilot community for the MEICDP. The purpose of the PRA was to generate information with the community for participatory planning in the conservation and development of the Mt. Elgon ecosystem. It also acted as a good entry point to the community for mobilisation and sensitisation.

The PRA was completed in the community. The first six days were committed to data generation, which culminated in the election of a CAP (Community Action Plan) committee. The second phase of the PRA was dedicated to compiling the CAP with the committee. The community will use the plan to follow up implementation of opportunities identified to address conservation and development constraints. The elaboration of the CAP took place for one month during weekly sessions with the designated committee.

Major Findings

The people living in the sub-location are indigenous to the area and have had a long history of interaction with the Mt. Elgon ecosystem. Their livelihood revolves around the mountain resources from which they get both direct and indirect benefits. The community is predominantly dependent on farming for their livelihood. Their activities mainly depend on the inherent high soil fertility of volcanic origin, rainfall resulting from this high rising, inland; land mass and the suitable temperature for growing high value, tropical and temperate crops and for livestock production.

The community is aware and concerned about the continued decline in soil fertility due to poor farming methods and population increase. The situation is aggravated by various agricultural constraints such as transportation, land, capital and lack of markets.

Some of the direct benefits the community gets from the forest reserve are pasture for their livestock, thatching grass, building materials, medicinal plants, honey, fuel wood, water, game meat, fruits and vegetables. Indirect benefits to the community are the fresh clean air, the traditional and customary rites conducted in the forest and with forest products. Others pray to their gods believed to live on the mountain. Rivers with sources on the mountain provide clean water to communities far away from the forest reserve. The Mt. Elgon forest acts as a good infiltration zone for excess run-off from the mountain, which controls erosion.

The community is aware of the diminishing trends in mountain resources availability. As resources continue to vanish at the hands of the external exploiters, the community feels their lives are threatened. One community representative says, "These people from outside, after finishing Mt. Elgon, will move on to another area". In order to address the situation and reverse the trend, they believe that community must be consulted for the proper long term management and sustainable use of the Mt. Elgon resources. "We local people must have more direct benefits from the resources than now because we are the custodians and major stakeholders of this valuable resource," they say.

There are both legal and illegal exploitation of the forest resources by the community, which has resulted in excessive pressure on the forest and conflict with the management institutions for forest resources. The community says the lack of capital to start alternative income generating activities is one result of this excessive pressure.

Some of the ways to reduce pressure and conflict are to improve the livelihoods of the local people by increasing profitability of agricultural and livestock production, provide forest resources at farm level, start other income generating activities and initiate other sustainable uses of the Mt. Elgon resources to generate income like ecotourism.

Gender concerns

Gender inequality is inherent in the sub-location as men and male youth are more empowered than the older women and female youth. Participation by women was slow during the exercise and few were in attendance. Only one female youth was available during the PRA. Women insisted that gender inequality was a major constraint to development in the area. They said their husbands never consult them on any matters and they have no voice. Their workload is big but bargaining power is small. When the community ranked problems, women, who had been influenced, ranked gender inequality fifteenth out of the sixteen problems, and men ranked it last. If adult women work the most, followed by female youth, male youth and lastly men in every family, then women have very little time for relaxation unlike men who probably have too much of it.

Report on the Participatory Rural Appraisal Completed at Kongit Sub-location, Kongit Location, Kaptama Division, Mt. Elgon District

1. INTRODUCTION

The Kongit sub-location community participated in a PRA organised by the MEICDP between 27th July and 21st September 1999. The exercise was carried out within the community at the Kongit market centre.

1.1 Objectives

The objectives of the PRA exercise were:

- to identify land and resource use practices of different social groups
- to determine stakeholders' level of use of forest resources and their inter-relations according to different social groups
- identify principal livelihood strategies, how they have changed over time and constraints
- identify socio-economic characteristics of the population.
- sensitise and create appreciation of the communities' role and potential contribution to conservation as key stakeholders
- guide the community in developing an action plan addressing main constraints and priorities in conservation and development.
- assess level of degradation of the natural resource in settlement area adjacent to the park and forest reserve.

1.2 Methodology

The appraisal was divided into two distinct phases. The first phase consisted of six days of data generation, which started on 27th July and ended on 6th August 1999. The period was spread over two weeks but the PRA team went out to the village on Tuesdays, Wednesdays and Fridays only. Most members of the community go to markets in Kapsokwony and Kimilili on Mondays and Thursdays respectively.

The second phase of the PRA included the preparation of the Community Action Plan (CAP) at which time the community together with the PRA team, compiled a plan for development and conservation of the sub-location. CAP compilation took five days with the PRA team going out to Kongit once a week.

Technicians from various government departments, ministries, parastatals and NGO's participated in four days of theoretical PRA training in July, 1999. The appraisal in Kongit represented the practical component of the training where the PRA tools discussed in class were applied to generate information and compile the CAP with adherence to PRA principles. (See Appendix 1 for a complete list of the multidisciplinary team.

The whole Kongit community was invited to attend the first phase of the exercise i.e. the first six days of data generation. During this time, the daily attendance averaged seventy (70) people, the highest recorded attendance was one hundred and five (105) people, of whom 21 were men, 24 were women and 60 were youth (see Appendix 14 for list of participants' names). There was only one female youth who attended throughout the PRA period.

The PRA team was out in the village with the community from around 10 am to 5 pm. In order to generate gender disaggregated information, the community was divided into three social groups: women, youth and men. Later, the youth were further subdivided to form two groups. These groups were maintained throughout the data generation phase except for a short time on the fifth day when all community members and the PRA team convened to identify problems hindering conservation and development in Kongit sub-location. Then, participants returned to their original groups to analyse some of these problems.

Sixteen problems were identified and each group was given four to analyse and come up with possible opportunities for intervention that later formed the basis of compiling the CAP. At the end of data generation, the PRA team facilitated the community to elect a thirty (30) member CAP implementation committee (see Appendix 15) that was responsible for compilation of the CAP.

During the CAP compilation, sub committees were elected from within the larger committee to follow up specific interventions designed to solve identified development problems. The CAP implementation committee had equal representation from the ten (10) villages of the sub-location with each designating one woman, a man and a youth.

At the end of the appraisal, the people of Kongit sub-location formulated a Community Action Plan which would be implemented by the CAP committee.

1.3 Time Schedule

Below is the six-day data generation programme of the PRA.

Day 1 - PRA Launching at Kongit Market

- a. Speeches by community leaders including group leaders, area councillor,
- b. the administration including the Chief and his assistant and the District Officer - Kaptama division.
- c. Introduction of PRA concept by facilitators in the PRA team.
- d. Discussion with community members on MEICDP and PRA objectives with a question and answer session.
- e. Data generation
 - i. Resource map
 - ii. Timeline (Historical Profile)
 - iii. Trend lines of resources and socio-economic factors

Day 2 - Data Generation

- i. Impact assessment map
- ii. Trend lines on socio-economic factors and resources

- iii. Agricultural constraint matrix
- iv. Seasonal calendar on various subjects
- v. Income and expenditure
- vi. Activity profile
- vii. Cost benefits analysis of agricultural enterprises.

Day 3 - Data Generation

- i. Transect walk
- ii. Household interviews

Day 4

- i. Institutional ranking
- ii. Stakeholder analysis
- iii. Forest resources analysis
- iv. Land tenure
- v. Activity profile
- vi. Local institutions

Day 5 - Data Generation

- i. Income generating activities
- ii. Marketing constraints analysis
- iii. Eco-tourism sites and ventures
- iv. Wealth ranking
- v. Livestock enterprise analysis
- vi. Exotic and Indigenous tree identification and criteria ranking

Day 6

- a. Data generation
 - i. Problem identification and analysis
 - ii. Introduction to options assessment
- b. Election of CAP implementation committee

2. BACKGROUND INFORMATION ON KONGIT SUB-LOCATION

2.1 Secondary Data

2.1.1 Size and Location

Kongit sub-location covers an area of six (6) square kilometres. It is located in Kongit location, Kaptama division of Mt. Elgon district. It is about five (5) kilometres east of the district headquarters at Kapsokwony. To the north, the sub-location borders the Mt.Elgon forest, Chemweisus sub-location to the

southwest, Chemoge sub-location to the southeast and to the northeast, Kaptilelio sub-location.

2.1.2 Climate

The area experiences high annual rainfall of about 1,400-1,800 mm per year well distributed with two peaks, April - May during long rains and August - September in the short rains. The area is warm in the daytime and cool at night during long rains while during short rains, it is cool in the daytime and warm at night.

2.1.3 Topography and Attitude

Kongit sub-location rises to an elevation of 2,000 m in its lower zone up to 2,200 m above sea level in its upper zone. The sub-location is part of the southern slopes of Mt. Elgon with land steadily rising northwards towards the mountain peak and well-drained undulating land with valleys across to the mountain slopes.

2.1.4 Soils

In the sub-location, volcanic, deep, fertile, dark, loamy, well-drained soils are found in the upper zone and red clay, well-drained, fertile soils of volcanic origin in the lower zone.

2.1.5 Agro-ecological zone

The upper highland two (UH2), Wheat-Dairy zone is predominant in the sub-location, with the lower highland one (LH1) Tea-Dairy zone occurring to the south and upper midland two (UM2) Coffee Zone to the southeast.

2.1.6 Farming Systems

Farmers practice mixed farming. They grow both subsistence and cash crops and sell surplus food for cash. Cattle, sheep, goats, donkeys and free-range chicken are kept by the local community. The major crop, maize, is inter-cropped with beans and both are grown for food and cash. Other major cash crops are Irish potatoes, wheat, sunflower, coffee, onions, pyrethrum and garlic. Food crops apart from maize and beans are tomatoes, vegetables, sweet potatoes and bananas. Because of insecurity and cattle-rustling in the area, very few cattle, mainly grazed in the forest reserve, are kept both for milk and cash. Agroforestry is notably absent in the sub-location. Farmers grow crops in two seasons coinciding with the two rainfall peaks.

2.1.7 Land Use

The highest proportion of land in the sub-location is under agriculture. The major Kapsokwony-Kaptama road runs across the area to the south, and a rural access road stretches from south to north then east towards Kaptelelio, which borders the Forest Reserve. There is one main market centre in Kongit, with two others recently established in Bondeni (along Kongit-Kapsokwony rural access road) and in Laini moja (near the Kongit Primary School towards the north of the sub-location). The only primary school is Kibei. There is no secondary school in the area. For more detail, see the Kongit Resource Map in Figure 1.

2.1.8 Land Tenure

Land holdings range mostly between 2.5 and 5.5 acres per family. Adjudication is complete but only about 125 men landowners have title deeds. There are a number of landless people squatting on market centres while some of them lease land temporarily from landowners.

2.1.9 Main Source of Income

People in Kongit depend on agricultural and livestock production for income. They sell honey, local beer and run small businesses to earn extra cash. At times of food scarcity, they work as farm labourers.

2.1.10 Labour

Family labour is used to carry out farm operations but at times of high demand like during weeding and harvesting, farmers are forced to hire external labour.

2.1.11 Demographic Information

The sub-location of Kongit is inhabited predominantly by the Sabaot community. There are about 607 households with an average family size of eight.

2.1.12 Water Supply

Despite having a number of rivers and springs, the community is poorly served with water which forces them to fetch water from rivers far off especially during the dry season when natural springs dry up. Most of the water is piped out of the sub-location to Kapsokwony and neighbouring areas. Springs are the main water source for the major part of the year. Only three springs are protected to serve the community though other unprotected springs have sufficient water. The Sosio River, whose source is in the forest, has been surveyed and found to have enough water to supply the whole sub-location.

Figure 1. Administrative Boundaries - Mt. Elgon District

Figure 2. Survey Map of Kongit Sub-location and Surrounding Area

Figure 3. Kongit Resource Map

2.2 Institutions in the Sub-Location

2.2.1 External Institutions

Two different groups of youth were helped to identify external institutions that are working with the community. They then analysed the interaction of each of these institutions with the community according to the relative importance of each institution.

To come up with this information, they cut out different sizes of circular cardboard paper and wrote names of institutions on them. The more important the institution, the bigger the piece of paper it was written on. So, the most important institution was written on the biggest paper and the least important on the smallest. A large circle was then drawn on a flip chart to represent Kongit sub-location, and then the cardboard papers were placed on it according to the level of interaction of that particular institution with the community. The closer the circle the higher will the interaction with the institution written on it.

Institutions whose circles lie inside the community have maximum interaction. Those whose circles touch each other interact in their duties as they work with the community.

Figure 4: Institutional Analysis Diagram

Education ranked first, and IUCN was last. MEICDP (IUCN) is a new project in this area and the people may not have fully understood its role. They also have not had any direct benefit from the organisation and they may think by ranking it lowest will prompt swift action by the project to provide direct benefits to the community.

By the understanding of the Kongit community, all the organisations do not in any way collaborate with each other but instead work in isolation. It will be interesting to do the same activity with the community during PM&E to see how MEICDP will have improved collaboration according to the community.

2.2.2 Local Institutions

The community also identified existing local institutions that conduct various activities to help raise the living standards of the people. There are 4 women's groups, 4 youth groups, 11 self-help groups and 1 men's group.

Generally, all the institutions (local) are involved in activities that aim at raising incomes of the members through income-generating activities thereby improving their livelihood. Some of the activities the groups are involved in include: farming and livestock production, trading in farm produce, tree seedling production, and construction of semi-permanent houses (iron roofed) for members, water projects, road maintenance, purchase of utensils, and primary health care. There is also one group whose main activity is to pay school fees for members' children.

3. LIVELIHOOD ANALYSIS

3.1 Overview of Socio-economic Trends

Kongit sub-location being a high potential agricultural area has experienced an increase in population growth rate over the last three decades. This, however, has been accompanied by a decline in livestock and food production due to insecurity and depressed per capita land ownership. Herd sizes have dwindled because animals have been forcibly taken away by cattle rustlers. Efforts to replenish herds have not been successful since rustlers repeatedly return. Increased land pressure coupled with poor land management over the years has resulted in depressed crop yields. The health situation has worsened since 1970. Lack of local health facilities to treat ailments in an ever-growing population has set the stage for more frequent environmentally-related communicable diseases. Education status has decreased mainly due to inadequate facilities. Kongit schools are over-enrolled. Communication improved between the first two decades with the construction of the rural access road in the sub-location, but has declined again due to lack of maintenance and the unfavourable climatic conditions brought about in 1997 by El Nino, when exceptionally high rainfall was recorded. See Table 1 for socio-economic trend line matrix.

Table 1: Socio-Economic Trend Matrix

3.2 Agriculture and Livestock Production

Livelihood of the Kongit Community is based on agriculture and livestock production. Therefore, most of their time throughout the year, the community is involved in agriculture related activities. They depend on tilling the land to produce crops for subsistence and cash requirements. Livestock are kept for dietary protein requirements, as sources of income when no crop products are available to sell, or for emergency financial needs like medical bills.

Principal crops, grown for sale are maize, beans, and vegetables (both indigenous and exotic). Cash crops grown include wheat, coffee, Irish potatoes, cabbages, and garlic. Only one farmer grows tea in the sub-location though there is potential for expansion of the crop. The local people keep cattle for milk, animal draught power for ploughing and transportation and as a source of

cash. Other domestic animals are donkeys, which are mainly herded for transport purposes to supply agricultural produce to Kapsokwony, Kamkoiywa and other markets. Local chicken is reared for meat and eggs and is sold for small domestic financial requirements.

All people in the community and at household level are involved in farming activities though the participation of the different social groups varies with the type of work and time of the year. Men tend only to be active at the time of land preparation, planting and harvesting. Most of the other work throughout the year is done by the youth and women (see Seasonal Calendar in Figure 2). Men and boys do similar work as do women and girls.

Figure 5: Seasonal Agricultural Calendar

3.2.1 Agricultural and Livestock Production Constraints

Farmers face a variety of constraints in the management of both agricultural and livestock enterprises. Constraints affecting agricultural production in order of their intensity are transport, land, labour, capital, market, pests/diseases and lastly technical knowledge. Potato production is most affected by these various constraints, followed by wheat, coffee and onions. Tomatoes are fourth, pyrethrum fifth and lastly cabbages. (See Table)

Table 2. Agricultural Constraints Matrix

It is assumed that the farmers would naturally allocate more land to enterprises that are less affected by constraints.

Marketing which encompasses various aspects is an important factor in agricultural production. It determines what crops will be grown and how much of each will be produced. In order of severity, marketing constraints affecting agricultural production in Kongit sub location are poor roads, lack of capital, lack of milking co-operation, low prices, lack of market information, poor marketing channels, transport and lastly pests and diseases. (See Appendix 2 for Pair wise Ranking of Marketing Constraints).

Livestock production is affected by a number of constraints, the most crucial being pasture and feed availability. The second is technical knowledge followed by market, transport, capital livestock diseases, water and lastly livestock theft (rustling) in that order. Cattle rearing have the highest limitation followed by sheep, goats, donkey, exotic chicken, pigs, local chicken, bee keeping (agriculture) and lastly rabbit keeping. (See Appendix 3a for Livestock Production Constraints Matrix)

A cattle rearing is the most important livestock enterprise followed by sheep, then local chickens, donkey, goats, bee keeping, exotic chicken, pigs and lastly rabbit keeping. (See Appendix 3b for Pair wise Ranking of Livestock Enterprises)

Though beekeeping, pig production and rabbit keeping are least affected by production constraints they are considered least important. Local people obtain local honey from the forest and do not need to rear bees. Pig and rabbit production are less important because of local customs and value system which do not encourage keeping other animals apart from cattle and a few sheep and goats.

3.2 Income-Generating Activities

In addition to farming, local people are also involved in other income-generating activities as sources of livelihood such as trading in farm produce and livestock, sale of local beer, donkey transport business, pit sawing of forest trees, oxen ploughing, labour supply, charcoal burning etc. Further analysis was done to find out what the community sees as some of the important non-agricultural income generating activities. The women and youth completed an exercise to generate this information.

The women first listed all the activities, after which a pair wise ranking matrix was used to rank the importance of each particular activity. Importance here refers to the relative number of people in the community involved in this activity. Therefore, the higher the rank the larger will be the participation of local people. Some of the activities like charcoal burning, pit sawing of forest trees and game poaching are those that contribute to the over exploitation and misuse of the Mt. Elgon resources.

The women ranked the non-agricultural income generating activities below in Table 3. The youth carried out a similar exercise and the results are listed below in descending order of importance:

Table 3: Ranking of Non-agricultural Income Generating Activities - Women and Youth

3.3 Ecotourism Activities and Ventures

Potential exists for ecotourism, which is an economic activity that is environmentally safe and which will encourage conservation of the Mt. Elgon resources through sustainable use. Through discussion, the youth identified some of the potential ecotourism sites, ventures and activities that could be exploited by the community. Some of the sites of potential tourist attraction are:

| <u>Site</u> | <u>Location</u> | <u>Major Attraction</u> |
|--------------------|-----------------|-------------------------|
| 1. Kongit cliff | Community | View Point |
| 2. Kotwem Spring | Community | Tortoise |
| 3. Kapkitau Spring | Community | Tortoise |
| 4. Natural forest | Forest Reserve | Bio-diversity |
| 5. Kosulol Cave | Forest Reserve | Pre-historic site |
| 6. Kapkitan cliff | Forest Reserve | View point |
| 7. Water falls | Forest Reserve | Waterfalls |

They also identified other ecotourism activities that they could be involved in like mountaineering, nature trails, picnic sites, and the construction of bandas for presentation of cultural activities and sale of artifacts.

3.4 Income and Expenditure

The youth generated information on the seasonal income and expenditure patterns. They constructed pie charts by drawing a circle on a flip chart and filling the encircled area with bean grains. Next, they apportioned the percentage for income contributed by each source by drawing lines through the grains. The same process was repeated for each of the three seasons and also for expenditure.

Figure 6: Income and Expenditure Pie Chart

The pie charts show that the majority of family income is obtained from agriculture and livestock production throughout the year. Maize contributes the largest percentage of family income followed by beans then livestock. Coffee contributes the least amongst agricultural products.

The community spends most of their income on food on an annual basis with the highest expenditure on food being between April and August. During the first season, January to March, the community invests half of their income in farming.

3.5 Division of Labour

The community is involved in both productive and reproductive work. Productive work provides food and income for the family while reproductive work mainly involves housekeeping, childcare and family welfare. Women work more hours than any other social group, and put in the most hours in both productive and reproductive work throughout the year. Men work for the least

number of hours per day, all the year round. They only put in a few hours per day in productive work especially during land preparation and planting but are not involved in reproductive work. During the last season, September - December, men work the least, and most of their time is spent at festivals and feasts.

In general, women have very little time to relax as opposed to men who have much more free time. Work done by female youth is the same as that of women, and male youth is same as that of men with a few extra hours used to help women (see Appendices 4a and b for Division of Labour and Activity Profile (gender daily calendar)).

Concerning agriculture, men and boys do most of the slashing, ploughing, harrowing planting and weeding, whereas the women are primarily responsible for harvesting and second planting. In forestry, men establish and manage nurseries, plant trees and cut timber, while women are involved in collection of medicinal forest products and fuelwood. The entire family is involved in the caring for animals. Men treat and slaughter, boys lead to pasture, while women and girls collect and sell milk, dip the animals, and collect water.

4. LAND AND RESOURCE USE

Mt. Elgon provides a number of benefits to the people of Kongit sub-location. The fertile lands on the slopes of the mountain, high rainfall, water and fresh air are benefits people from other areas do not enjoy. People living next to the forest benefit culturally, financially and for their day-to-day livelihood. The natural mountain tree cover can contribute to soil conservation, increasing infiltration of excess runoff from the mountain. The hydrological cycle of the mountain ecosystem provides for high rainfall throughout the year, which allows crop and livestock production.

The mountain is a source of clean water that flows from rivers and streams. Firewood for the community is collected mainly from the Forest Reserve. They also harvest timber and building materials. The local communities wholly depend on the forest for the grazing of their animals. Some of the other non-timber forest products collected from the forest are medicine, honey, vegetables and fruits.

4.1 Mt. Elgon Resource Trends

Most of the mountain resources are on the decline according to the local Kongit Community (see Table 3). A resource trend matrix was constructed by the PRA facilitators by counting of grains to show the level of availability of the resources during different periods from 1991 and into the future. They counted grains from 1 to 10 each time and put them in the box representing a certain

period to show the level of resource availability. The higher the number of grains implies the more available the resource.

Land, soil fertility, water, forest, wildlife, on-farm trees, grass and stones have decreased throughout. Forest cultivation was nil up to 1991 and has remained but the community feels it will decrease in the future.

Table 4: Resource Availability Trends

4.2 Values of Trees and Uses to the Community

The community values both indigenous and exotic tree species for their many uses. The value of each tree varies according to its number of uses, which illustrates its level of utility. Facilitators in the PRA team asked the group to give information on the value through a criteria matrix, which placed uses on the x-axis and tree species on the y-axis. They placed on the chart ten (10) grains for highest values of that particular use and one (1) for the lowest value.

This exercise was done twice, the first for indigenous trees only and the second both indigenous and exotic tree species (see Appendices 5a and b). The ranking of the analysis for indigenous species is presented below:

| | |
|--|---|
| 1. Simotweet (<i>Ficus thonningii</i>) | 2. Armotit (<i>Prunus africana</i>) |
| 3. Pekeriodeet | 4. Komiyeetyeet |
| 5. Cheptiyeet (<i>Diospyros abyssinnica</i>) | 6. Tobosweet (<i>Croton macrostachys</i>) |
| 7. Kapkoiit | 8. Kaptolongit (<i>Ficus natalensis</i>) |
| 9. Sapteet (<i>Podocarpus falcatus</i>) | 10. Seweet (<i>Albizia gummifera</i>) |
| 11. Lulyoondet (<i>Aningeria adolfi-friedericii</i>) | 12. Chorweet (<i>Halleria lucida</i>) |

For the combined list of both indigenous and exotic species, the results in descending order was:

| | |
|--|---|
| 1. Elgon Teak Korosiodet (<i>Olea welwitschii</i>) | 2. Cheptuiyiet (<i>Diospyros abyssinnica</i>) |
| 3. Armotit (<i>Prunus africana</i>) | 4. Cypress (<i>Cupressus lusitanica</i>) |
| 5. Makinget (<i>Acacia lahai</i>) | 6. Kabokoit (mitikafu) |
| 7. Eucalyptus (<i>E. saligna</i>) | 8. Grevillea (<i>G. robusta</i>) |
| 9. <i>Sesbania sesban</i> | 10. <i>Pinus patula</i> |

4.3 Forest Resources Use and Conflict

4.3.1 Forest Resource Value

The various social groups were asked to discuss the relative importance they attach to different forest resources. Men and women priority ranked the resources and the results are shown in Table 5 below. Results indicate that men attach the highest value to pasture followed by fuel wood then building materials. Livestock keeping is and has always been to this Saboat community a priority, and with increasing land pressure, most of the pasture resources are not found in the forest reserve. As for women, the first three important forest resources for women are water, fuel wood then pasture in that order.

Table 5: Value of Forest Resources through Pair wise Ranking

4.3.2 Forest Resources Conflict

In addition to the inherent benefits that the community enjoys as a result of being part of the Mt. Elgon ecosystem, they also have direct access to Mt. Elgon forest resources. Conflict over use and control of these resources occurs within and between communities, the state and other groups. The source, type and level of conflict vary between men and women within the same community.

In order to generate and analyse information on this subject, the community was facilitated to complete a forest resource conflict matrix with men and women separately. Four sources of conflict were analysed: 1) between villages i.e. within Kongit sub location, 2) with neighbours of the sub location, 3) with outsiders who come from far and 4) with the state through the institutions with the mandate over the Mt. Elgon forest resources i.e. Forest Department and KWS.

The women analysed the conflicts and their effects on women, but men explained how conflict affects both men and women. The matrices were constructed by counting grains to show the level of conflict. A count of ten (10) shows big conflict, zero (0), no conflict and intermediary counts indicate the varying levels conflict according to the different sources. The grains were placed on the matrix drawn on flip chart in the appropriate box. (See Appendices 7a and b)

According to women the greatest conflict on use of forest resources other than water occurs with the state. Conflict exists with strangers on use of all forest resources except pasture. The level of conflict between villages and between

neighbours within a village is the same. For both, there exists no conflict on pasture, water, fruits, honey, thatching grass, vegetables and game meat. Little conflict exists for firewood, building materials, timber and medicine. Timber and medicine are the source of greatest conflict while honey possesses only average conflict with strangers.

Results of the exercise show that the greatest conflict on the use of all resources occurs with the state, except water where they have no conflict. When the men and women enter the forest to harvest products and graze animals without paying royalties to the government, they get arrested by forest guards. Hunting of game for meat is illegal, but the community still poaches and if found, are arrested. Conflict with the state over medicinal plants, thatching grass, fruits and vegetables is minimal because the community obtains them free of charge. Some conflicts exist since exploitation of these products is controlled by the Forest Department and the community's demand is often not met.

The biggest conflict with strangers is over timber and medicinal plants. Big saw millers are given preference over the community by Forest Department to harvest trees for timber. People from outside look for the same dwindling medicinal plants and trees as the local community do. Honey is stolen by strangers, especially saw millers, who do not know that it is a taboo in customs of local people to harvest honey from someone else's beehive. Strangers also steal thatching grass cut and left to dry in the forest.

Little conflict occurs between villages and with neighbours over forest resources. The source of this conflict mainly occurs when harvested products left in the forest to be collected later are taken by others. Conflict over water occurs when people want to draw from water points that they did not participate in establishing.

The exercise repeated with men yielded similar results, however, the men thought that there was higher conflict in the use of forest resources for women than themselves, between villages and with neighbours. The situation is the same for conflict with outsiders except in the use of pasture and honey where the men's conflict is higher with the state; conflict with women is also higher than with men in the use of all forest resources. Women have no conflict with anybody over game meat (see Appendix 6b).

4.4 Land Tenure

The facilitators explained to the group the meaning of land tenure. Five types of land tenure were identified as existing in the sub-location i.e. government land, communal land, freehold, leasehold and seasonal leasehold. Most of the land in the sub-location is registered so owners have title deeds. It was found

out that land ownership under the different land tenure arrangement varies from 100 acres down to below 1 acre per person.

Schools, the Forest Reserve, water storage tanks and agricultural demonstration plots are found on government land. Leasehold land includes markets owned by county council where plot owners have a thirty-three (33) year's lease. Communal land is along riverbanks and streams, cattle dips, access roads, and church grounds. Freehold land is owned by individuals, usually for a ninety-nine (99) year lease from the government. Seasonal leasehold is land given by individual freehold or leasehold owners to other users on an annual basis at an agreed fee.

After the explanation and identification of various land tenure classifications, the group then proceeded to analyse the existing conflicts that exist. To get this information the group counted a maximum number of ten (10) maize grains to show maximum/highest conflict and zero (0) for no conflict.

A flip chart was put on the ground and a matrix drawn to analyse the conflicts. The x-axis had the different sources of conflict and the y-axis had the type of land tenure. The group then discussed and agreed upon the level of conflict before scoring.

Table 6: Land Conflict Matrix

The highest conflict in all land tenure types occurs between families and the least with outsiders. Freehold land has the highest conflict and communal land the least.

The source of conflict on individual freehold land among families is unwillingness of men to subdivide land for their sons. Boundary disputes are the source of conflict between families.

4.5 Human/Wildlife Conflict

Conflict between inhabitants of Kongit and wild animals from the Forest Reserve is more severe for people living next to the forest. The animals very often destroy crops, prey on their livestock and pose danger to people, especially women, who go to the forest for resources. Elephants, apart from invading farms, also destroy stored crops, especially maize. The men and male youth hunt down the animals for meat and other products.

Residents of the sub-location think that they are the ultimate losers in this conflict. Appendix 8 gives a map assessing the impact of wildlife on farmland in the sub-location.

A ranking exercise with the older men illustrated that the great rat is actually the most troublesome of all wild animals (see Appendix 9). Elephants cause widespread destruction, but it may only happen once every 5 years. The rat, on the other hand, causes havoc in the fields, the home, and the granaries and is thought to be the worst offender.

The youth draw a seasonal human wildlife conflict showing the source of conflict, type and when it occurs during a normal year. The exercise however, dealt on destruction by the wildlife and not by humans (see Figure 5).

Figure 7: Human/Wildlife Conflict Calendar

N/B Most animals come to villages when the fields are covered with maize mainly because of hideouts.

4.6 Stakeholders and Their Relationship

The men of Kongit sub-location conducted an analysis of the stakeholders of the Mt. Elgon Forest Reserve. Their conviction is that the community has the highest stake, followed by Forest Department, then KWS. Raiply, the local administration, external saw millers and charcoal burners follow each other in that order.

Apart from FD and KWS who have the mandate over the Forest Reserve and the National Park, the stakeholders who have influence on the management and use of forest resources are Raiply, external saw millers, IUCN, charcoal burners and herbalists in order of their level of influence. Though the community has the highest stake, it has very little influence through community groups (see Figure 6)

To complete the stakeholder analysis exercise, the facilitators explained to the participants the meaning of a stakeholder. They then listed all the stakeholders on a flip chart. Next, they cut out circular cardboard papers of different sizes and wrote names of the stakeholders, one on each card according to the amount of stake each one has in the Forest Reserve (biggest stakeholder = largest card and smallest stakeholder = smallest card).

A large circle was then drawn on another flip chart to represent the Forest Reserve. They then placed the cardboard papers on the flip chart according to the actual distance the stakeholder is in relation to the forest. The nearer the card, the closer the stakeholder is to the forest.

The men then discussed and moved around the cards and agreed where to place each one of them. They then drew arrows to represent the level of influence each stakeholder has in the use and management of the Forest

Reserve. The thicker the arrow, it results the higher influence and vice versa. A dotted arrow shows very little influence or even none at times.

Figure 8: Stakeholder Analysis of Mt. Elgon Forest

4.7 Land Resource Management

The PRA team completed a transect walk through the sub-location with the guidance of local community members in order to compare the land resource use and management systems local development efforts, achievements constraints and existing opportunities in the different zones of the sub-location (see Appendix 10). The transect walk also provided an opportunity to counter-check information illustrated on the resource map.

Land resource use and management was also analysed at farm level by farmers drawing their farm sketches. The sketches show that farms in the upper zone, represented by Appendix 11a and b do not manage and conserve land resources well. The farms are not planned and no soil conservation structures exist. Very few scattered trees are seen, mainly because the forest is close and they have easy access to tree products. On the other hand, the sketch from the lower zone away from the forest (Appendix 11c) illustrated good land management with a well-laid out farm, soil conservation structures and tree planting. Farmers from this zone have little access to forest tree products because of the long distance to the forest and therefore have to provide them on-farm.

5. PROBLEM IDENTIFICATION, ANALYSIS AND RANKING

After all the respective groups had finished the various tasks they had been assigned to generate information, the whole community reconvened to discuss and identify constraints to conservation and development. The group came up with sixteen (16) problems, which were divided among the different social groups to expedite the process of detailed analysis. The groups included men, women, youth I (youth who are full time at home farming) and youth II (youth out of school or college and still waiting for professional training or employment respectively). Each of the groups came up with problem causes, coping strategies and opportunities for intervention (see Table for problem analysis chart).

The groups were then guided in ranking the severity of all the sixteen identified problems (see Table 7). It was clear that the identified problems affect the social groups differently and to varying degrees. Such information is useful because it indicates which particular interventions a particular group will be motivated to participate in.

5.1 Problem Ranking by Social Group

After the social groups had finished analysing the problems, they proceeded to do a pair wise ranking of all the sixteen identified problems. Each of the groups came up with different results as summarized below. (See Appendix 12 for detailed pair wise ranking matrices).

Educational facilities were ranked highly by all groups, except the second youth group, indicating the importance the community places on education needs. Although the women placed training as a lower priority, the other groups ranked it in their top four priorities, which is favourable for sustainable support that the MEICDP can provide.

In terms of differences among the social groups, lack of land was ranked number one by one youth group, whereas, women placed it as a lower priority problem. For women, there is not much option in owning land. Women recognized soil erosion as a problem more than any other group, probably since they are spending more time in the fields and become more aware of less food availability to feed their families. Marketing problems were ranked relatively low except by one youth group, the same group that also felt lack of capital is a critical issue. As in Trans Nzoia, only women placed crop damage by wildlife as an important problem, for the same reason that they spend more time in the fields and are probably more concerned about food security. None of the groups felt that gender inequality ranked high considering the other issues facing the community.

Table 7: Summary of Problem Ranking by Social Group

Table 8: Ranking of Problems Combining Responses of All Social Groups

Table 9: Problem Analysis Chart

6. CAP - COMMUNITY ACTION PLAN

The PRA exercise culminated in the compilation of a plan to deal with identified constraints and opportunities on conservation and development by referring to the problem analysis chart. The PRA team facilitated the CAP committee to assess opportunities that are most favourable to deal with the constraints cited by the community during the PRA. Through an options assessment exercise, all identified interventions were subjected to an analysis, which included aspects such as sustainability, productivity, equity, technical feasibility, social cultural acceptability, cost effectiveness, and time to benefit.

This exercise was useful in order to determine the options that the communities are most empowered to implement without extensive outside assistance. These options took priority in the development of the CAP. In addition, the activity was important to identify areas where the community

lack capacity and require external assistance (see Appendix 13 for options assessment charts)

Based on the results of the options assessments, an action plan was compiled together with the CAP committee (see Table 10 for the CAP). The CAP was a very important tool for empowerment to the community and it helped in identifying local leadership potentials.

Table 10: Community Action Plan, Kongit

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

1. The people of Kongit sub-location, though mainly small scale mixed farmers, have a high dependency on various products from the Mt. Elgon forest for their daily lives.
2. The community of Kongit gets both direct and indirect benefits from the Mt. Elgon ecosystem.
3. Members of the community have a big interest in the way the Mt. Elgon resources are utilised and managed, considering the number of people and level of participation during the PRA exercise.
4. Potential for agricultural and livestock production has not been fully exploited because of various constraints. The most limiting constraints being transport, land, capital and marketing.
5. The Mt. Elgon resources are continually being exploited unsustainably by outsiders, and the community feels that they have been left out, yet they are custodians of this important resource.
6. Community members have indigenous knowledge about the Mt. Elgon ecosystem and if consulted, can play a leading role in the management and sustainable use of the Mt Elgon resources as key stakeholders.
7. There is potential of ecotourism that has not been exploited.

7.2 Recommendations

1. The livelihood of the Kongit sub-location will greatly improve through up-grading the road system, thereby helping marketing of farm produce to increase income from agriculture. This will release pressure on the forest resources harvested for cash by the community.
2. External interventions that provide products, normally obtained from the forest, on-farm, existing conflicts resulting from the use of FR resources by the community will be minimised and release pressure on the forest.
3. There is need for the government departments and institutions with the mandate over the Mt. Elgon resources and other stakeholders to consider

- local people as major stakeholders, and consult them on how best to sustainably use and manage the Mt. Elgon resources.
4. Alternative income generating activities need to be initiated by the community to ensure gaps in income from agriculture are filled, reducing the rate of forest exploitation for extra income.
 5. Agricultural enterprise diversification will greatly improve family incomes and reduce dependency on the forest resources.
 6. Communities need to implement environmental conservation techniques through education in order to increase and sustain agricultural and forest production that will ensure maintenance of the forest ecosystem.

APPENDICES

- Appendix 1. Multidisciplinary PRA Team
- Appendix 2. Pair wise Ranking of Marketing Constraints
- Appendix 3a. Livestock Production Constraints Matrix
- Appendix 4a. Activity Profile (Women)
- Appendix 4b. Activity Profile (Men)
- Appendix 4c. Activity Profile (Youth)
- Appendix 5a. Indigenous Forest Tree Species and Their Uses
- Appendix 5b. Criteria Ranking Matrix For Exotic and Indigenous Trees
- Appendix 6a. Women Pair wise Ranking Forest Resources
- Appendix 6b. Men Pair wise Ranking of the Forest Resources
- Appendix 7a. Forest Resources Conflict Matrix (Women)
- Appendix 7b. Forest Resources Conflict (Men)
- Appendix 8. Impact Assessment Diagram of Wildlife Damage and Soil Erosion to Farmland
- Appendix 9. Intensity of Damage by Wildlife - Pair wise Ranking
- Appendix 10. Transect Walk across Kongit Sub-Location
- Appendix 11a. Farm Sketch from Upper Zone
- Appendix 11b. Farm Sketch from Middle Zone
- Appendix 11c. Farm Sketch from Lower Zone
- Appendix 12a. Group 1 (a) Pair wise Ranking of Identified Problems
- Appendix 12b. Group 2: Pair wise Ranking of the Community Problems (Men)
- Appendix 13. Options Assessment Charts*
- Appendix 14. List of PRA Participants
- Appendix 15. CAP Implementation Committee Members by Village
- Appendix 16. Checklist Used for PRA Team Members.