

# Kenya's Water Towers Protection and Climate Change Mitigation and Adaptation (WaTER) Programme

## Component 4: Science to Inform Design of Community-Level Actions and Policy Decisions

### Baseline Survey Report on identification and prioritization of Nature Bases Entreprises (NBEs)

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Kenya Forestry Research Institute  
(KEFRI)

**PHOTOS OF ECOSYSTEMS NBEs ACTIVITIES DURING BASELINE SURVEY**



The Research Assistants with the interviewees near modern beehives in Kapsar Cherangany Hills Ecosystem Elgon Ecosystem



The Pamoja Tuungane Women Group display the smoker for harvesting honey they got from the County Government at Cheptais in Mt Elgon Ecosystem



A traditional beehive in Kapolet, Cheranagany Hills Ecosystem



Some of the beaded products that Lalang self help group has made at Kapcherop, Cherangany Hills Ecosystem



Weaving products from Sekemiik Self-Help Group in Iyaa, Chepkitale- Mt Elgon Ecosystem

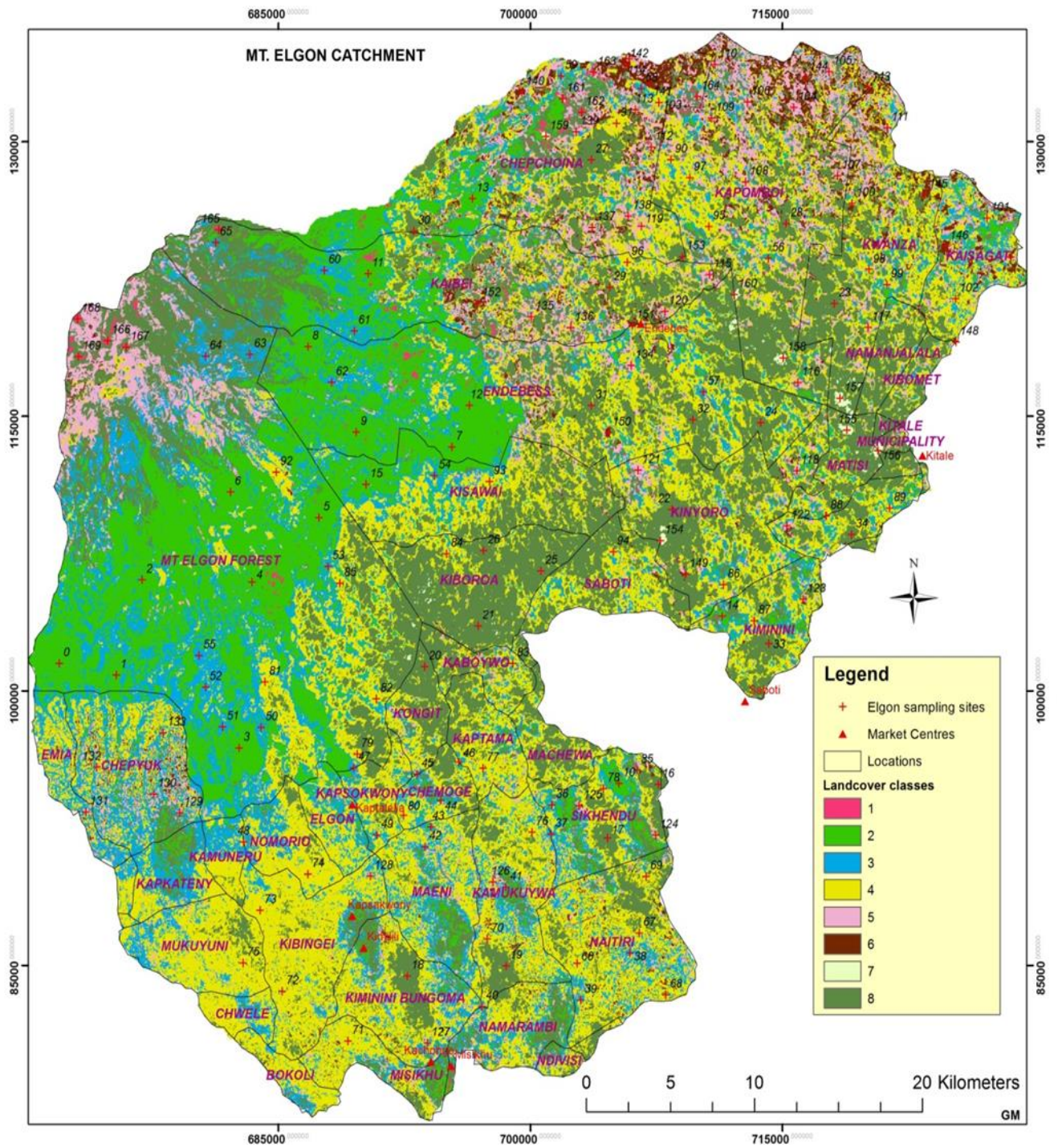


Figure 1. Mt. Elgon Ecosystem Land Cover Map (Source; KEFRI Land Use Land Cover Report-2016).

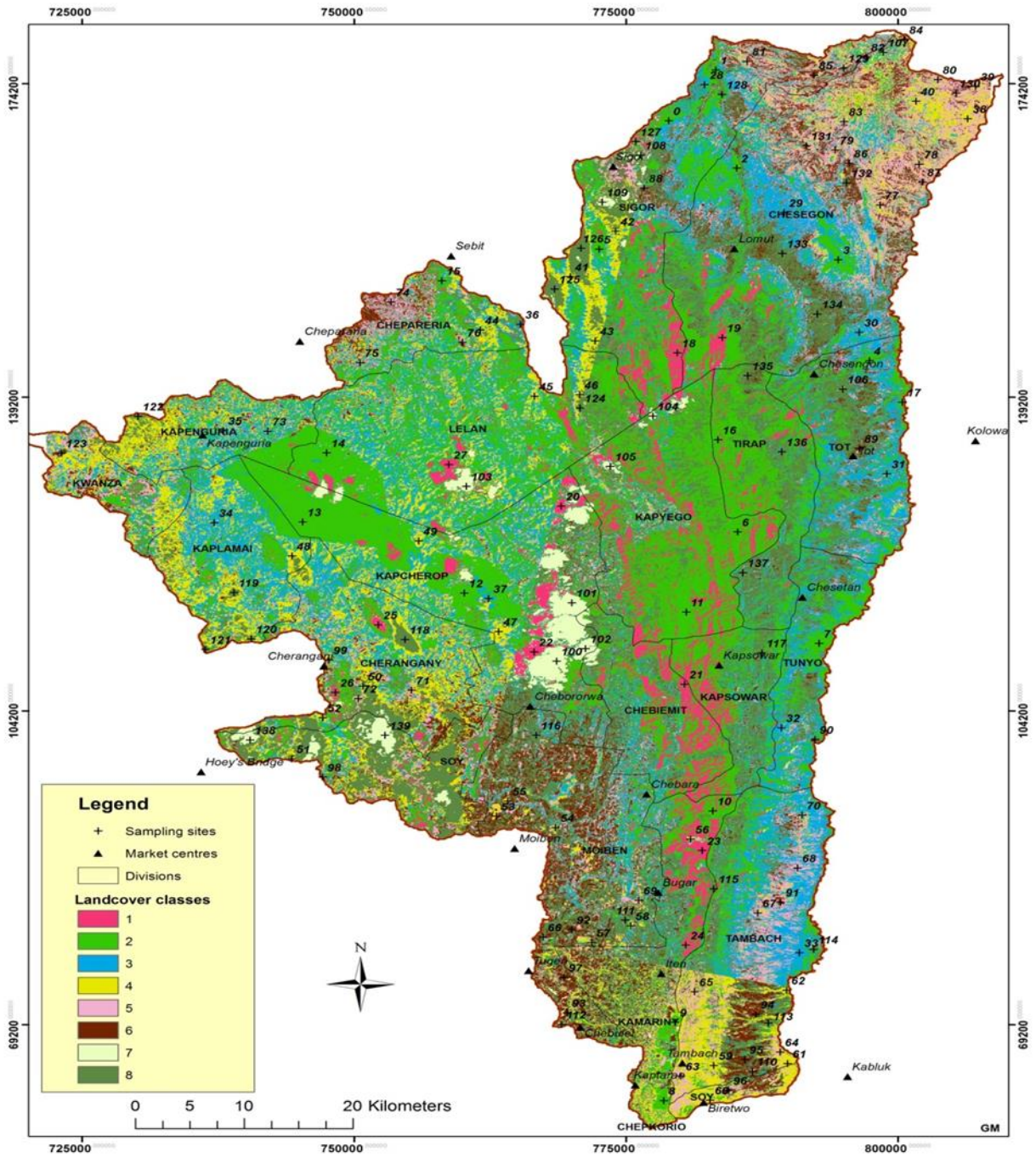


Figure 2. Cherangany Ecosystem Land Cover Map (Source; KEFRI Land Use Land Cover Report-2016).

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## **Disclaimer**

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## **Acknowledgements**

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We also appreciate the contributions made by the communities of Mt. Elgon and Cherangany Sub-counties for their cooperation during the baseline survey, key informant interviews and focus group discussions.

## **Affirmation**

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We affirm that this baseline survey report consists of the findings of the study that was undertaken through gathering information on the current status of Nature Based Enterprises (NBEs) in the Project Areas of Bungoma, Trans Nzoia and Elgeyo Marakwet Counties which is among the eleven counties in which the project is being implemented.

The development of this report has been guided by the Terms of Reference, provided by KEFRI and contributions of individuals and community through key informant interviews, focus group discussions and individual respondents during the study.

This Baseline Survey Report remains the property of KEFRI. Information and data collected must be used only with their consent.

## **List of Acronyms and Abbreviations**

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CAN	Capacity Needs Assessment
CIDP	County Integrated Development Plan
CIG	Common Interest Group
EU	European Union
FGD	Focal Group Discussion
GoK	Government of Kenya
GDP	Gross Domestic Products
HH	Household
Ha	Hectares
KII	Key Informant Interview
NBE	Nature Based Enterprise
PES	Payment for Ecosystem Services
ToR	Terms of Reference
VSLA	Village Savings and Loans Association
WRUA	Water Resources Users Association

## Executive Summary

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This study was commissioned by KEFRI in recognition of the fact that Nature-Based Enterprises offer opportunities for local people to develop livelihood strategies from natural resources and not just the opportunity to participate in conservation for its own sake.

The ecosystems of Cherang'any Hills and Mt. Elgon were chosen for this baseline survey study based on the fact that there is a good natural resource base already exploited by communities for subsistence and commercial purposes. However, the two ecosystems continue to be degraded due to population pressure and increasing household living standards. The fundamental question of concern is to identify the existing nature based enterprises and establish the basis for prioritization to transform them into sustainable income generating activities. Sustainable income generating activities ideally rely on availability of adequate supply of raw materials that would provide reliable income streams. The expectation of the local people is to be motivated to achieve sustainable livelihoods and incomes.

This baseline survey was conducted to identify and Prioritize Nature Based Enterprises (NBEs) for Cherang'any Hills and Mt. Elgon Water Ecosystems.

# Chapter 1: Introduction

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## 1.1 Background of the Study

This Study was based on Component Area 4 (Result Area 4) which is on: “Science to inform design of community-level actions and policy decisions”. This EU funded project is expected to support Kenya to reduce poverty through enhancing the productivity and resilience to climate change of Kenya’s water sources. The project is a community Initiative Partnership between the Government of Kenya (GoK) and EU. The Project is being implemented in Mount Elgon and Cherangany Hills Ecosystems. Kenya's economy is nature-based with its water towers influencing livelihoods of beneficiaries of ecosystem services, both adjacent and further afield.

The ability of Kenya's water towers to continue to provide critical ecosystem services, in a sustained manner to adjacent communities and beneficiaries further afield is being threatened by deforestation and land degradation. Deforestation has reduced Kenya’s forest coverage from 12% in the 1960s to currently 6.9%. Deforestation costs the Kenyan economy an estimated KES 5.8 billion per year. An estimated 50,000ha lost between 2000 and 2010, has resulted in cumulative negative effects amounting to KES 3,652million/year, more than 2.8 times the cash revenue of deforestation. The contribution of forests to Gross Domestic Product (GDP) is estimated to be around 3.6%.

The study, identifies and prioritizes key nature based enterprises (identify ongoing/existing beekeeping, butterfly, mushroom, medicinal herbs, ornamentals, weaving, beading) in Mt. Elgon and Cherangany ecosystems. The Elgeyo Marakwet’s and the Trans Nzoia’s economy is driven by agriculture. NBEs as an age old tradition have both a positive effect on livelihoods and also sustainable land use through environmental benefits. Traditional log beehive is the main form of beekeeping technology used. There is a high potential for bee-keeping especially along the Kerio Valley which is characterized by a rich vegetation of various acacia tree species known for production of high quality honey. Trees, shrubs, plants and crops that bees actively forage on include; *Acacia species*, *Croton megalocarpus*, Bananas, Citrus fruit plants, maize, Lucerne, *Eucalyptus spp*, Mangoes, paw paws, *Dombeya spp*, *Coleous spp*, *Grevillea sp* and oranges which the County is richly endowed with (County Integrated Development Plans (CIDP) 2013 – 2017).

The major impact will be to improve the ecosystem, enhance livelihoods and ensure a clean environment. Interventions for rehabilitation tend to disadvantage livelihoods of local nature dependent communities. Tension arising from the resultant deprivation poses threats to the sustainability of interventions which can be offset by promoting NBEs to these groups of people in the community. The overall objective of this activity was to promote and develop nature based enterprises targeting men, women, youth and people with disabilities. Thus, the objectives of the activity (identification and prioritization of NBEs) were;

1. To identify the nature based enterprises in the two ecosystems;
2. To prioritize the nature based enterprises in the ecosystems; and
3. To identify the importance of nature based enterprises.

## **1.2 Project Activities and Outcomes**

The baseline survey study used a two-pronged approach that included the following:

Objective 1: To identify the nature based enterprises in the two ecosystems;

Activities:

- a: To prepare a household profile by developing the following (HH Size, HH income, and identifying NBEs);
- b: To identify the NBEs against the following variables (education, gender and occupation);
- c: To identify on - going key NBEs.

Objective 2: To prioritize the NBEs in the ecosystems; and

Activities:

- a: To prioritize food needs of the household
- b: To identify interest in undertaking NBEs
- c: To identify preferred NBEs

Objective 3: To identify the importance of NBEs

Activities:

- a: To estimate the income from sale of NBEs;
- b: To identify markets for NBEs;
- c: To identify the expenditure on production, processing and marketing of NBEs.

Outcome: The study is expected to document the status of two ecosystems in terms of engagement in NBEs activities, which will enable strengthening of available NBEs for livelihood improvement and ecosystem conservation. NBEs exist in the two ecosystems, and products are harvested using indigenous knowledge. However, value addition to these NBEs

is not exploited to its full capacity. NBEs in the ecosystems are also influenced by gender, e.g. honey, weaving and beading.

### **1.3 Rationale and Justification of Survey**

The identification and prioritization of NBEs Survey in the two ecosystems was undertaken to identify practitioner's preference and rank the indicators to establish how the communities can be empowered and enterprises introduced or improved. The following aspects were examined;

- ⇒ *Involvement and undertaking of NBEs;*
- ⇒ *Identifying and prioritizing NBEs;*
- ⇒ *Income estimation from sale of NBEs.*
- ⇒ *Marketing of NBEs; and*
- ⇒ *Expenditure on production, processing and marketing of NBEs;*

The identification and Prioritization of Nature Based Enterprise Survey Report will be important in identifying community involvement in NBEs activities, their contribution and importance in livelihood transformation. This will inform science at the local and national levels prompting decision making on the relevant intervention required to ensure viability and sustainability of the enterprises.

### **1.4 Scope of the Identification and Prioritization of NBEs Assessment Survey**

The purpose of this study was to undertake two complementary activities; 1, identification of NBEs and 2, prioritization of NBEs within the two ecosystems, to understand the need for strengthening the enterprises and engaging communities in sustainable management of environment to provide long term benefits. The scope of study will enhance the understanding of NBEs, by addressing the following questions in a more focused and informed manner.

- 1) What NBEs can be identified;
- 2) What NBEs can be prioritized;
- 3) What NBEs are the farmers involved in.



## Chapter 2: Assessment Approach and Methodology

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This chapter presents the approach and methodology that was used while undertaking the Priority Baseline Assessment Survey.

### 2.1 Assessment Approach

#### 2.1.1 Work structure for the Identification and Prioritization of NBEs Design

The overall approach to this assignment is structured in Identification and Prioritization Needs Assessment Design summarized in Figure 3 below.

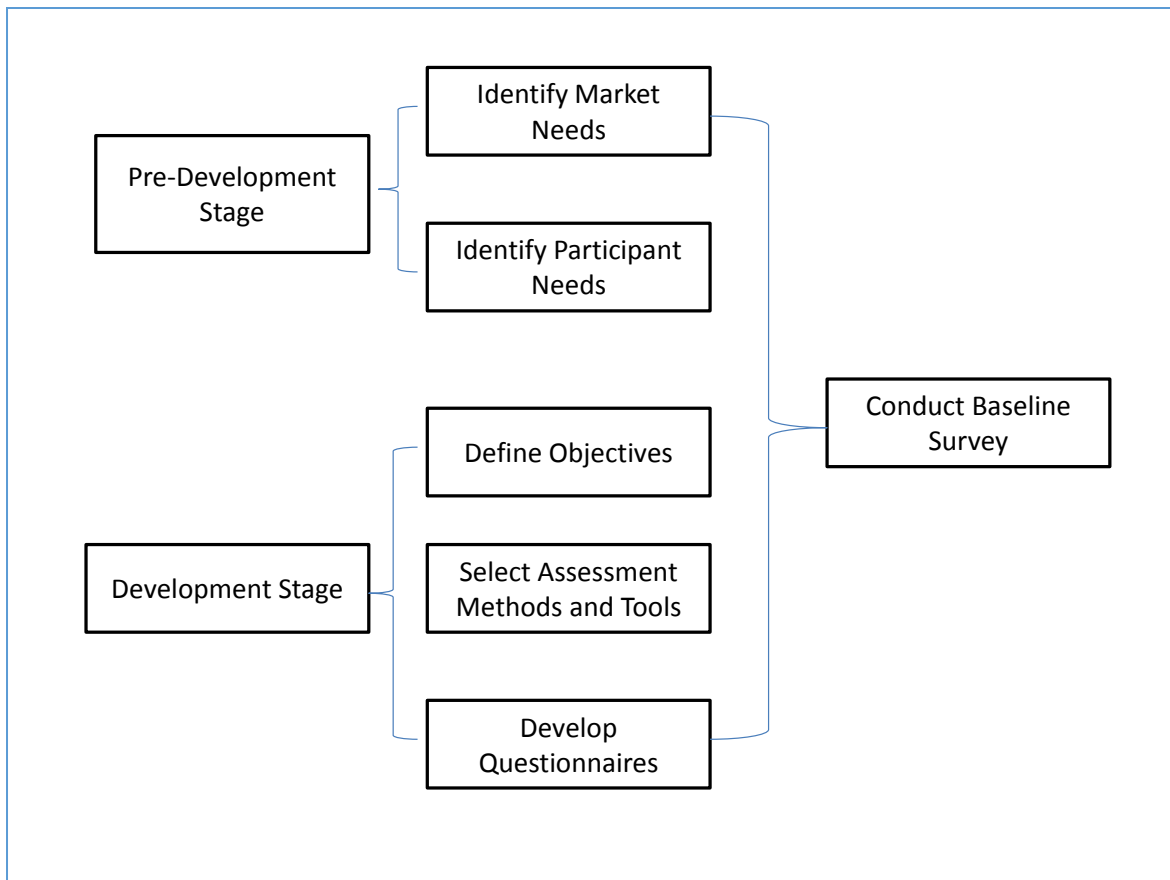


Figure 3 Priority Assessment Design

#### 2.1.2 Identification and Prioritization Assessment Framework

In order to address the ToR objectives, an Identification and Prioritization Assessment framework Table 1 was developed to link the objectives to the key dimensions of ranking and the criteria used.

Table 1: Identification and Prioritization Assessment Framework

<b>Objective(s):</b>	
<ol style="list-style-type: none"> <li>1) To Identify the nature based enterprises in the two ecosystems;</li> <li>2) To Priorities the nature based enterprises in the ecosystems; and</li> <li>3) To identify the importance of nature based enterprises.</li> </ol>	
<b>Assessment Aspect(s)</b>	<b>Indicators</b>
Identification and Prioritization	<ul style="list-style-type: none"> <li>✓ Level of Involvement in NBEs</li> <li>✓ Level of Identification and Prioritization</li> <li>✓ Level of Undertaking</li> <li>✓ Level of Estimation</li> <li>✓ Level of Expenditure</li> <li>✓ Marketing of NBEs</li> </ul>
Community Engagement	<ul style="list-style-type: none"> <li>✓ Level of Involvement in NBEs</li> </ul>

## 2.2 Assessment Methodology

This assessment was undertaken through the tasks demonstrated by Figure 4:

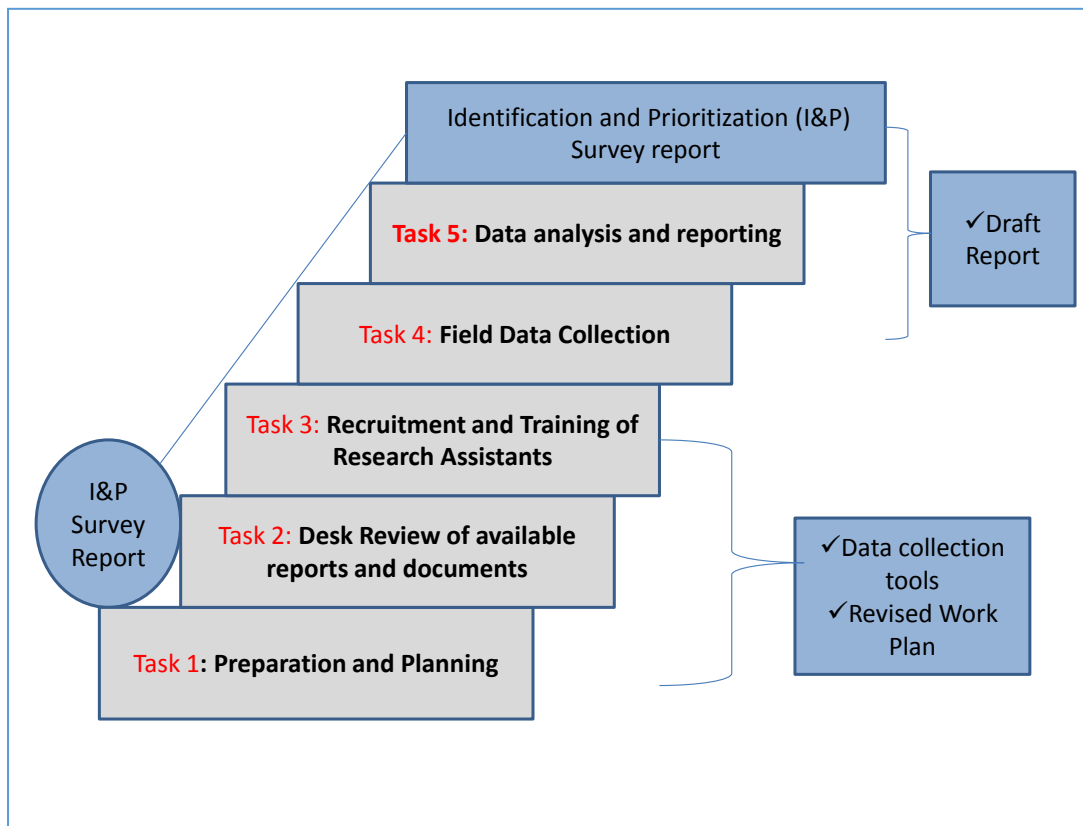


Figure 4. Key tasks in the survey and deliverables

### 2.2.1 Task 1: Preparation and Planning

At the commencement of the assignment, the consultancy team held a de-briefing meeting with KEFRI team in which the PI and regional managers were consulted. The objective of the kick-off meeting was to:

- ⇒ Build consensus on the objectives and scope of the assignment;
- ⇒ Harmonize the Consultants' understanding and approach to the assessment and the Client's expectations from the assignment;
- ⇒ Confirm availability of literature and documentation to be reviewed and making arrangements for further data collection; and
- ⇒ Discuss the necessary logistical arrangements regarding execution of the survey activities, including working out the time frame for the assignment and possible itinerary for the field visits.

The consultancy then constituted a team that would engage in the activities to achieve the project objectives. The roles and activities of the team members were identified, and planning for field activities commenced by creating contacts with the relevant stakeholders.

### **2.2.2 Task 2: Desk Review of Reports**

The following project documents were reviewed in order to ascertain the status of project implementation and to guide in the development of the data collection tools:

- ⇒ County Government of Elgeyo Marakwet. County Integrated Development Plans (CIDP) 2013 - 2017;
- ⇒ Trans Nzoia County Integrated Development Plan 2013 – 2017;
- ⇒ Cherangany Hills Forest Strategic Ecosystem Management Plan 2015 – 2040;

### **Data Collection Tools**

A combination of qualitative and quantitative tools was developed for data collection activities. These included household survey questionnaires Appendix A1, Key Informant Interview guide Appendix A3 and Focus Group Discussions guide Appendix A2 to provide information on different variables of study and indicators, which included;

#### **Household survey questionnaire**

The key information gathered under this survey were, general household information, involvement in NBEs, identification of NBEs, prioritization of NBEs and gender participation in NBEs.

#### **Key informant interview**

The key information gathered under this interview was to ascertain the status of the NBEs, and the involvement of formal and informal organizations.

#### **Focus Group Discussions**

The FGD gathered under this interview were to ascertain the community involvement in NBEs activities and the impact of NBEs on the community.

### **2.2.3 Task 3: Recruitment and Training of Research Assistants and Enumerators**

A team of research assistants with experience in community based development projects were hired as facilitators. Two days training was undertaken for this team. The training focused on:

- a) Understanding of the data collection tools (HH Questionnaire, KII and FGD Guides);  
and
- b) Administering the HH questionnaire.

After the training, the HH data collection tool was pre-tested on site prior to actual data collection.

#### **2.2.4 Task 4: Field Data Collection methodology**

The baseline survey was conducted in Mt. Elgon and Cherangany Hills ecosystems

Figure 1 and Figure 2. The two ecosystems cover 11 counties where the project is being implemented. However, the counties of interest in this activity were Bungoma, Trans-Nzoia and Elgeyo Marakwet counties.

The baseline assessment survey employed a mixed (both qualitative and quantitative) research approach. The overall design was a cross-sectional survey that was augmented with appropriate consultative and qualitative data collection methods including guided focus group discussions (FGDs) and key informant interviews (KIIs).

##### **Focus Group Discussions (FGDs)**

In order to factor in the contribution of the various CIGs and provide qualitative information, focus group discussions were held with various randomly selected groups. The selection of these groups was based on the mobilization from Trans Nzoia Environmental County officers, Elgeyo Marakwet Environmental County officers, KEFRI and KFS. Trained FGD facilitators assisted in undertaking discussions with the groups. The FGDs were guided by semi-structured questionnaires based on the probing technique of participatory question based facilitation. This methodological approach involved inclusive participation with equal treatment of participants and building consensus on issues. The FGD guide used is presented in Appendix A2.

##### **Key Informant Interviews (KII)**

Key informant interviews was undertaken in order to gather qualitative information on engagement in NBEs. The choice of the key informants for in-depth interviews was guided by the perceived level of influence, information expected from the persons interviewed and intentional bias to gather information. These interviews were guided by semi-structured questions developed to cover pertinent issues in the Cherangany and Mount Elgon

ecosystems.

The following is a list of officers that were interviewed as key informants:

- ⇒ *Ministry of Environment (Trans Nzoia, Elgeyo Marakwet and Bungoma Counties)* including;
  - ✓ Deputy Director for Environment;
  - ✓ Sub-county project coordinators (SCPCs); and
  - ✓ KFS Ecosystem Coordinators
- ⇒ *WRMA Staff; and*
- ⇒ *Sub-County Officers: Environment, Agriculture and Livestock Officers.*

### **Household Interviews**

A set of household questionnaires were used for household interviews. The sample location, sample size and households engaged were determined based on information provided by county officials, local administration and community heads. Household heads (male and female) or dependents (aged 18 years and above) were interviewed, to provide information that would represent the views of the household on NBEs.

#### **2.2.5 Step 5: Data Analysis and Reporting**

Analysis of baseline survey data was carried out using SPSS and MS Excel. Qualitative data was processed and analyzed to complement, confirm and explain the processed quantitative data. Appropriate code and synthesis approaches were developed. Qualitative data synthesis and analysis techniques largely involved systematic synthesis, or putting the material collected into a narrative account of the sectorial issues and indicators. The synthesis involved selecting, organizing, and analysing the materials collected into topical themes and central ideas or concepts. The framework analysis approach to qualitative analysis was employed as it systematizes the process of data analysis into steps of transcription, familiarisation, content analysis (coding and classification/indexing) and presentation.

This information and data was then used to prepare the Identification and Prioritization Needs Assessment Survey Report. Reporting focused on comparative assessment of the various assessment indicators.

### **2.3 Data Checks and Quality Control**

To guarantee data and procedural quality control, strict supervision, guidance and

backstopping were done by the consultants, team members and supervisors. Daily reporting meetings were held to address any data gaps and quality concerns. The training of enumerators and research assistants, data entry clerks emphasized the importance of care and attention to detail in interviewing and recording responses.

Further cleaning with logical checks was performed on the completed data sets prior to analysis.

## Chapter 3: Results and Discussions

This chapter presents comparative analysis, results and discussions based on the objectives as stated in the ToR for this baseline survey for Cherangany hills and Mt. Elgon Ecosystem. The high variability between Mount Elgon and Cherangany Hills is explained by the number of samples. This is based on 70 respondents (41.4%), 29 from Mount Elgon and 41 respondent (58.6%) from Cherangany Hills.

### 3.1 Household profiles of Cherangany and Mount Elgon Ecosystems

#### 3.1.1 Household Size

Overall, the male headed households in Mt. Elgon (86.2%) and Cherangany (70.7%) ecosystems were higher than the female headed households. However, the male headed households in Mt. Elgon were higher compared to male headed households in Cherangany Hills.

The average household size in Mt. Elgon and Cherangany ecosystem was 6-10 members. However, families of 1-5 members were higher in Cherangany. The family size of 10-more than 15 members declined in the two ecosystems

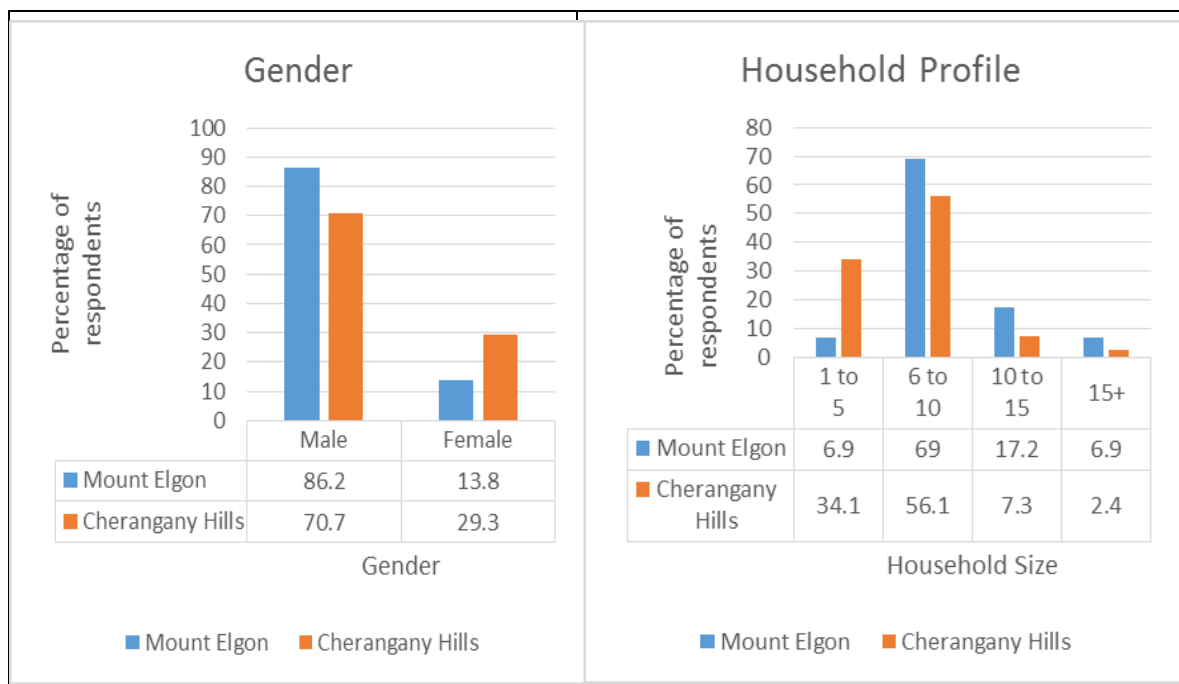


Figure 5. Household profiles in Mt. Elgon and Cherangany Hills Ecosystem.



## Household Income

Majority household heads in Mt. Elgon (75.9%) did not receive regular income compared to Cherangany household heads. However, the number of households who did not receive regular incomes in Cherangany and Mt. Elgon were relatively similar Figure 6

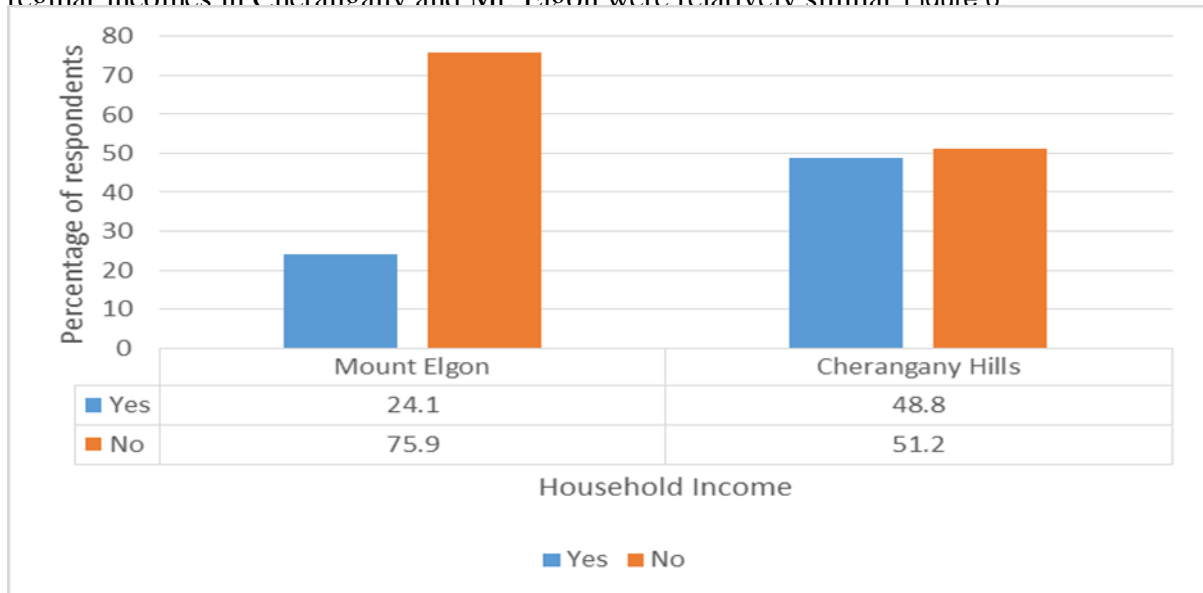


Figure 6. Household head regular income in Mt. Elgon and Cherangany Hills Ecosystems.

## Nature Based Enterprises

The interest in undertaking NBEs are as shown in Figure 7 below.

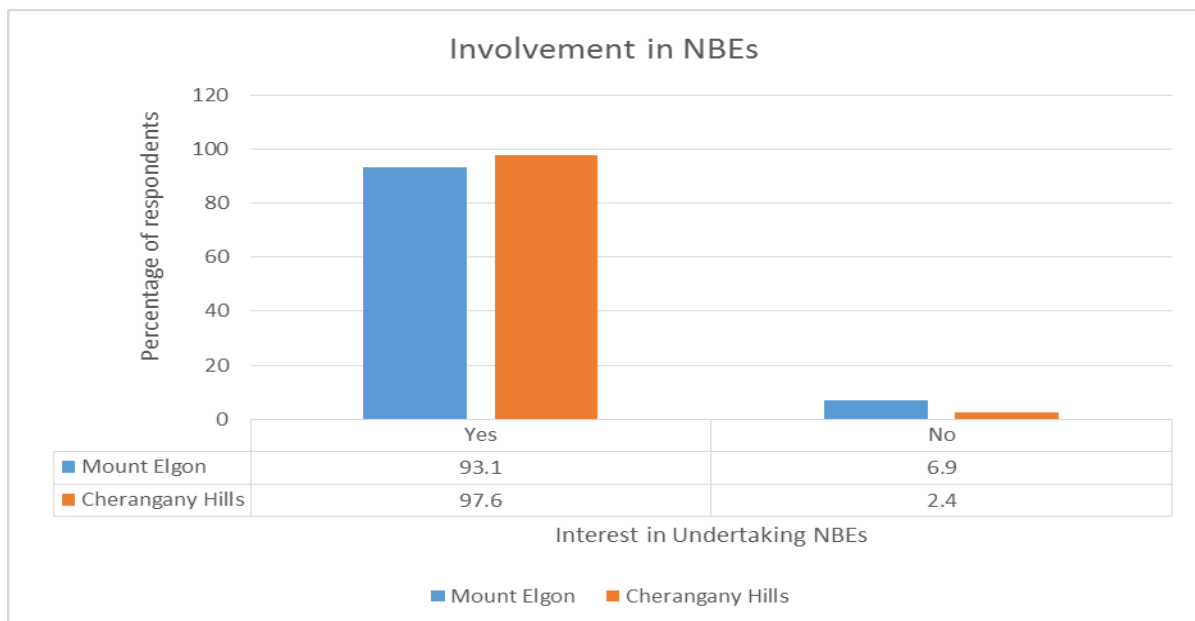


Figure 7. Household involvement in NBEs.

Most of the households in Mt. Elgon and Cherangany were involved in NBEs activities. Only 6.9% and 2.4% of households were not involved in NBEs activities in Mt. Elgon and Cherangany (Figure 7).

### 3.1.2 Identifying ongoing key NBEs

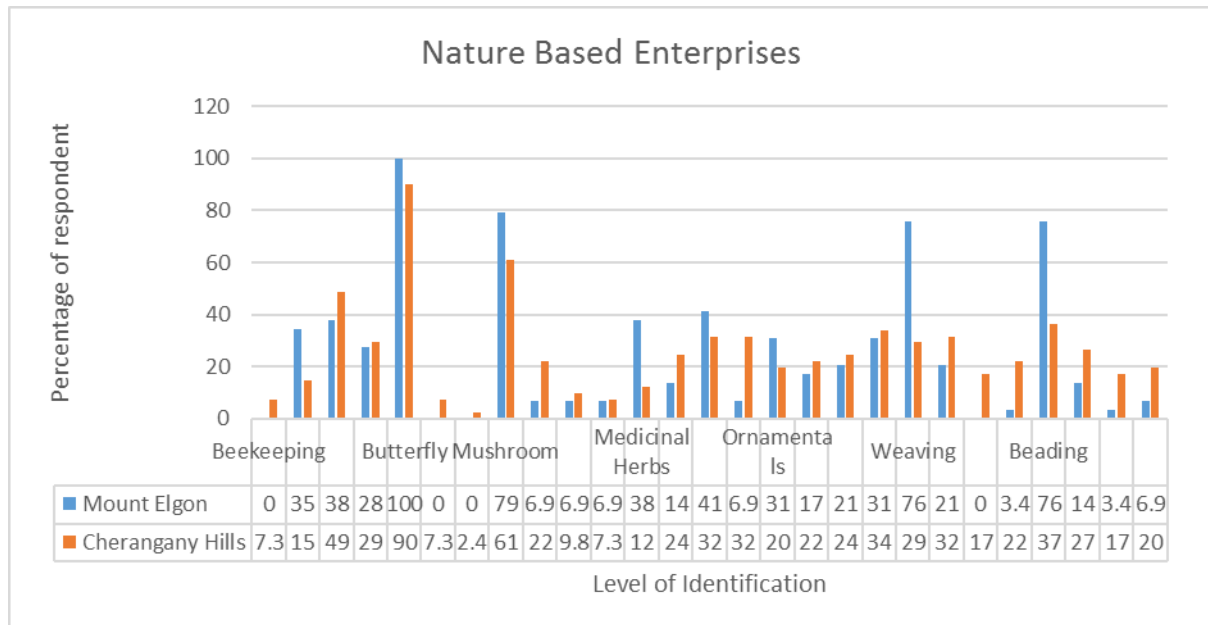


Figure 8. Level of identification of NBEs.

Very few households in Cherangany did not identify bee keeping activities, while all households interviewed in Mt Elgon identified bee keeping activities. However, 49% and 38% of households in Cherangany and Mt. Elgon identification of bee keeping activities was medium, with the number reducing and relatively similar for high identification Figure 8.

In butterfly activities, 100% and 90% of households Mt. Elgon and Cherangany did not identify the activities. There was 7.3% and 2.4% identification of butterfly activities in Cherangany and Mt. Elgon respectively Figure 8 .

There was a 79% and 61% no identification of mushroom activities in Mt Elgon and Cherangany respectively. There was a relatively similar 9% low, medium and high identification of mushroom in Mt. Elgon, while low identification was 22% in Cherangany, medium and high level of identification significantly reduced 9.8% and 7.3% respectively Figure 8.

There was a 38% and 12% no identification of medicinal herbs in Mt. Elgon and Cherangany. The medium identification of medicinal herbs increase in Mt Elgon and Cherangany, with Mt. Elgon having a higher medium identification than Cherangany. However, Cherangany had 32% identification of medicinal herbs compared to 6.9% identification in Mt. Elgon Figure 8.

There was a 31% and 20% no identification of ornamentals in Mt Elgon and Cherangany. However, the percent households with low, medium and higher identification increased but were relatively similar in Mt. Elgon and Cherangany. The level of identification was relatively higher in Cherangany compared to Mt. Elgon Figure 8.

There was a 76% and 29% no identification of weaving activities, with low identification of 32% and 3.4% in Cherangany and Mt. Elgon respectively. However there was no medium identification of weaving activities in Mt. Elgon, with a 3.4% and 22% high identification of weaving activities in Mt. Elgon and Cherangany respectively Figure 8.

There was a 76% and 37% no identification of beading activities in Mt. Elgon and Cherangany. The level of low and medium identification declined in Mt. Elgon and Cherangany, and a slight increase in High identification of 20 and 6.9% in Cherangany and Mt. Elgon Respectively Figure 8.

### 3.1.3 Education Level of respondents

The survey data on the highest educational attainment of respondents are presented in Figure 9.

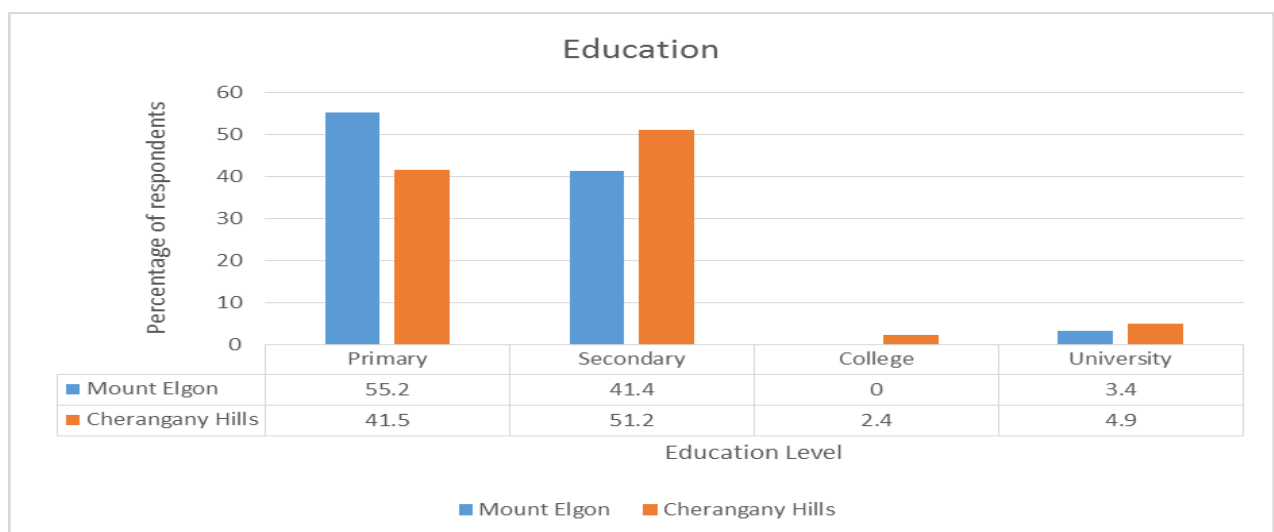


Figure 9. Education Level

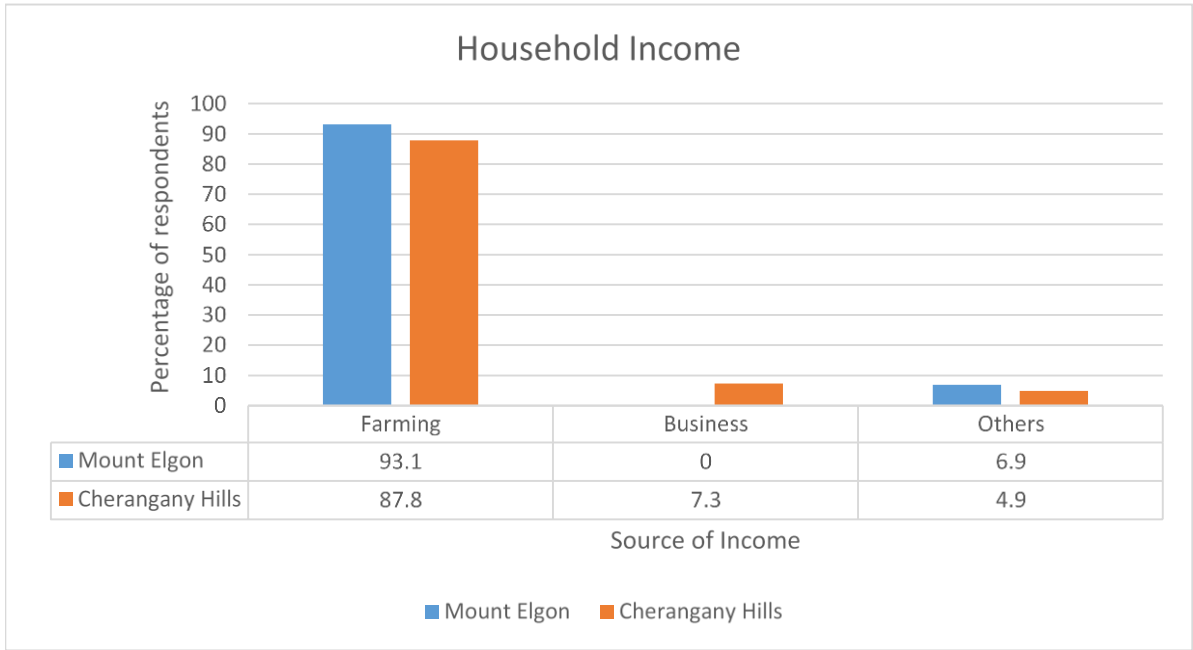
Figure 9 shows that Mt. Elgon and Cherangany Hills had 55.2% and 41.5% respondents who attained primary education.

However, there was decline and an increase of the respondents who attained secondary education in Mt. Elgon and Cherangany Hills respectively. Only 2.4% of the respondents attained college education in Cherangany Hills while no respondent attained college education in Mt. Elgon. There were 3.4% and 4.9% respondents who attained university education in Mt. Elgon and Cherangany Hills

#### ***3.1.4 Household Source of Income***

Most respondents 93.1% and 87.8% in Mt. Elgon and Cherangany Hills respectively practiced agriculture, which was the main source of income. 7.3%. The main crops produced included potatoes and maize for subsistence purposes. 7.3 % of households engaged in retail businesses for example shops for selling goods other than agricultural products in Cherangany Hills, while none of the respondents operated any business in Mt. Elgon. 6.9% and 4.9% of respondents in Mt. Elgon and Cherangany Hills respectively, had other sources of income which included working for the formal sector. The main sources of household income are as shown in

**Figure 10** below.



**Figure 10.** Household Income.

### 3.2 Priority Needs

Identifying the priority needs of the NBEs practitioners is key to the sustainability of the NBE projects. The survey sought to establish the priority needs of the NBEs practitioners to enhance contribution and participation in value addition, marketing and use of technology without destroying the environment, to ensure the sustainability of the NBEs.

The priority needs identified were on the following key areas:

- ⇒ Value addition;
- ⇒ Marketing; and
- ⇒ Use of technology;

The lack of priority within the NBEs has resulted in negative returns from the enterprises. The following was quoted from the WRUA Chairman-Kitalale (Mt. Elgon) Phase 1 Bee Keeping Group:

*“.....The members are all well informed and the quality of life has improved. However, the poverty level is still very high because of the poor access to markets and use of technology....”*

The following indicators of priority needs were identified during the baseline survey. This survey is based on 29 respondents from Mount Elgon and 41 respondents from Cherangany Hills.

#### 3.2.1 Involvement in NBEs

The interest in undertaking NBEs are as shown in Figure 11 below.

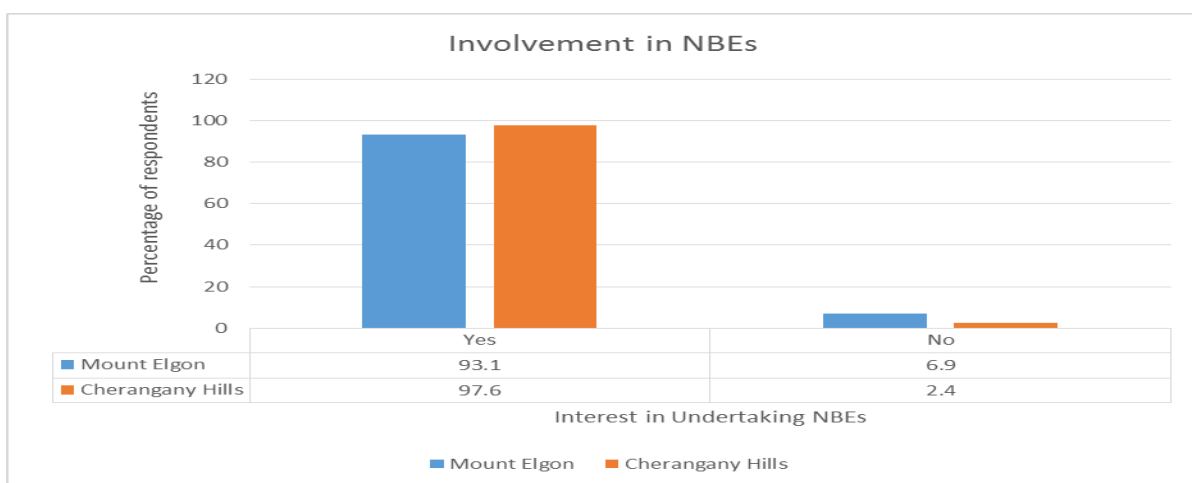


Figure 11. Involvement in NBEs

There was a high interest 93.1% and 97.6% of involvement in NBEs in Mt. Elgon and Cherangany. However, 6.9% and 2.4% were not interested in NBEs in Mt Elgon and Cherangany respectively (Figure 11).

### 3.2.2 Preference of NBEs

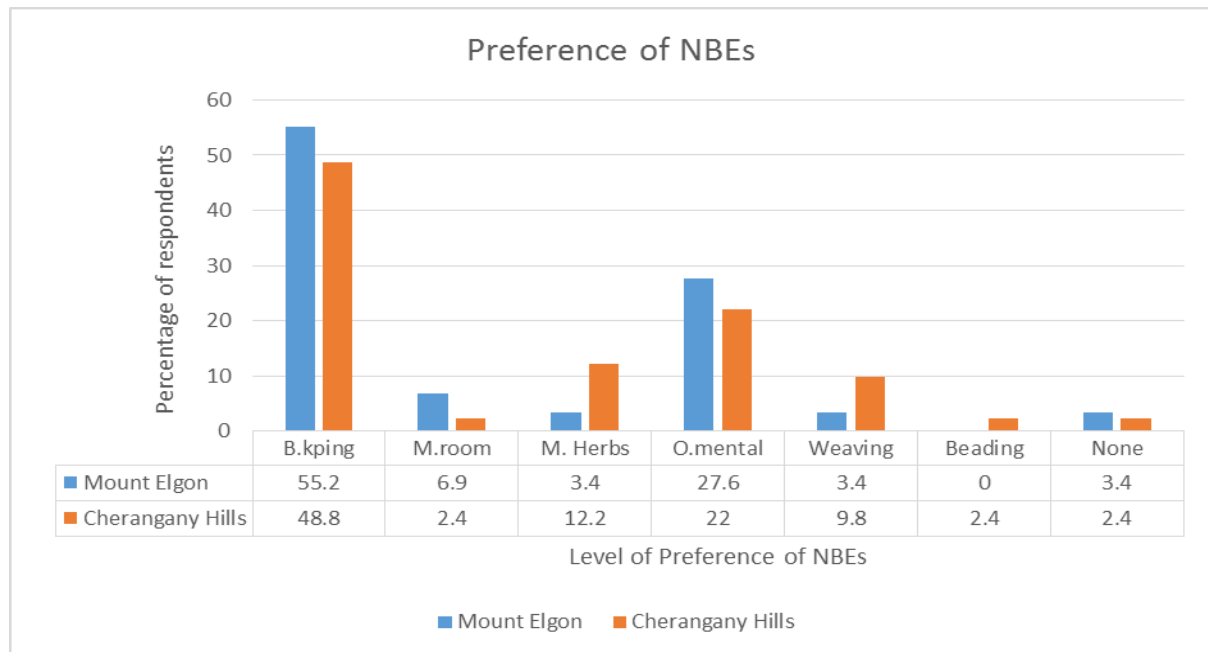


Figure 12. Preference of NBEs.

In Mt. Elgon and Cherangany Hills, bee keeping was the most preferred activity by the respondents at 55.2% and 48.8% respectively. The second most preferred NBE was ornamental 27.6% and 22% in Mt Elgon and Cherangany Hills respectively. Mushroom was most preferred in Mt Elgon, while herbs and weaving were most preferred in Cherangany. Beading was preferred only in Cherangany 2.4%, while 3.4% and 2.4% of the respondents did not give preference to any of the activities in Mt. Elgon and Cherangany Hills respectively (Figure 12).

### 3.2.3 Prioritization of NBEs

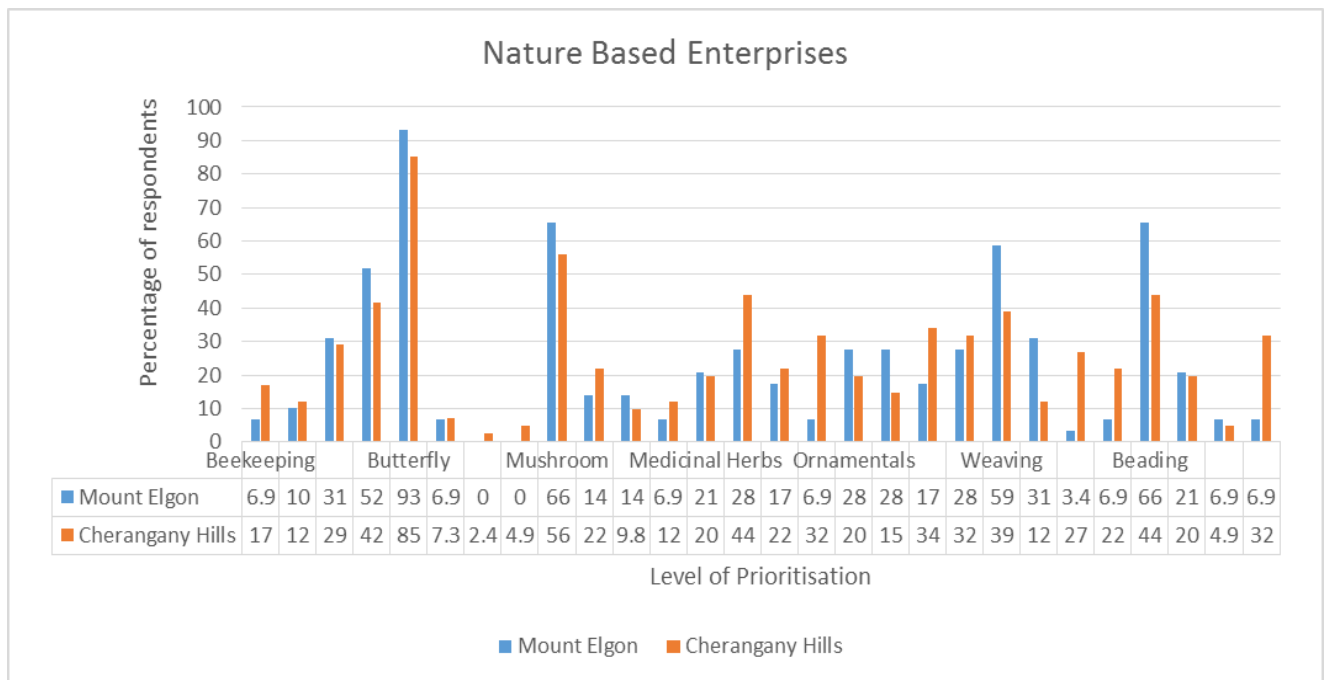


Figure 13. Level of Prioritization of NBEs.

As per Figure 13, Mount Elgon had 7% prioritization and Cherangany Hills had 17.1%. For Low prioritization, Mount Elgon had 10.3% prioritization and Cherangany Hills had 12.2%. For Medium identification, Mount Elgon had 31% prioritization and Cherangany Hills had 29.3%. For High prioritization, Mount Elgon had 51.7% prioritization and Cherangany Hills had 41.5%.

As per Figure 13, Mount Elgon had 93% prioritization and Cherangany Hills had 85.4%. For Low prioritization, Mount Elgon had 7% prioritization and Cherangany Hills had 7.3%. For Medium identification, Mount Elgon had 0% prioritization and Cherangany Hills had 4.9%. For High prioritization, Mount Elgon had 0% prioritization and Cherangany Hills had 4.9%.

As per Figure 13, Mount Elgon had 65.5% prioritization and Cherangany Hills had 56.1%. For Low prioritization, Mount Elgon had 14% prioritization and Cherangany Hills had 22%. For Medium identification, Mount Elgon had 13.8% prioritization and Cherangany Hills had 9.8%. For High prioritization, Mount Elgon had 6.9% prioritization and Cherangany Hills had 12.2%.



As per Figure 13 Mount Elgon had 34.5% prioritization and Cherangany Hills had 14.6%. For Low prioritization, Mount Elgon had 20.7% prioritization and Cherangany Hills had 19.5%. For Medium identification, Mount Elgon had 27.6% prioritization and Cherangany Hills had 43.9%. For High prioritization, Mount Elgon had 17.2% prioritization and Cherangany Hills had 22%.

Mount Elgon had 27.6% prioritization and Cherangany Hills had 19.5%. For Low prioritization, Mount Elgon had 28% prioritization and Cherangany Hills had 14.6%. For Medium identification, Mount Elgon had 17.2% prioritization and Cherangany Hills had 34.1%. For High prioritization, Mount Elgon had 27.6% prioritization and Cherangany Hills had 31.7% Figure 13.

As per Figure 13, Mount Elgon had 75.9% prioritization and Cherangany Hills had 36.6%. For Low prioritization, Mount Elgon had 13.8% prioritization and Cherangany Hills had 26.8%. For Medium identification, Mount Elgon had 3.4% prioritization and Cherangany Hills had 17.1%. For High prioritization, Mount Elgon had 6.9% prioritization and Cherangany Hills had 19.5%.

As per Figure 13, Mount Elgon had 65.5% prioritization and Cherangany Hills had 43.9%. For Low prioritization, Mount Elgon had 20.7% prioritization and Cherangany Hills had 19.5%. For Medium identification, Mount Elgon had 6.9% prioritization and Cherangany Hills had 4.9%. For High prioritization, Mount Elgon had 6.9% prioritization and Cherangany Hills had 31.7%.

### 3.2.4 Undertaking of NBEs

The undertaking of NBEs (Beekeeping) is as shown in Figure 14 below. On bee keeping activities, 13.8% and 31.7% of respondents did not undertake bee keeping activities in Mt. Elgon and Cherangany respectively.

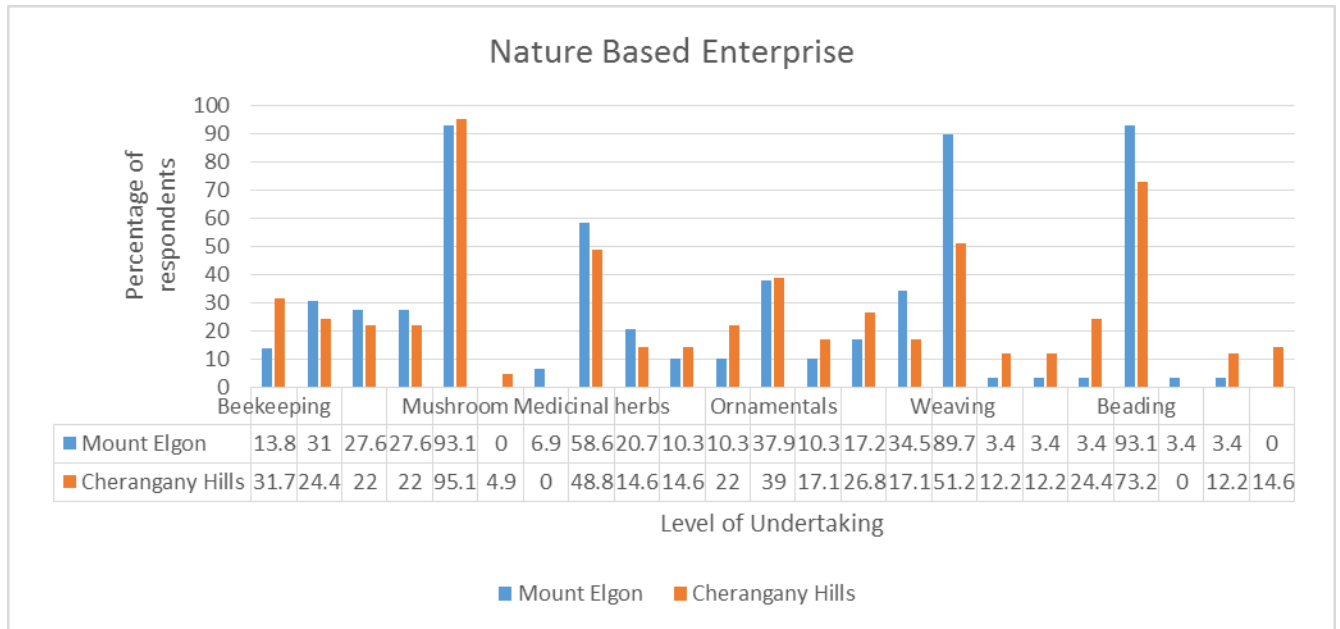


Figure 14. Level of Undertaking of NBEs.

There was a 31% and 24.4% low undertaking of bee keeping activities in Mt. Elgon and Cherangany respectively. However, there was a relatively similar medium and high undertaking 27.6% and 22% of bee keeping activities in Mt. Elgon and Cherangany Figure 14.

In the two ecosystems, there was no undertaking of butterfly farming by any of the respondents (Figure 14).

On mushroom farming, 93.1% and 95.1% of respondents did not undertake mushroom farming. Only 4.9% and 6.9% had a low and medium undertaking of mushroom farming Cherangany and Mt. Elgon respectively (Figure 14).

There was 58.6% and 48.8% no undertaking in medicinal herbs in Mt. Elgon and Cherangany. However, there was a relatively similar low and medium and an increase in high 22% undertaking of medicinal herbs in Cherangany, with a decline in low 20.7% and a relatively similar medium and high 10.3% undertaking in Mt. Elgon Figure 14.

In Mt. Elgon and Cherangany, 37.9% and 39% of respondents did not undertake ornamental

activities. However there was an increase in low, medium and high undertaking of ornamental activities 10.3%, 17.2% and 34.4 % respectively in Mt. Elgon, and increase in low and medium undertaking 17.1% and 26,8% followed by a decline 17.1% of high undertaking in Cherangany (Figure 14).

In Mt. Elgon and Cherangany, 89.7% and 51.2% of respondents did not undertake weaving activities. In Mt. Elgon, the low, medium and high undertakings of weaving activities were relatively similar at 3.4%. While the low and medium undertakings of weaving activities were relatively similar 12.3% in Cherangany, the high level of undertaking increased 24.4% (Figure 14).

In Mt. Elgon and Cherangany, 93.1% and 73.2% respectively did not undertake beading activities. There was a relatively similar 3.4% low and medium undertaking and medium and high beading activities in Mt. Elgon and Cherangany respectively. There were no low and high undertaking of beading activities in Cherangany and Mt. Elgon respectively Figure 14.

### 3.3 NATURE BASED ENTERPRISES

#### 3.3.1 Estimating the income (in Kshs)

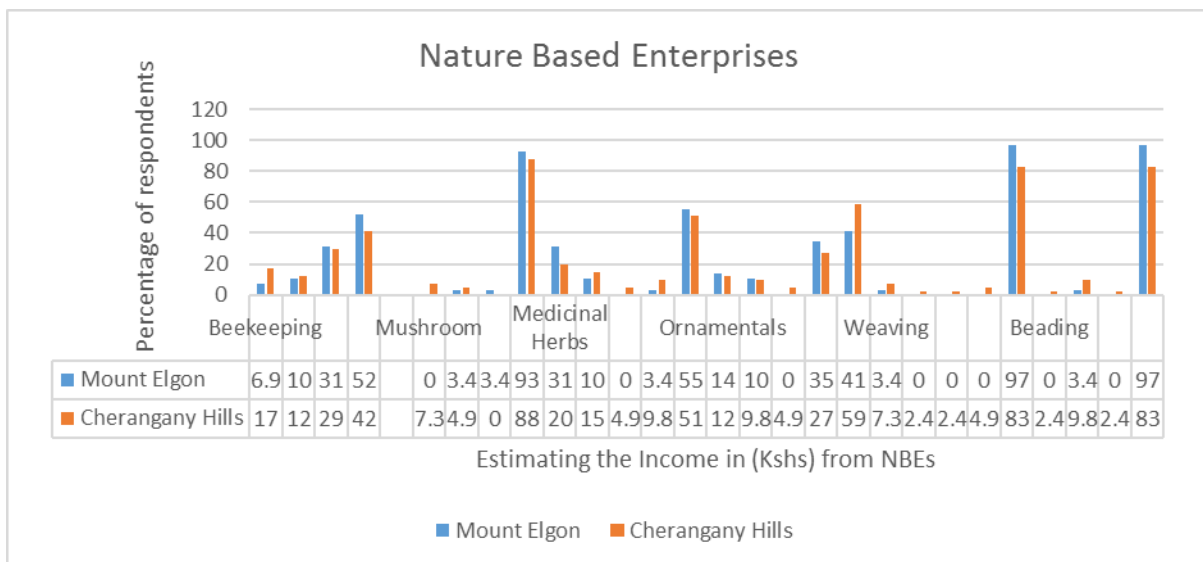


Figure 15. Estimating the income (in Kshs) from NBEs.

Income from the sale of honey showed, that Mt. Elgon had 31% for less than 200 and Cherangany Hills had 17.1%. From 200 to 500, Mt. Elgon had 37.9% and Cherangany Hills had 14.6%. From 501 to 1000, Mount Elgon had 13.8% and Cherangany Hills had 31.7%. For more than 1000, Mt. Elgon had 6.9% and Cherangany Hills had 14.6%. Mt. Elgon had 10.3% and Cherangany Hills had 22% for the participants who did not receive any income from bee keeping (Figure 15).

Income estimation of medicinal herbs showed, Mt. Elgon had 31% for less than 200 and Cherangany Hills had 19.5%. From 200 to 500, while Mt. Elgon had 10.3% and Cherangany Hills had 14.6%. From 501 to 1000, Mt. Elgon had 0% and Cherangany Hills had 4.9%. For more than 1000, Mount Elgon had 3.4% and Cherangany Hills had 9.8%. Of the respondents who did not receive any income from the sale of medicinal herbs, 55.2 % were in Mt. Elgon, while 51.2% were in Cherangany (Figure 15).

Estimation of income from the sale of ornamentals showed, Mt. Elgon had 13.8% for less than 200 and Cherangany Hills had 12.2%. From 200 to 500, Mt. Elgon had 10.3% and Cherangany Hills had 9.8%. For more than 1000, Mount Elgon had 34.5% and Cherangany Hills had 26.8%. 41.4 % and 46.3% of the respondents in Mt. Elgon and Cherangany respectively did not receive any income from the sale of ornamentals. Income estimation from the sale of mushrooms showed, no income of less than 200 in Mt. Elgon, while Cherangany Hills had 7.3%. From 200 to 500, Mount Elgon had 3.4% and Cherangany Hills had 4.9%. While 3.4% received From 501 to 1000 in Mt. Elgon, respondents in Cherangany did not receive any amount. 93% and 87.8% of respondents did not receive any income from the sale of mushrooms (Figure 15).

Estimation of income from the sale of weaving products showed that 3.4 % in Mt. Elgon and 7.3 % in Cherangany received less than 200. While no respondent in Mt Elgon receive income, 2.4% in Cherangany received 200-500. From 501 to 1000, Mt. Elgon had 0% and Cherangany Hills had 2.4%. For more than 1000, Mt. Elgon had 0% and Cherangany Hills had 4.9%. Most respondents 96.6% and 82.9% did not receive any income in Mt. Elgon and Cherangany respectively (Figure 15).

Income estimation from sale of beads showed that for less than 200 that Mt. Elgon did not receive any income while 2.4% received income in Cherangany. 3.4% and 9.8% of the respondents in Mt. Elgon and Cherangany received incomes of 200 to 500, while no

respondent in Mt. Elgon and 2.4% in Cherangany received incomes of 501 to 1000. Of the participants who did not receive any payments, 96.6% and 85.4% were in Mt. Elgon and Cherangany respectively (Figure 15).

### 3.3.2 Expenditure on Production of NBEs

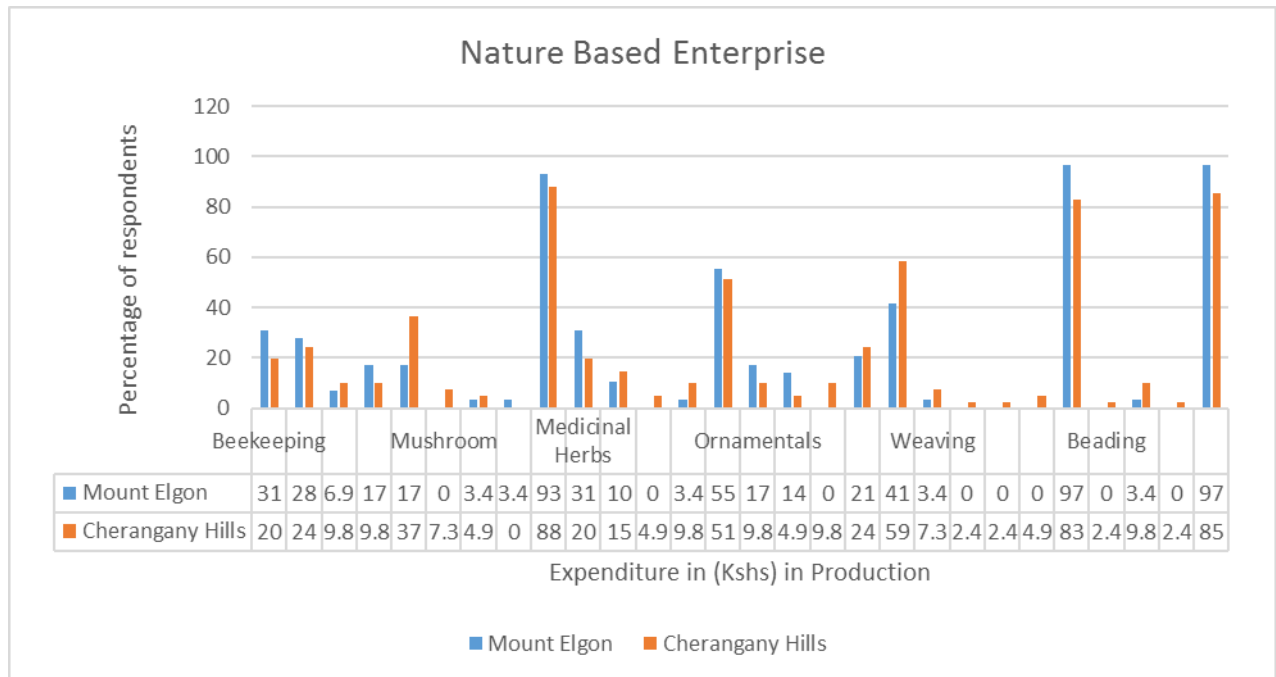


Figure 16. Level of Expenditure on Production of NBEs

Estimation of expenditure from the production of honey showed, that 31% and 19.5% spent less than 200 in Mt. Elgon and Cherangany Hills. 27.6% and 24.4% in Mt. Elgon and Cherangany spent 200 to 500., while 6.9% and 9.8% of the respondents spent 501 to 1000, in Mt. Elgon and Cherangany Hills.. However, 17.2% and 9.8% of respondents spent more than 100. 17.2% and 36.6% in Mt Elgon and Cherangany did not have any expenditure on honey production(Figure 16).

Estimation of expenditures from the production mushrooms showed, that 3.4% and 4.9% spent less than 200, while 3.4% and 2.4% spent 200 to 500 in Mt. Elgon and Cherangany Hills Respectively ., 93.1% and 92.7% did not have any expenditure on mushroom production (Figure 16).

Estimation of expenditure on the processing of weaves showed that 3.4% and 12.2% spent less than while no respondent and 2.4% spent 200 to 500 respectively in Mt Elgon and

Cherangany. However, No respondent and 2.4% spent 501 to 1000, while 96.6% and 82.9% did not have any expenditure on processing of weaves in Mt. Elgon and Cherangany (Figure 16).

Expenditure on the production of beads showed, no respondent and 4.9% in spent less than 200, while in Mt Elgon and Cherangany. No respondents spent 200-500, 500-100 in Mt. Elgon while 2.4% spent 200-500, 500-100 in Cherangany. 96.6% and 85.4% of respondents did not have any expenditure on bead production in Mt. Elgon and Cherangany respectively (Figure 16).

Expenditure for the production of ornamentals showed, that 17.2% and 9.8% spent less than 200, 13.8% and 4.9% spent 200-500, in Mt. Elgon and Cherangany respectively. However, there were no expenditures in Mt. Elgon, with 9.8% spending 501 to 1000 in Cherangany. 20.7% and 24.4% spent more than 1000, while 48.3% and 51.2% did not have any expenditure in Mt. Elgon and Cherangany Respectively (Figure 16).

### 3.3.3 Expenditure on Processing of NBEs

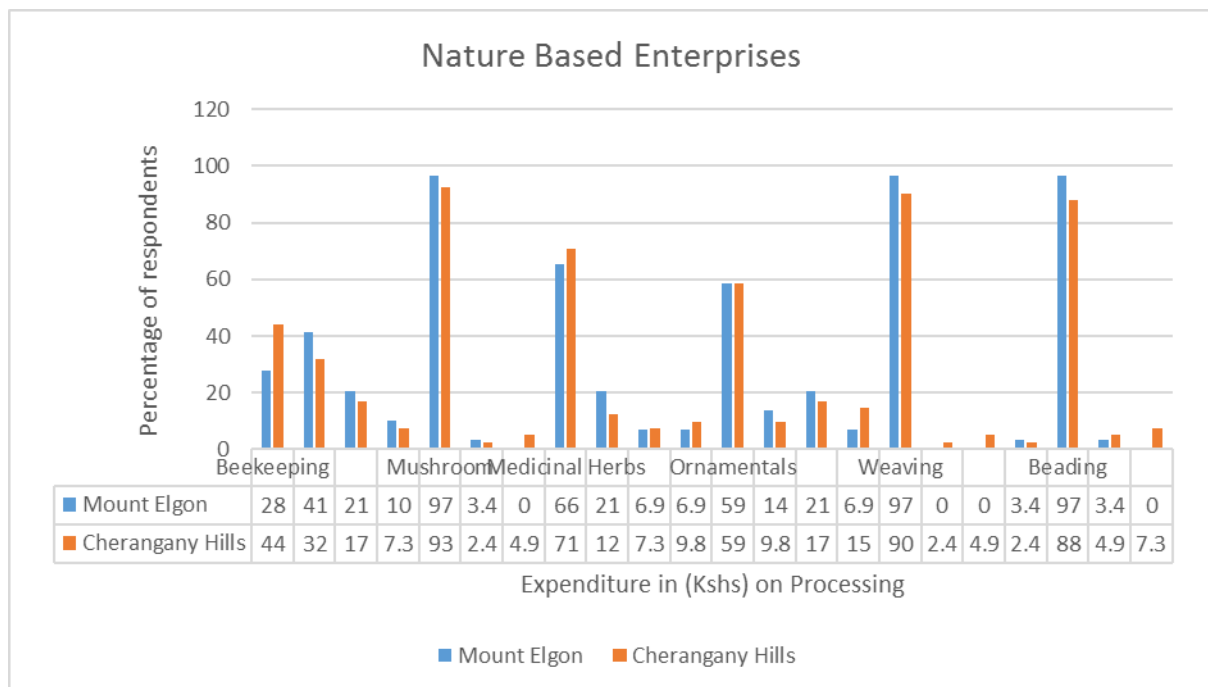


Figure 17. Level of Expenditure on Processing NBEs.

27.6% and 51.2% did not have any processing expenditures in Mt. Elgon and Cherangany respectively. However, respondents in Mt. Elgon did not spend more than 1000, while 2.4 spent more than 1000 (Figure 17).

Expenditure for the processing of ornamentals showed that 20.7% and 34.1% spent less than 200, 3.4% and 2.4% spent 200 to 500, 10.3% and 7.3% spent more than 1000, 62.1% and 56.1% did not have any expenditure on processing of ornamentals in Mt. Elgon and Cherangany respectively. However, 3.4% spent and none of the respondents spent 501-1000 in Mt. Elgon and Cherangany (Figure 17).

Estimating expenditure on the processing of mushrooms showed, 6.9% and 7.3% spent less than 200 while 93.1% and 92.7% did not incur any processing costs in Mt. Elgon and Cherangany respectively (Figure 17).

Expenditure on the processing of weaves showed, that 3.4% and 14.6% spent less than 200, while 96.6% and 85.4% did not have any expenditure in Mt. Elgon and Cherangany respectively (Figure 17).

Estimating expenditure on the processing of beads showed that 3.4% and 2.4% spent more than 1000, while 96.6% and 87.8% did not incur processing costs in Mt. Elgon and Cherangany. However, no respondents in Mt. Elgon spent less than 200, while 9.8% spent less than 200 in Cherangany (Figure 17).

### 3.3.4 Expenditure on Marketing of NBEs

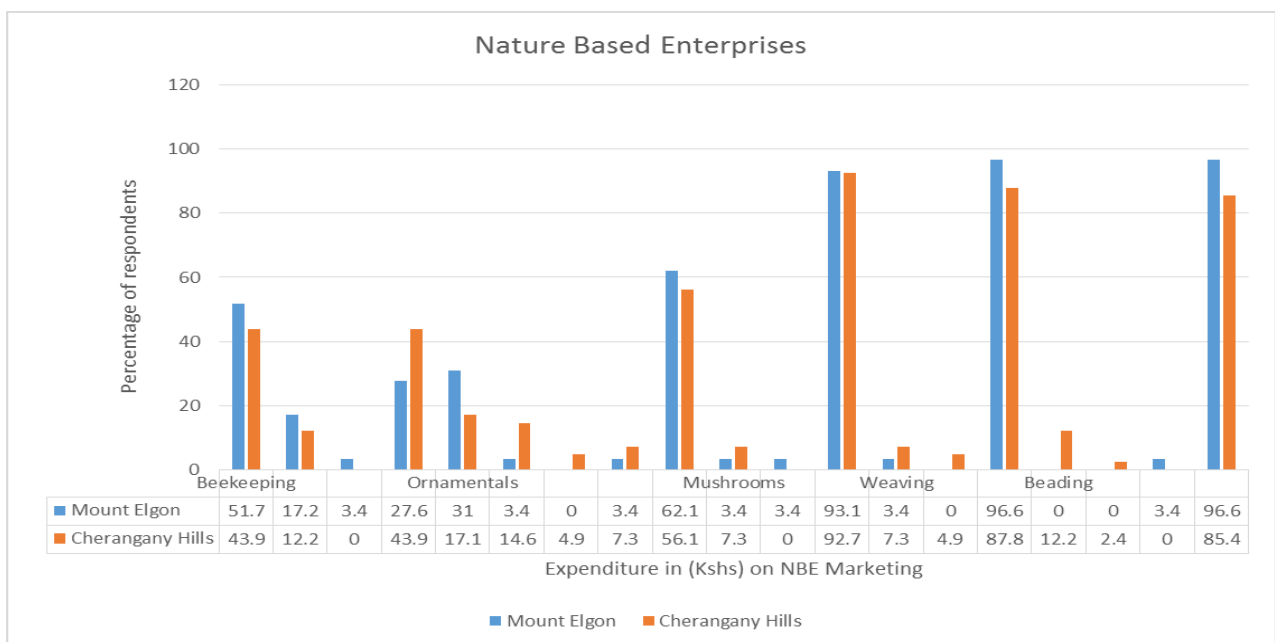


Figure 18 Level of Expenditure on NBE Marketing

Estimating expenditure for marketing of honey showed Mount Elgon had 51.7% for less than 200 and Cherangany Hills had 43.9%. From 200 to 500, Mount Elgon had 17.2% and Cherangany Hills had 12.2%. From 501 to 1000, Mount Elgon had 3.4% and Cherangany Hills had 0%. For the participants who said none, Mount Elgon had 27.6% and Cherangany Hills had 43.9% (Figure 18).

Expenditure for the marketing of ornamentals showed, Mount Elgon had 31% for less than 200 and Cherangany Hills had 17.1%. From 200 to 500, Mount Elgon had 3.4% and Cherangany Hills had 14.6%. From 501 to 1000, Mount Elgon had 0% and Cherangany Hills had 4.9%. For more than 1000, Mount Elgon had 3.4% and Cherangany Hills had 7.3%. For the participants who said none, Mount Elgon had 62.1% and Cherangany Hills had 56.1% (Figure 18).

Expenditure for the marketing of mushrooms showed, Mount Elgon had 3.4% for less than 200 and Cherangany Hills had 7.3%. From 200 to 500, Mount Elgon had 3.4% and Cherangany Hills had 0%. For the participants who said none, Mount Elgon had 93.1% and Cherangany Hills had 92.7% (Figure 18).

Expenditure for the marketing of weaves showed, Mount Elgon had 3.4% for less than 200 and Cherangany Hills had 7.3%. From 501 to 1000, Mount Elgon had 0% and Cherangany Hills had 4.9%. For the participants who said none, Mount Elgon had 96.6% and Cherangany Hills had 87.8% (Figure 18).

Expenditure for the marketing of beads showed, Mount Elgon had 0% for less than 200 and Cherangany Hills had 12.2%. From 200 to 500, Mount Elgon had 0% and Cherangany Hills had 2.4%. For more than 1000, Mount Elgon had 3.4% and Cherangany Hills had 0%. For the participants who said none, Mount Elgon had 96.6% and Cherangany Hills had 85.4% (Figure 18).



### 3.3 Marketing Channels for NBEs

#### 3.1.1 Marketing of Honey (Farm gate, Local market, Super market and SACCO)

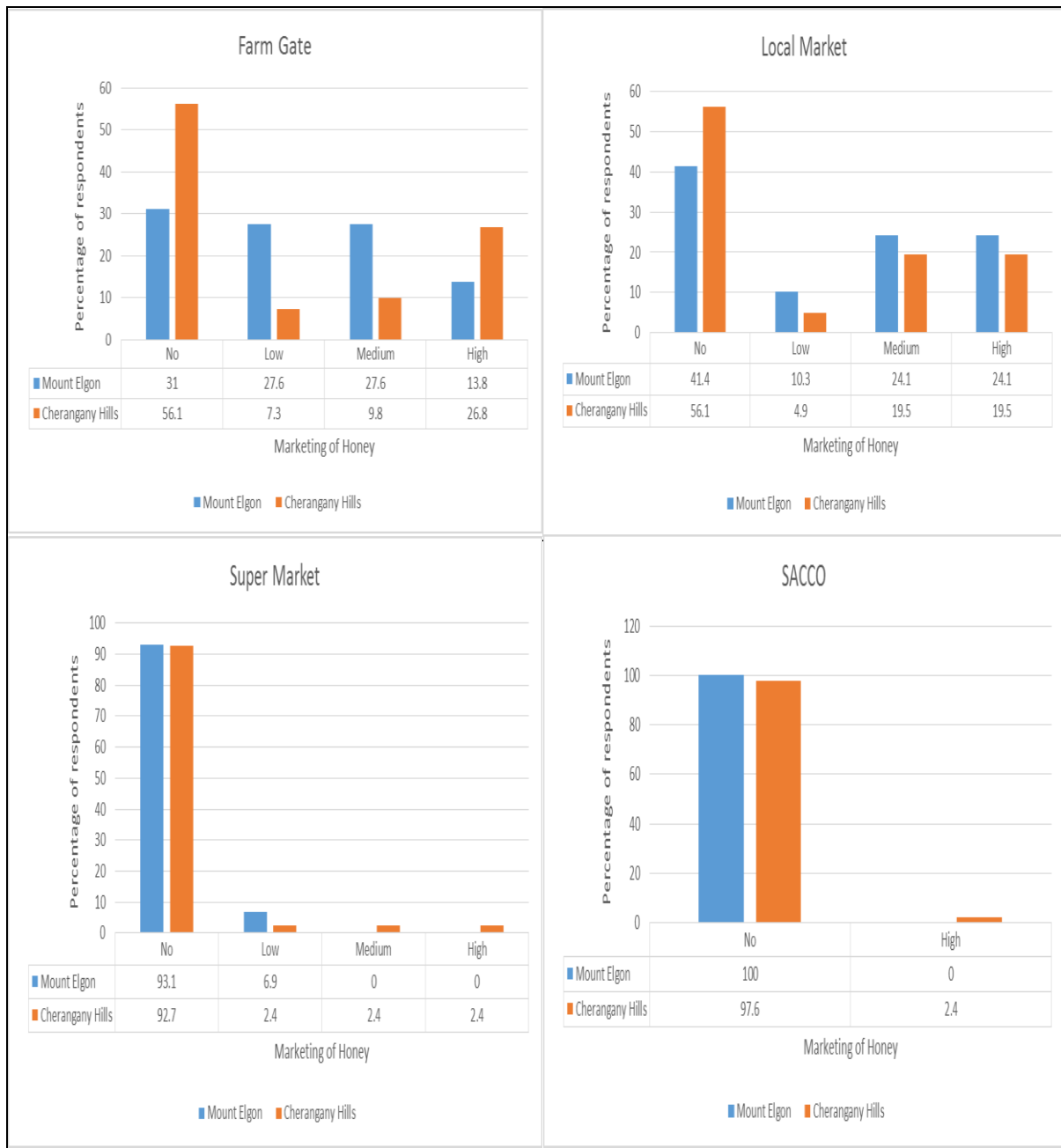


Figure 19. Level of Marketing of Honey.

Marketing of Honey at farm gate, Mount Elgon had 31% stating they don't sell at farm gate and Cherangany Hills had 56.1%. Mount Elgon had 27.6% stating they sell in low quantities at farm gate and Cherangany Hills had 7.3%. For Medium sales, Mount Elgon had 27.6% selling at farm gate and Cherangany Hills had 9.8%. For High sales, Mount Elgon had 13.8%

selling at farm gate and Cherangany Hills had 26.8% (Figure 19).

Marketing of Honey at local market, Mount Elgon had 41% stating they don't sell at local market and Cherangany Hills had 56.1%. Mount Elgon had 10.3% stating they sell in low quantities at local market and Cherangany Hills had 4.9%. For Medium sales, Mount Elgon had 24.1% selling at local market and Cherangany Hills had 19.5%. For High sales, Mount Elgon had 24.1% selling at local market and Cherangany Hills had 19.5% (Figure 19).

Marketing of Honey at super market, Mount Elgon had 93.1% stating they don't sell at super market and Cherangany Hills had 92.7%. Mount Elgon had 6.9% stating they sell in low quantities at super market and Cherangany Hills had 2.4%. For Medium sales, Mount Elgon had 0% selling at super market and Cherangany Hills had 2.4%. For High sales, Mount Elgon had 0% selling at super market and Cherangany Hills had 2.4% (Figure 19).

Marketing of Honey at SACCO, Mount Elgon had 100% stating they don't sell at SACCO and Cherangany Hills had 97.6%. For High sales, Mount Elgon had 0% selling at SACCO and Cherangany Hills had 2.4% (Figure 19).

### 3.1.2 Marketing of Ornamentals (Farm gate, Local market, Supermarket and SACCO)

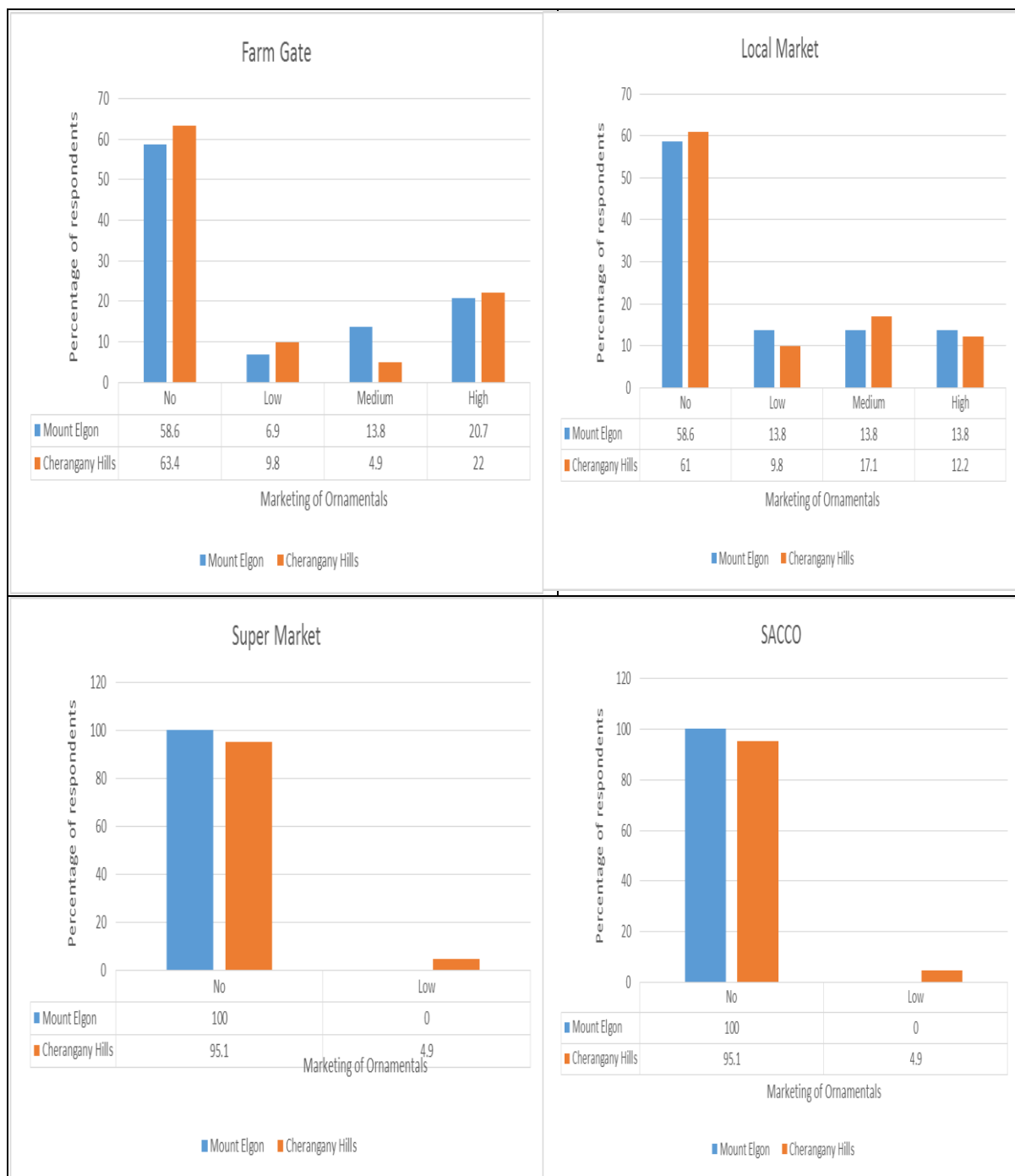


Figure 20. Level of Marketing of Ornamentals.

Marketing of ornamentals at farm gate, Mount Elgon had 58.6% stating they don't sell at farm gate and Cherangany Hills had 63.4%. Mount Elgon had 6.9% stating they sell in low quantities at farm gate and Cherangany Hills had 9.8%. For Medium sales, Mount Elgon had 13.8% selling at farm gate and Cherangany Hills had 4.9%. For High sales, Mount Elgon had

20.7% selling at farm gate and Cherangany Hills had 22% (Figure 20).

Marketing of ornamentals at local market, Mount Elgon had 58.6% stating they don't sell at local market and Cherangany Hills had 61%. Mount Elgon had 13.8% stating they sell in low quantities at local market and Cherangany Hills had 9.8%. For Medium sales, Mount Elgon had 13.8% selling at local market and Cherangany Hills had 17.1%. For High sales, Mount Elgon had 13.8% selling at local market and Cherangany Hills had 12.2% (Figure 20).

Marketing of ornamentals at super market, Mount Elgon had 100% stating they don't sell at super market and Cherangany Hills had 95.1%. Mount Elgon had 0% stating they sell in low quantities at super market and Cherangany Hills had 4.9% (Figure 20).

Marketing of Ornamentals at SACCO, Mount Elgon had 100% stating they don't sell at SACCO and Cherangany Hills had 95.1%. Mount Elgon had 0% stating they sell in low quantities at SACCO and Cherangany Hills had 4.9% (Figure 20).

### 3.1.3 Marketing of Mushrooms (Farm gates, Local market, Super markets and SACCO)

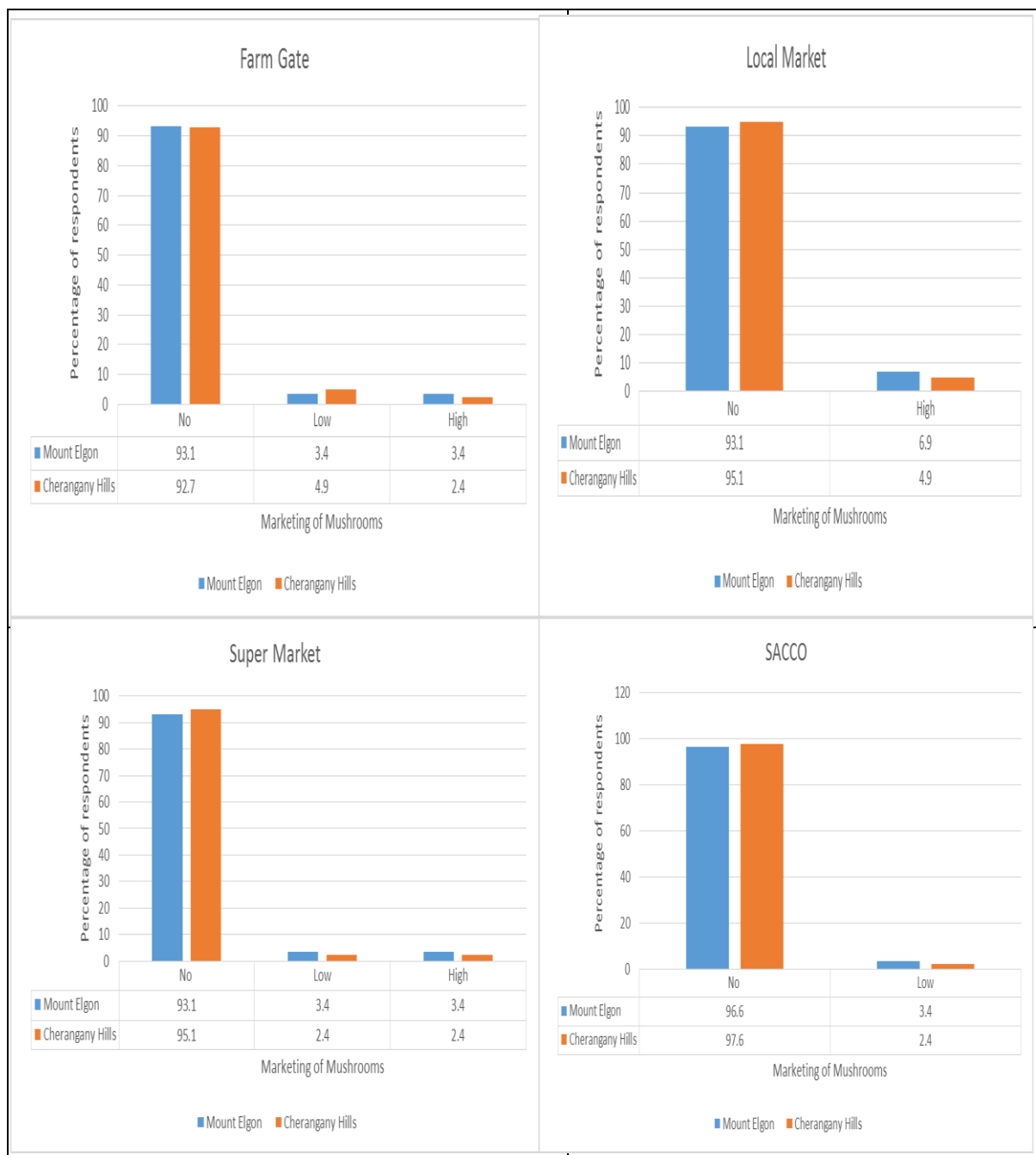


Figure 21. Level of Marketing of Mushrooms.

Marketing of mushrooms at farm gate, Mount Elgon had 93.1% stating they don't sell at farm gate and Cherangany Hills had 92.7%. Mount Elgon had 3.4% stating they sell in low quantities at farm gate and Cherangany Hills had 4.9%. For High sales, Mount Elgon had 3.4% selling at farm gate and Cherangany Hills had 2.4% (Figure 21).

Marketing of mushrooms at local market, Mount Elgon had 93.1% stating they don't sell at

local market and Cherangany Hills had 95.1%. For High sales, Mount Elgon had 6.9% selling at local market and Cherangany Hills had 4.9% (Figure 21).

Marketing of mushrooms at super market, Mount Elgon had 93.1% stating they don't sell at super market and Cherangany Hills had 95.1%. Mount Elgon had 3.4% stating they sell in low quantities at super market and Cherangany Hills had 2.4%. For High sales, Mount Elgon had 3.4% selling at super market and Cherangany Hills had 2.4%N(Figure 21).

Marketing of mushrooms at SACCO, Mount Elgon had 96.6% stating they don't sell at SACCO and Cherangany Hills had 97.6%. Mount Elgon had 3.4% stating they sell in low quantities at SACCO and Cherangany Hills had 2.4% (Figure 21).

### 3.1.4 Marketing of Weave products (Farm gate, Local market, Super market and SACCO)

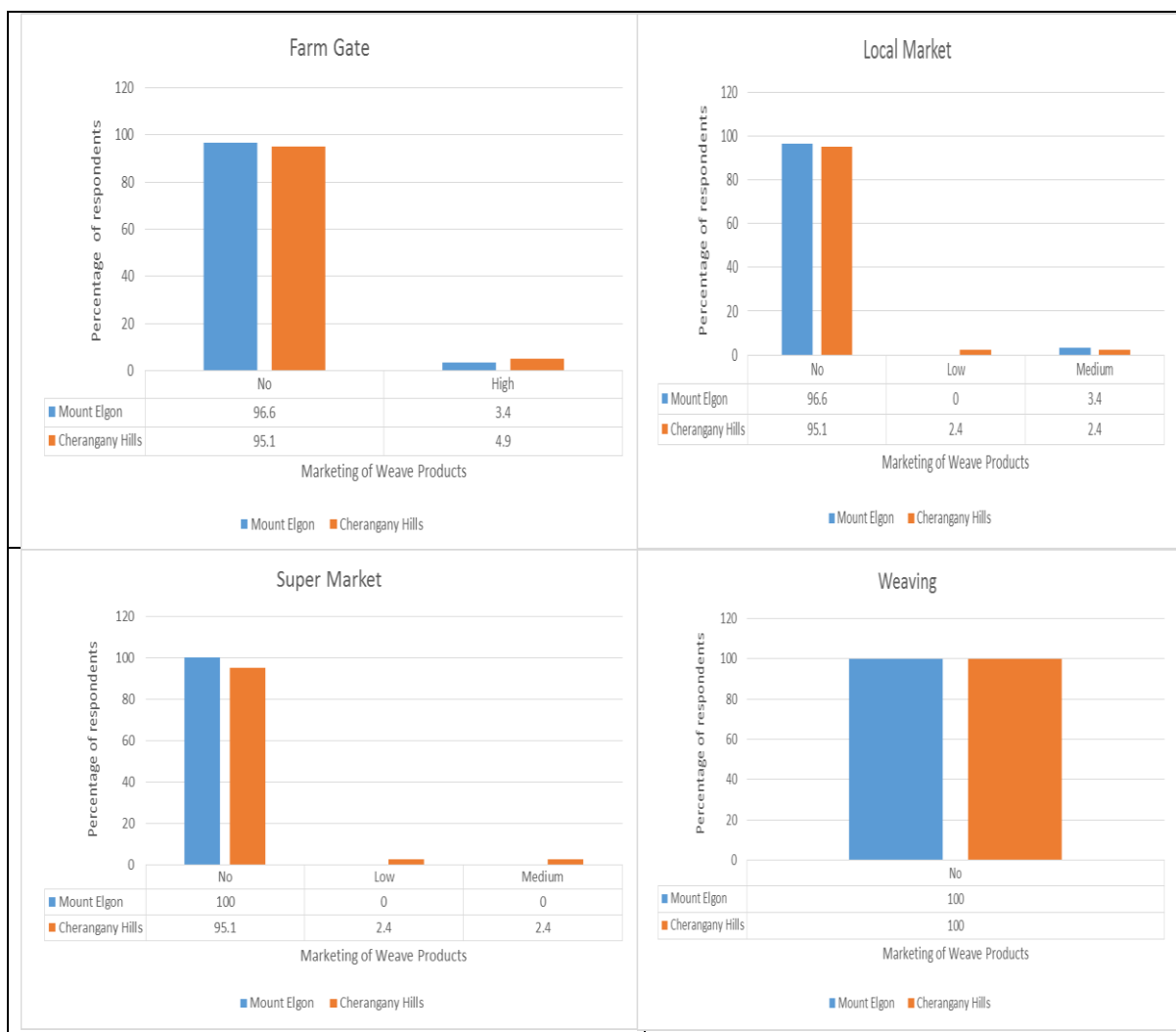


Figure 22. Level of Marketing of Weave Products.

Marketing of weave products at farm gate, Mount Elgon had 96.6% stating they don't sell at farm gate and Cherangany Hills had 95.1%. For High sales, Mount Elgon had 3.4% selling at farm gate and Cherangany Hills had 4.9% (Figure 22).

Marketing of Weave Products at local market, Mount Elgon had 96.6% stating they don't sell at local market and Cherangany Hills had 95.1%. For Low sales, Mount Elgon had 0% selling at local market and Cherangany Hills had 2.4%. For medium sales, Mount Elgon had 3.4% selling at local market and Cherangany Hills had 2.4% (Figure 22).

Marketing of Weave Products at super market, Mount Elgon had 100% stating they don't sell at super market and Cherangany Hills had 95.1%. For Low sales, Mount Elgon had 0% selling at super market and Cherangany Hills had 2.4%. For medium sales, Mount Elgon had 0% selling at super market and Cherangany Hills had 2.4% (Figure 22).

Marketing of Weave Products at SACCO, Mount Elgon had 100% stating they don't sell at SACCO and Cherangany Hills had 100% (Figure 22).

### 3.1.5 Marketing of Bead products (Farm gate, Local market, Super market and SACCO)

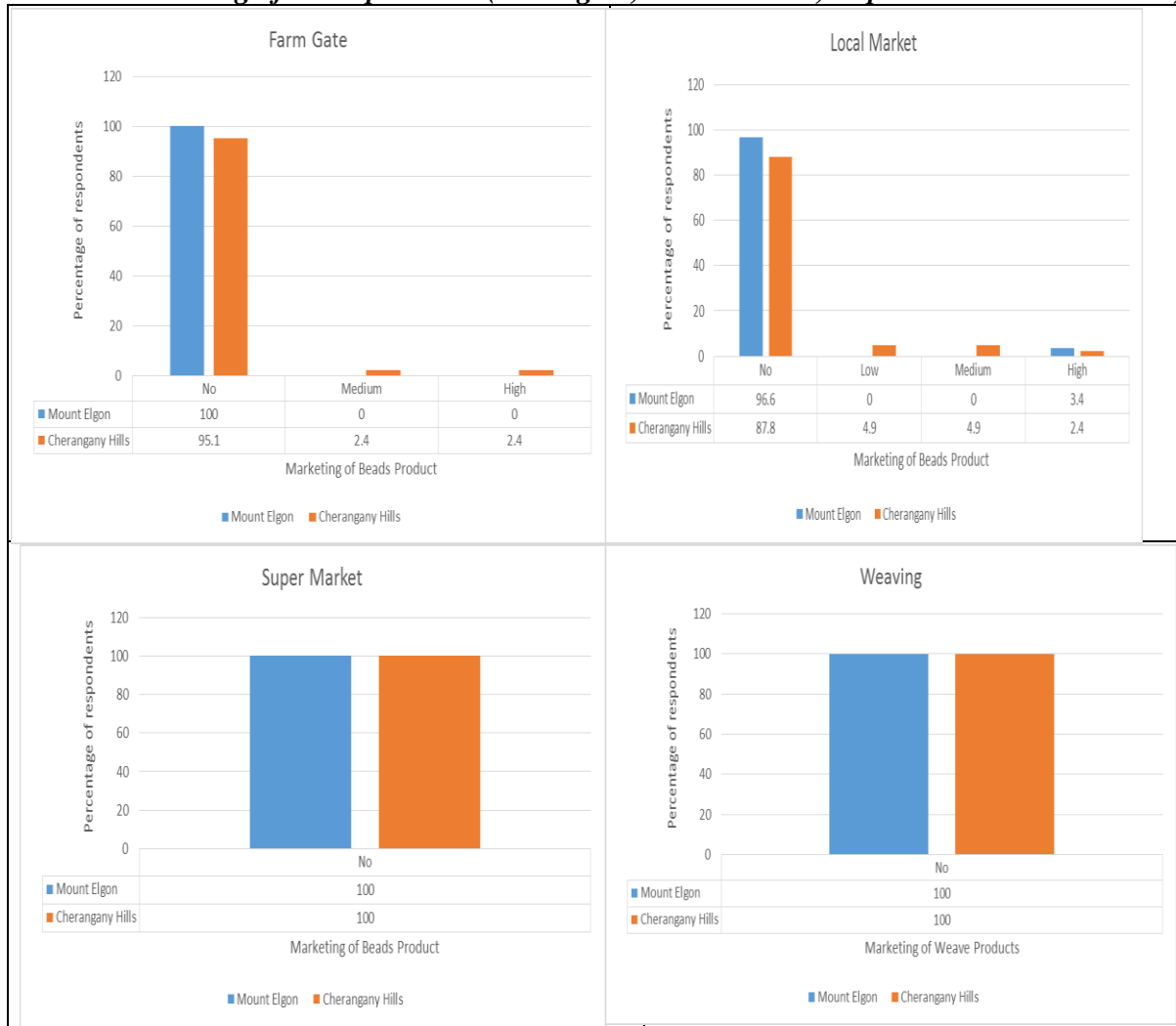


Figure 23. Level of Marketing of Bead Products.

Marketing of beads products at farm gate, Mount Elgon had 100% stating they don't sell at farm gate and Cherangany Hills had 95.1%. For medium sales, Mount Elgon had 0% selling at farm gate and Cherangany Hills had 2.4%. For High sales, Mount Elgon had 0% selling at farm gate and Cherangany Hills had 2.4% (Figure 23).

Marketing of beads at local market, Mount Elgon had 96.6% stating they don't sell at local market and Cherangany Hills had 87.8%. For Low sales, Mount Elgon had 0% selling at local market and Cherangany Hills had 4.9%. For medium sales, Mount Elgon had 0% selling at local market and Cherangany Hills had 4.9%. For high sales, Mount Elgon had 3.4% selling at local market and Cherangany Hills had 2.4% (Figure 23).



Marketing of beads at super market, Mount Elgon had 100% stating they don't sell at super market and Cherangany Hills had 100% stating they don't sell at super market (Figure 23).

Marketing of beads at SACCO, Mount Elgon had 100% stating they don't sell at SACCO and Cherangany Hills had 100%, stating they don't sell at SACCO (Figure 23).

### **3.8 Project Challenges/Constraints**

Although the respondents had made various levels of progress in setting up the various enterprises, the various respondents' interviewed pointed out a number of challenges that have been encountered and these include:

- ⇒ Areas of collaboration with the county governments in project interventions were still not yet clearly defined;
- ⇒ Available project funding is still inadequate to fund various viable proposals received from various CIGs;
- ⇒ There is low level of production of NBEs in general and makes it hard to get common market;
- ⇒ Lack of market information and challenges in the two ecosystems;
- ⇒ Lack of processing expertise;
- ⇒ Lack of training on matters of NBEs;
- ⇒ Lack of financial support from government;
- ⇒ Getting start-up capital has been a challenge;

## **4. Conclusions and Recommendations**

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### **4.1 Conclusions**

The baseline assessment survey was to a large extent successful in achieving the expected results which in turn positively contributed towards the overall objectives and project purpose.

Overall, the Identification and Prioritization Baseline Assessment Survey findings revealed a general lack of marketing, processing, production even though there were interest and community involvement.

## APPENDICES

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<b>Appendix A: Data Collection Tools</b>	
<b>A1</b>	Baseline Survey Questionnaire
<b>A2</b>	Focus Group Discussion Guide
<b>A3</b>	Key Informant Interview Guide
<b>A4</b>	Cherangany Hills and Mt. Elgon Ecosystems Questionnaires

# Appendix A: Field Data Collection Tools

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## Appendix A1 Baseline Household Survey Questionnaires

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### Interview Guide/Questionnaire

#### 1. General Info

1.1. Name of Respondent \_\_\_\_\_ 1.2. Date \_\_\_\_\_

1.3. Gender      Male      Female      1.4. Age/Marital Status

1.5. Study Area      1.6 Farm Size.....  
(a) County      (b) Sub-County  
(c) Location      (d) Sub-location/Village

1.7. Level of Education      1.8. Household Size  
1.9 Number of dependents

2.0 Occupation

2.1 Source(s) of Income

2.2 Agro-climatic zone:      I      II      III  
IV

2.3 Rainfall      High      Medium      Low

2.4 Altitude:      Highland (upland)      Lowland

2.5 GPS coordinates Lat (X).....Long (Y).....

2.6 What are the land use practices: Forest/ Woodlot/Grazing/Fallow/ Cultivation/Others

2.7 What are the Major crops in the farm?

2.8 What are the Cash crops in the farm?

#### Household information

2.9 Who is the head of this household

3.0 What is the major occupation of household head

3.1 Does household heads have regular monthly income? Yes....No.....If no explain

3.2 What is the average monthly household income? (Ksh)

3.3 What is your household monthly expenditure?

3.4 What enterprises are undertaken by other household members?

3.5 Are you a member of a VSLA: Yes.....No.....if yes when did you become a member

3.6 Are you a member of a group (e.g CIG, Women/ Youth Group, FBO, CBO, Other) that undertakes nature based enterprises? If yes explain.

3.7 Do you have an account with any commercial bank/MFI? Ye.....No.....If yes give details of bank and branch. If no please explain?

3.8 Have you ever taken a loan? If yes give source of loan and when the loan was taken

3.9 How did you utilize the funds acquired through the loan?

4.0 Who made the decision on how to utilize the funds? (a) Self only (b) Joint with spouse (c) Spouse only.

#### HOUSEHOLD FOOD SECURITY

4.1 In the last three months did the household take less than 3 meals in a day due to unavailability of food or cash to buy food? Yes.....No..... explain?

4.2 Are you able to meet food needs of your household year round?  
Yes.....No.....

If yes give means of achieving food needs

- a) Through food production
- b) Through purchase from the market
- c) Through production and purchase from the market
- d) Other means explain

If no do you have strategies to ensure household does not experience food or income shortages in the future? Please explain

Involvement in NBEs

4.3 Would you be interested in undertaking nature base enterprise? Yes....No.....

If yes which nature based enterprise would you like to venture in.? Give 3 preferred NBEs starting with the most preferred

4.4 List the products that you make from the following NBE: (a) beekeeping;(b)butterfly; (c) mushroom; (d) Medicinal herbs; (e) Ornaments; (f) weaving and (g) beading..

Empowerment

4.5 Do you feel confident speaking about gender and other community issues at the local level? If no explain.

4.6 In the last one year, have you expressed your opinion in a public meeting? If no explain.



**SECTION A: NATURE BASED ENTERPRISES KNOWLEDGE (NBEs)**

Question		Priority-building score			
		1	2	3	4
Nature based enterprise knowledge (NBE)	1.1 What do you understand about NBE?	No understanding	Low understanding	Medium understanding	High understanding
	Comments				
Identify nature based enterprises	1.2 Can you Identify on-going key NBEs- (a) Beekeeping, (b) Butterfly, (c) Mushroom, (d) Medicinal herbs, (e) Ornamentals (f) Weaving, (g) Beading	No I can't (a) (b) (c) (d) (e) (f) (g)	Low identification (a) (b) (c) (d) (e) (f) (g)	Medium identification (a) (b) (c) (d) (e) (f) (g)	High identification (a) (b) (c) (d) (e) (f) (g)
	Comments				

**SECTION B: PRIORITIZATION OF NATURE BASED ENTERPRISES (NBEs)**

Prioritize key nature based enterprises	2.1 How would you prioritize key NBEs-	I can't prioritize	Low priority	Medium priority	High priority
	(a) Beekeeping,	(a)	(a)	(a)	(a)
	(b) Butterfly,	(b)	(b)	(b)	(b)
	(c) Mushroom,	(c)	(c)	(c)	(c)
	(d) Medicinal herbs,	(d)	(d)	(d)	(d)
	(e) Ornamentals	(e)	(e)	(e)	(e)
	(f) Weaving,	(f)	(f)	(f)	(f)
	(g) Beading	(g)	(g)	(g)	(g)
	Comments				
	2.2 Do you undertake any of these nature based enterprises	No undertaking	Low undertaking	Medium undertaking	High undertaking
	(a) Beekeeping,	(a)	(a)	(a)	(a)
	(b) Butterfly,	(b)	(b)	(b)	(b)
	(c) Mushroom,	(c)	(c)	(c)	(c)
	(d) Medicinal herbs,	(d)	(d)	(d)	(d)
	(e) Ornamentals	(e)	(e)	(e)	(e)
	(f) Weaving,	(f)	(f)	(f)	(f)
	(g) Beading	(g)	(g)	(g)	(g)
	Comments				



**SECTION B: PRIORITIZATION OF NATURE BASED ENTERPRISES (NBEs)**

Bee keeping	2.3 What is your understanding of beekeeping practices	No understanding	Low understanding	Medium understanding	High understanding
	(a) Modern beehives	(a)	(a)	(a)	(a)
	(b) Traditional beehives	(b)	(b)	(b)	(b)
	Comments				
	2.4 Please estimate the amount of money you could get from sale of honey per kg (Kshs)	Less than 200	From 200 to 500	From 501 to 1000	More than 1000
	Comments				
	2.5 Do you keep bees in:	None	Low	Medium	High
	(a) Individual farm	(a)	(a)	(a)	(a)
	(b) Communal land	(b)	(b)	(b)	(b)
	Comments				
<b>SECTION B: PRIORITIZATION OF NATURE BASED ENTERPRISES (NBEs)</b>					
	2.6 Level of understanding of harvesting honey	None	Low	Medium	High
	Comments				

	2.7 Level of understanding of processing (value addition) of honey	None	Low	Medium	High
	Comments				
	2.8 Where do you sell/market your honey	No	Low	Medium	High
	(a) farm gate	(a)	(a)	(a)	(a)
	(b) local market	(b)	(b)	(b)	(b)
	(c) super markets	(c)	(c)	(c)	(c)
	(d) SACCO	(d)	(d)	(d)	(d)
	Comments				
	2.9 How much do you spend on production (Kshs) of honey	Less than 200	From 200 to 500	From 501-1000	More than 1000
	Comments				
<b>SECTION B: PRIORITIZATION OF NATURE BASED ENTERPRISES (NBEs)</b>					
	3.0 How much do you spend on processing of honey (Kshs)	Less than 200	From 200 to 500	From 501-1000	More than 1000
	Comments				
	3,1 How much do you spend on marketing of honey (Kshs)	Less than 200	From 200 to 500	From 501-1000	More than 1000
	Comments				

Medicinal herbs	3.2 What is your knowledge of medical herbs	No knowledge	Low knowledge	Medium knowledge	High knowledge
	Comments				
	3.3 Estimate the amount of money you could get from sale of medicinal herbs per kg (Kshs)	Less than 200	From 200 to 500	From 501-1000	More than 1000
	Comments				
	3.4 Do you harvest medicinal herbs from  (a) Individual farm  (b) Communal land	None  (a)  (b)	Low  (a)  (b)	Medium  (a)  (b)	High  (a)  (b)
	Comments				
<b>SECTION B: PRIORITIZATION OF NATURE BASED ENTERPRISES (NBEs)</b>					
	3.5 Level of understanding of harvesting of medicinal herbs	None understanding	Low understanding	Medium understanding	High understanding
	Comments				
	3.6 level of understanding of processing (value addition) of medicinal herbs	No understanding	Low understanding	Medium understanding	High understanding
	Comments				
	3.7 Level of understanding of marketing of herbal	No understanding	Low understanding	Medium understanding	High understanding

	medicinal herbs				
	Comments				
	3.8 What is the level of availability of medicinal herbs compared to ten - twenty years ago?	None	Low	Medium	High
	Comments				
<b>SECTION B: PRIORITIZATION OF NATURE BASED ENTERPRISES (NBEs)</b>					
	3.7 Is there indigenous technical knowledge on the use of medicinal plants that are important to the community?	None	Low	Medium	High
	Comments				
Ornamentals	3.8 What is your level of understanding of ornamentals	No understanding	Low understanding	Medium understanding	High understanding
	Comments				
	3.9 Estimate the amount of money you could get from sale of ornamentals (Kshs)	Less than 200	From 200 to 500	From 501-1000	More than 1000
	Comments				
	4.0 Do you keep ornamental	None (a)	Low (a)	Medium (a)	High (a)

	products at (a) home (b) shop	(b)	(b)	(b)	(b)
	Comments				
<b>SECTION B: PRIORITIZATION OF NATURE BASED ENTERPRISES (NBEs)</b>					
	4.1 Level of understanding of harvesting ornamentals	None	Low	Medium	High
	Comments				
	4.2 level of understanding of processing (value addition) of ornamentals	None	Low	Medium	High
	Comments				
	4.3 level of understanding of marketing of ornamentals	None	Low	Medium	High
	Comments				
	4.4 How do you sell/Market ornamentals (a) farm gate (b) local market (c) super markets (d) SACCO	No (a) (b) (c) (d)	Low (a) (b) (c) (d)	Medium (a) (b) (c) (d)	High (a) (b) (c) (d)
	Comments				

**SECTION B: PRIORITIZATION OF NATURE BASED ENTERPRISES (NBEs)**

	4.5 How much do you spend on production of ornamentals (Kshs)	less than 200	From 200 to 500	From 501-1000	More than 1000
	Comments				
	4.6 How much do you spend on processing of ornamentals (Kshs)	Less than 200	From 200 to 500	From 501-1000	More than 1000
	Comments				
	4.7 How much do you spend on marketing of ornamentals (Kshs)?	Less than 200	From 200 to 500	From 501-1000	More than 1000
	Comments				
Butterflies	4.8 Do you use butterflies to support family income	No use	Low usage	Medium usage	High usage
	Comments				
	4.9 Estimate the amount of money you could get from butterflies (Kshs)	Less than 200	From 200-to 500	From 501-1000	More than 1000
	Comments				

**SECTION B: PRIORITIZATION OF NATURE BASED ENTERPRISES (NBEs)**

	5.0 Do you keep butterflies	None	Low	Medium	High
	(a) Individual farm	(a)	(a)	(a)	(a)
	(b) Communal land	(b)	(b)	(b)	(b)
	Comments				
	5.1 Level of understanding of butterflies production	None	Low	Medium	High
	Comments				
	5.2 Level of understanding of processing (value addition) of butterflies	None	Low	Medium	High
	Comments				
	5.3 How do you sell/Market of butterflies	No	Low	Medium	High
	(a) Farm gate	(a)	(a)	(a)	(a)
	(b) Local market	(b)	(b)	(b)	(b)
	(c) Super markets	(c)	(c)	(c)	(c)
	(d) SACCO	(d)	(d)	(d)	(d)
	Comments				

**SECTION B: PRIORITIZATION OF NATURE BASED ENTERPRISES (NBEs)**

	5.4 How much do you spend on production of butterflies (Kshs)	Less than 200	From 200 to 500	From 501-1000	More than 1000
	Comments				
	5.5 How much do you spend on processing of butterflies (Kshs)	Less than 200	From 200 to 500	From 501-1000	More than 1000
	Comments				
	5.6 How much do you spend on marketing of butterflies (Kshs)	Less than 200	From 200-to 500	From 501-1000	More than 1000
	Comments				
Mushrooms	5.7 Do you use mushrooms to support family income	No usage	Low usage	Medium usage	High usage
	Comments				
	5.8 Estimate the amount of money you could get from sale of mushrooms per kg	Less than 200	From 200-to 500	From 501-1000	More than 1000
	Comments				



**SECTION B: PRIORITIZATION OF NATURE BASED ENTERPRISES (NBEs)**

	5.9 Do you keep mushrooms	None	Low	Medium	High
	(a) Individual farm		(a)	(a)	(a)
	(b) Communal land		(b)	(b)	(b)
	Comments				
	6.0 Level of understanding of harvesting mushrooms	None	Low	Medium	High
	Comments				
	6.1 level of understanding of processing (value addition) of mushrooms	None	Low	Medium	High
	Comments				
	6.2 How do you sell/Market mushrooms	No	Low	Medium	High
	(a) farm gate	(a)	(a)	(a)	(a)
	(b) local market	(b)	(b)	(b)	(b)
	(c) super markets	(c)	(c)	(c)	(c)
	(d) SACCO	(d)	(d)	(d)	(d)
	Comments				
	6.3 How much do you spend on production of	Less than 200	From 200 to 500	From 501-1000	More than 1000

	mushrooms per kg (Kshs)				
	Comments				
<b>SECTION B: PRIORITIZATION OF NATURE BASED ENTERPRISES</b>					
	6.4 How much do you spend on processing of mushrooms (Kshs)	Less than 200	From 200 to 500	From 501-1000	More than 1000
	Comments				
	6.5 How much do you spend on marketing of mushrooms Kshs)	Less than 200	From 200 to 500	From 501-1000	More than 1000
	Comments				
Weaving	6.6 Do you use weaving to support family income	No usage	Low usage	Medium usage	High usage
	Comments				
	6.7 Estimate the amount of money you could get from sale of weaving (Kshs)	Less than 200	From 200 to 500	From 501-1000	More than 1000
	Comments				
	6.8 Do you keep weaving products in (a) House (b) Shop	None	Low (a) (b)	Medium (a) (b)	High (a) (b)

	Comments				
<b>SECTION B: PRIORITIZATION OF NATURE BASED ENTERPRISES</b>					
	6.9 Level of understanding of weaving production	None	Low	Medium	High
	Comments				
	7.0 Level of understanding of weaving process (value addition)	None	Low	Medium	High
	Comments				
	7.1 How do you sell/Market weaving products (a) farm gate (b) local market (c) super markets (d) SACCO	No (a) (b) (c) (d)	Low (a) (b) (c) (d)	Medium (a) (b) (c) (d)	High (a) (b) (c) (d)
	Comments				
	7.2 How much do you spend on weave production (Kshs)	Less than 200	From 200 to 500	From 501-1000	More than 1000
	Comments				
	7.3 How much do you spend on weave process (Kshs)	Less than 200	From 200 to 500	From 501-1000	More than 1000
	Comments				

**SECTION B: PRIORITIZATION OF NATURE BASED ENTERPRISES**

	7.4.1 How much do you spend on marketing of weave products (Kshs)	Less than 200	Less than 200-500	From 501-1000	More than 1000
	Comments				
Beading	7.5 Do you use beading to support family income	No usage	Low usage	Medium usage	High usage
	Comments				
	7.6 Estimate the amount of money you could get from sale of beading products (Kshs)	Less than 200	From 200 to 500	From 501-1000	More than 1000
	Comments				
	7.7 Do you keep beads in (a) home (b) Shop	None	Low (a) (b)	Medium (a) (b)	High (a) (b)
	Comments				
	7.8 Level of understanding of harvesting of beads	None	Low	Medium	High
	Comments				

**SECTION B: PRIORITIZATION OF NATURE BASED ENTERPRISES**

	7.9 Level of understanding of beading process (value addition)	None	Low	Medium	High
	Comments				
	8.0 How do you sell/Market beading products  (a) farm gate (b) local market (c) super markets (d) SACCO	No (a) (b) (c) (d)	Low (a) (b) (c) (d)	Medium (a) (b) (c) (d)	High (a) (b) (c) (d)
	Comments				
	8.1 How much do you spend on production of beads (Kshs)	Less than 200	From 200 to 500	From 501-1000	More than 1000
	Comments				
	8.2 How much do you spend on beading process (Kshs)	Less than 200	From 200 to 500	From 501-1000	More than 1000
	Comments				
	8.3 How much do you spend on marketing of beads (Kshs)	Less than 200	From 200 to 500	From 501-1000	More than 1000
	Comments				

**SECTION C: GENDER PARTICIPATION IN NBE**

Involvement of Women in nature based enterprise (NBE)	8.4 Who is involved in the NBE (production)	No involvement	Low involvement	Medium involvement	High involvement
	(a) men	(a)	(a)	(a)	(a)
	(b) women	(b)	(b)	(b)	(b)
	(c) Youth	(c)	(c)	(c)	(c)
	Comments				
	8.5 Who is involved in the NBE (processing)	No involvement	Low involvement	Medium involvement	High involvement
	(a) men	(c)	(c)	(c)	(c)
	(b) women	(d)	(d)	(d)	(d)
	(a) Youth	(c)	(c)	(c)	(c)
	Comments				
Access, Control and use of household income	8.6 Do you have access to HH income?	No access	Low access	Medium access	High access
	Comments				
	8.7 Do you have control of HH income?	No control	Low control	Medium control	High control
	Comments				

**SECTION C: GENDER PARTICIPATION IN NBE**

	8.8 Do you have use of HH income	No use	Low use	Medium use	High use
	Comments				
	8.9 Do you have control over the money from NBE	No control	Low control	Medium control	High control
	Comments				

**SECTION D: VILLAGE SAVINGS AND LOANS ASSOCIATIONS**

	9.0 Do you have access to loans	No access	Low access	Medium access	High access
	(a) Sacco loan	(a)	(a)	(a)	(a)
	(b) Merry go round/	(b)	(b)	(b)	(b)
	(c) Bank loan	(c)	(c)	(c)	(c)
	Comments				
	9.1 What are the terms and conditions	No terms	Low terms	Medium terms	High terms
	(a) Sacco loan	(a)	(a)	(a)	(a)
	(b) Merry go round	(b)	(b)	(b)	(b)
	(c) Bank loan	(c)	(c)	(c)	(c)
	Comments				
	9.2 Do you have access to VSLA loan	No Access	Low Access	Medium Access	High Access

	Comments				
	9.3 What is your level of preference of the three sources of loans  (a) Sacco loan  (b) Merry go round  (c) Bank loan	No preference  (a)  (b)  (c)	Low preference  (a)  (b)  (c)	Medium preference  (a)  (b)  (c)	High preference  (a)  (b)  (c)
	Comments				

**SECTION D: VILLAGE SAVINGS AND LOANS ASSOCIATIONS**

	9.4.1 How do you document your transactions	No Documentation	Low Documentation	Medium Documentation	High Documentation
	Comments				
	9.5 Do you have records of your transactions for the past 6 months and 12 months	No Records	Low Records	Medium Records	High Records
	Comments				
	9.6 What do you understand about the operations of VSLA	No Understanding	Low Understanding	Medium Understanding	High Understanding
	Comments				
	9.7 Do you know the formation of VSLA	No Understanding	Low Understanding	Medium Understanding	High Understanding
	Comments				
	9.8 Do you know the type of savings of	No Understanding	Low Understanding	Medium Understanding	High Understanding



	VSLA				
	Comments				
	9.9 Do you know how to join the VSLA	No Understanding	Low Understanding	Medium Understanding	High Understanding
	Comments				
	10 Do you have any training on VSLA management	No Understanding	Low Understanding	Medium Understanding	High Understanding
	Comments				

## Appendix A2 Focus Group Discussion Guide

	Name	Signature	Date
<b>Enumerator</b>			
<b>Field Supervisor</b>			
<b>Data Entry Clerk</b>			
<b>A. Identification</b>			
<i>Question</i>	<i>Option</i>	<i>Code/V alue</i>	<i>Answer</i>
A 1: What are the NBEs undertaken by community members?	Beekeeping	<b>1</b>	
	Butterfly	<b>2</b>	
	Mushroom	<b>3</b>	
	Medicinal herbs	<b>4</b>	
	Ornamentals	<b>5</b>	
	Weaving	<b>6</b>	
	Beading	<b>7</b>	
A 2: Have any of this NBEs improved the livelihoods of the community	Yes	<b>1</b>	
	No	<b>2</b>	
A3: What support systems to NBEs exist within the ecosystem?	CDF	<b>1</b>	
	County government	<b>2</b>	
	NGOs	<b>3</b>	
	CBOs	<b>4</b>	
	Others specify	<b>5</b>	
A 4: Is there a difference in availability of NBEs compared to 10-20 years ago? (for each enterprise)	Yes	<b>1</b>	
	No	<b>2</b>	
	Specify reasons	<b>3</b>	
A5: Are you aware of available NBEs that impacts on	Yes	<b>1</b>	

the environment positively?	No	<b>2</b>	
	Other (specify)		
A6: Are you aware of available NBEs that impacts on youth, women and the physically challenged?	Yes	<b>1</b>	
	No	<b>2</b>	
	Others (specify)		
<b>B. Prioritization</b>			
B1: Can you prioritise/ rank the NBEs in the ecosystem on the basis of preference?  Please specify reason for preference	Beekeeping	<b>1</b>	
	Butterfly	<b>2</b>	
	Mushroom	<b>3</b>	
	Medicinal herbs	<b>4</b>	
	Ornamentals	<b>5.</b>	
	Weaving	<b>6.</b>	
	Beading	<b>7.</b>	
B2: Which NBEs will significantly contribute to ecosystem conservation?	Beekeeping	<b>1</b>	
	Butterfly	<b>2</b>	
	Mushroom	<b>3</b>	
	Medicinal herbs	<b>4</b>	
	Ornamentals	<b>8.</b>	
	Weaving	<b>9.</b>	
	Beading	<b>10.</b>	
<b>C. Marketing</b>			
C1: What products from NBEs are marketed by the community: see NBEs?	Individually	<b>1</b>	
	Group	<b>2</b>	
	Other (Specify)		
C2: Are there existing markets for the products?	Yes	<b>1</b>	
	No	<b>2</b>	

	Please specify	<b>3</b>	
C3: Where do you market/sell the products?	Local Markets	1	
	Major towns	2	
	Cross border	3	
	Others Please specify	4	
C4: What challenges are experienced in sourcing raw materials?	Unavailability of raw materials	<b>1</b>	
	Transportation cost	<b>2</b>	
	Lack of information	<b>3</b>	
	High cost of raw materials	<b>4</b>	
	Others (specify)	<b>5</b>	
C5: What challenges are experienced in value addition/processing of products?	Lack of skills/knowledge	<b>1</b>	
	High cost of inputs	<b>2</b>	
	Lack of facilities	<b>3</b>	
	Lack of access to affordable technology	<b>4</b>	
	Others (specify)	<b>5</b>	
C6: What challenges are experienced in marketing of the products?	Lack of information	<b>1</b>	
	Lack of Competitive advantage	<b>2</b>	
	Lack of favourable market channels/outlets	<b>3</b>	
	Others (specify)	<b>4</b>	
<b>D. Feasibility of NBEs in ecosystems</b>			
D1: How feasible are the NBEs in the ecosystem?	Economic feasibility	1	
	Financial feasibility	2	

	Technical feasibility	3	
	Market feasibility	4	
	Organisational/managerial feasibility	5	
	Others (specify)	6	
D2: Are you aware of the role of NBEs in environmental conservation and food security?	Yes	1	
	No	2	
D3: What activities are you undertaking to ensure sustainability of the NBEs?	Priority building (Training)	1	
	Exposure tours	2	
	Improved extension services	3	
	Availability of market outlets for NBEs products	4	
	Others (specify)	5	
D4: Do community members have the Priority to develop viable and sustainable NBEs and to manage them independently?	Yes	1	
	No	2	

## Appendix A3 Key informant Interview Guide

### KII For Nature Based Enterprises

	Name	Signature	Date
<b>Enumerator</b>			
<b>Field Supervisor</b>			
<b>Data Entry Clerk</b>			
<b>A. NBE Issues of Concern in the two Ecosystems</b>			
Question	Option	Code/ Value	Answer
A 1: What are the major NBEs undertaken by community members?	Beekeeping	<b>1</b>	
	Butterfly	<b>2</b>	
	Mushroom	<b>3</b>	
	Medicinal herbs	<b>4</b>	
	Ornamentals	<b>5</b>	
	Weaving	<b>6</b>	
	Beading	<b>7</b>	
A 2: What are some of the existing efforts to support NBEs	Capacity building/training	<b>1</b>	
	Extension services	<b>2</b>	
	Exposure tour	<b>3</b>	
	Agricultural shows/fair	<b>4</b>	
A3: What are the most important markets outlets where NBE products are sold? (for each enterprise)	Farm gate	<b>1</b>	
	Local market	<b>2</b>	
	Super markets	<b>3</b>	
	SACCO	<b>4</b>	
A 4: Who is involved in the NBEs?	Men	<b>1</b>	

	Women	<b>2</b>	
	Youth	<b>3</b>	
	Physically Challenged	<b>4</b>	
A5: Which formal or informal groups/ associations are involved in NBEs	NGOs	<b>1</b>	
	CBOs	<b>2</b>	
	FBOs	<b>3</b>	
	Women group	<b>4</b>	
	Merry go round/table banking	<b>5</b>	
	Other (specify)		
A6: Are there any organisations involved in NRM activities in the ecosystem? Have they incorporated NBEs in their project activities? If so which NBEs and where in the ecosystem?	NGOs	<b>1</b>	
	CBOs	<b>2</b>	
	FBOs	<b>3</b>	
	Women group	<b>4</b>	
	Merry go round/table banking	<b>5</b>	
	Others (specify)		
A7: Does the community have the capacity to develop viable and sustainable NBEs and to manage them independently	Yes	<b>1</b>	
	No	<b>2</b>	
A8: Are community members aware of the role of NBEs in addressing their needs and improving their livelihoods?	Yes	<b>1</b>	
	No	<b>2</b>	
	Give reasons (specify)		
A9: What are some of the challenges that hinder the success and establishment of NBEs	Lack of information	<b>1</b>	
	Lack of funding	<b>2</b>	
	Lack of training	<b>3</b>	
	Cultural beliefs	<b>4</b>	
	Lack of security	<b>5</b>	

	Extension services	<b>6</b>	
	Others (specify)		
<b>D. Information about potential service providers/banks and microfinance institutions</b>			
D1: What are the most common sources of loans in this ecosystem?	SACCO Loan	<b>1</b>	
	Merry go round/table banking	<b>2</b>	
	Bank loan	<b>3</b>	
	Others (specify)	<b>4</b>	
D2: Are there SMEs in this ecosystem?	Yes	<b>1</b>	
	No	<b>2</b>	
D3: Have trends in NRM investments changed during recent years?	Yes	<b>1</b>	
	No	<b>2</b>	
<b>E. Information about potential technical and administrative support providers</b>			
E1: Do frontline extension workers visit the villages in this ecosystem?	Yes	<b>1</b>	
	No	<b>2</b>	
E2: Do extension workers have the necessary skills and capacity to support NBEs in the ecosystem?	Yes	<b>1</b>	
	No	<b>2</b>	
	Specify reasons	<b>3</b>	



Appendix A4 Cherang'any and Mt. Elgon Ecosystem questionnaires

<i>Questionnaire No.</i>	<i>COUNTY</i>	<i>SUB-COUNTY</i>	<i>LOCATION</i>	<i>ECOSYSTEM</i>	<i>DATE OF INTERVIEW</i>
1	TRANS NZOIA	Saboti	Kinyoro	<b>Mt.Elgon</b>	26.9.2016
2	E.MARAKWET	Marakwet East	Kapyego	<b>Cherangany</b>	29.9.2016
3	E.MARAKWET	Marakwet East	Kapyego	<b>Cherangany</b>	29.9.2016
4	E.MARAKWET	Marakwet East	Kapyego	<b>Cherangany</b>	29.9.2016
5	TRANS NZOIA	Trans Nzoia East	Makutano	<b>Cherangany</b>	27.9.2016
6	WEST POKOT	Chepareria	Ywalatekte	<b>Cherangany</b>	27.9.2016
7	TRANS NZOIA	Saboti	Kinyoro	<b>Mt Elgon</b>	26.9.2016
8	TRANS NZOIA	Cherangany	Makutano	<b>Cherangany</b>	27.9.2016
9	TRANS NZOIA	Trans Nzoia East	Cherangani	<b>Cherangany</b>	27.9.2016
10	TRANS NZOIA	Kitale East	Makutano	<b>Cherangany</b>	27.9.2016
11	TRANS NZOIA	Saboti	Matisi	<b>Mt. Elgon</b>	26.9.2016
12	E.MARAKWET	Marakwet	Embobut	<b>Cherangany</b>	29.9.2016
13	E.MARAKWET	Marakwet East	Kipchumwa	<b>Cherangany</b>	29.9.2016
14	E.MARAKWET	Marakwet East	Embobut	<b>Cherangany</b>	29.9.2016
15	E.MARAKWET	Marakwet East	Embobut	<b>Cherangany</b>	29.9.2016
16	E.MARAKWET	Marakwet East	Kapyego	<b>Cherangany</b>	29.9.2016
17	E.MARAKWET	Marakwet East	Embobut	<b>Cherangany</b>	29.9.2016
18	TRANS NZOIA	ENDEBBES	Chepchoina	<b>Mt. Elgon</b>	30.9.2016
19	TRANS NZOIA	ENDEBBES	Chepchoina	<b>Mt. Elgon</b>	30.9.2016
20	TRANS NZOIA	ENDEBBES	Chepchoina	<b>Mt. Elgon</b>	30.9.2016
21	TRANS NZOIA	ENDEBBES	Chepchoina	<b>Mt. Elgon</b>	30.9.2016
22	TRANS NZOIA	ENDEBBES	Chepchoina	<b>Mt. Elgon</b>	30.9.2016
23	TRANS NZOIA	ENDEBBES	Chepchoina	<b>Mt. Elgon</b>	30.9.2016
24	TRANS NZOIA	ENDEBBES	Chepchoina	<b>Mt. Elgon</b>	30.9.2016

25	TRANS NZOIA	ENDEBBES	Chepchoina	<b>Mt. Elgon</b>	30.9.2016
26	TRANS NZOIA	ENDEBBES	Chepchoina	<b>Mt. Elgon</b>	30.9.2016
27	TRANS NZOIA	ENDEBBES	Chepchoina	<b>Mt. Elgon</b>	30.9.2016
28	TRANS NZOIA	ENDEBBES	Chepchoina	<b>Mt. Elgon</b>	30.9.2016
29	TRANS NZOIA	ENDEBBES	Chepchoina	<b>Mt. Elgon</b>	30.9.2016
30	E.MARAKWET	Marakwet West	Kapsumai	<b>Cherangany</b>	29.9.2016
31	E.MARAKWET	Marakwet West	Koibarak	<b>Cherangany</b>	29.9.2016
32	E.MARAKWET	Marakwet West	Kapsowar	<b>Cherangany</b>	29.9.2016
33	E.MARAKWET	Marakwet West	Kapsowar	<b>Cherangany</b>	29.9.2016s
34	E.MARAKWET	Marakwet West	Kapsumai	<b>Cherangany</b>	29.9.2016
35	TRANS NZOIA	Trans Nzoia East	Makutano	<b>Cherangany</b>	29.7.2016
36	E.MARAKWET	Marakwet East	Embobut	<b>Cherangany</b>	29.9.2016
37	TRANS NZOIA	Saboti	Kinyoro	<b>Mt.Elgon</b>	26.9.2016
38	TRANS NZOIA	Trans Nzoia East	Makutano	<b>Cherangany</b>	28.9.2016
39	TRANS NZOIA	Trans Nzoia East	Makutano	<b>Cherangany</b>	27.9.2016
40	TRANS NZOIA	Trans Nzoia East	Makutano	<b>Cherangany</b>	27.9.2016
41	TRANS NZOIA	Saboti	Kinyoro	<b>Mt.Elgon</b>	26.9.2016
42	E.MARAKWET	Marakwet East	Embobut	<b>Cherangany</b>	29.9.2016

Continued

<i>Questionnaire No.</i>	<i>COUNTY</i>	<i>SUB-COUNTY</i>	<i>LOCATION</i>	<i>ECOSYSTEM</i>	<i>DATE OF INTERVIEW</i>
43	TRANS NZOIA	Trans Nzoia East	Makutano	<b>Cherangany</b>	28.9.2016
44	E.MARAKWET	Marakwet West	Kapsumai	<b>Cherangany</b>	29.9.2016
45	E.MARAKWET	Marakwet West	Kapsumai	<b>Cherangany</b>	29.9.2016
46	TRANSNZOIA	Trans Nzoia East	Motoseti	<b>Cherangany</b>	26.9.2016
47	E.MARAKWET	MARAKWET EAST	Kapyego	<b>Cherangany</b>	29.9.2016
48	E.MARAKWET	Marakwet East	Kapyego	<b>Cherangany</b>	29.9.2016
49	BUNGOMA	Cheptais	Chepkube	<b>Mt. Elgon</b>	4.10.2016
50	BUNGOMA	Mt.Elgon	Kaptama	<b>Mt. Elgon</b>	3.10.2016
51	BUNGOMA	Mt. Elgon	Kaboywo	<b>Mt. Elgon</b>	3.10.2016
52	BUNGOMA	Mt. Elgon		<b>Mt. Elgon</b>	3.10.2016
53	BUNGOMA	Mt. Elgon	Koboywo	<b>Mt. Elgon</b>	3.10.2016
54	BUNGOMA	Mt. Elgon	Kaptama	<b>Mt. Elgon</b>	3.10.2016
55	BUNGOMA	Mt. Elgon	Cheptais	<b>Mt. Elgon</b>	4.10.2016
56	BUNGOMA	Mt. Elgon	Kaptama	<b>Mt.Elgon</b>	3.10.2016
57	BUNGOMA	Mt.ELGON	Kapsokwony	<b>Mt. Elgon</b>	3.10.2016
58	BUNGOMA	Mt. Elgon	Kaboywo	<b>Mt. Elgon</b>	3.10.2016
59	BUNGOMA	Kapsokwony	Kaboywo	<b>Mt. Elgon</b>	3.10.2016
60	BUNGOMA	Mt. Elgon	Kaboywo	<b>Mt. Elgon</b>	3.10.2016
61	BUNGOMA	Kapsokwony	Kaboywo	<b>Mt. Elgon</b>	3.10.2016
62	BUNGOMA	Kapsokwony	Kaboywo	<b>Mt.Elgon</b>	3.10.2016
63	BUNGOMA	Mt.Elgon	Kaboywo	<b>Mt. Elgon</b>	3.10.2016
64	E.MARAKWET	Marakwet West		<b>Cherangany</b>	31.10.2016
65	E.MARAKWET	Marakwet West	Cherangany	<b>Cherangany</b>	31.10.2016
66	E.MARAKWET	Marakwet West	Cherangany	<b>Cherangany</b>	31.10.2016
67	E.MARAKWET	Marakwet West	Sengwer	<b>Cherangany</b>	31.10.2016

<b>68</b>	E.MARAKWET	Marakwet West	Sengwer	<b>Cherangany</b>	31.10.2016
<b>69</b>	E.MARAKWET	Marakwet West	Sengwer	<b>Cherangany</b>	31.10.2016
<b>70</b>	E.MARAKWET	Marakwet West	Sengwer	<b>Cherangany</b>	31.10.2016
<b>71</b>	E.MARAKWET	Marakwet West	Sengwer	<b>Cherangany</b>	31.10.2016
<b>72</b>	E.MARAKWET	Marakwet West	Sengwer	<b>Cherangany</b>	31.10.2016
<b>73</b>	E.MARAKWET	Marakwet West	Sengwer	<b>Cherangany</b>	31.10.2016