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 Capacity Needs Assessment of Nature Based Enterprises (NBEs)

Reporting Period: 1st August- 30th October 2016

PHOTOS FOR ECOSYSTEMS ACTIVITIES FOR CAPACITY NEEDS ASSESSMENT BASELINE SURVEY REPORT

FGD in progress at Suam in Mt Elgon Ecosystem

Focus Group Discussion at Laboot posing for a photo after the session, Mt. Elgon Ecosystem.

Kateroon Self Help Group members pose for a photo after a Focus Group Discussion, Mt. Elgon Ecosystem

An FGD in Progress at Kitalale Phase 3, Kitale, Mt Elgon Ecosystem

Mokotu Self-help group members posing for a photo with research assistants at Kapolet, Cherangany Hills Ecosystem

Kapolet Forest Station CFA members pose for a photo after an FGD at Kapolet, Cherangany Hills Ecosystem

Focus Group Discussion in progress in Kapyego Location, Cherangany Hills Ecosystem

A Research Assistant supervising respondents filling questionnaires in Suam Forest Station, Mt Elgon Ecosystem

Focus Group Discussion in progress at Suam Forest Station, Mt Elgon Ecosystem

Research Assistants helping respondents fill in questionnaires in Suam Forest Station, Mt Elgon Ecosystem

FGD Members of Kipsorwa Young Women group, Mt. Elgon Ecosystem

The Kaberwa Forester briefing the Iyaa Residents in Chepkitale, Mt. Elgon Ecosystem
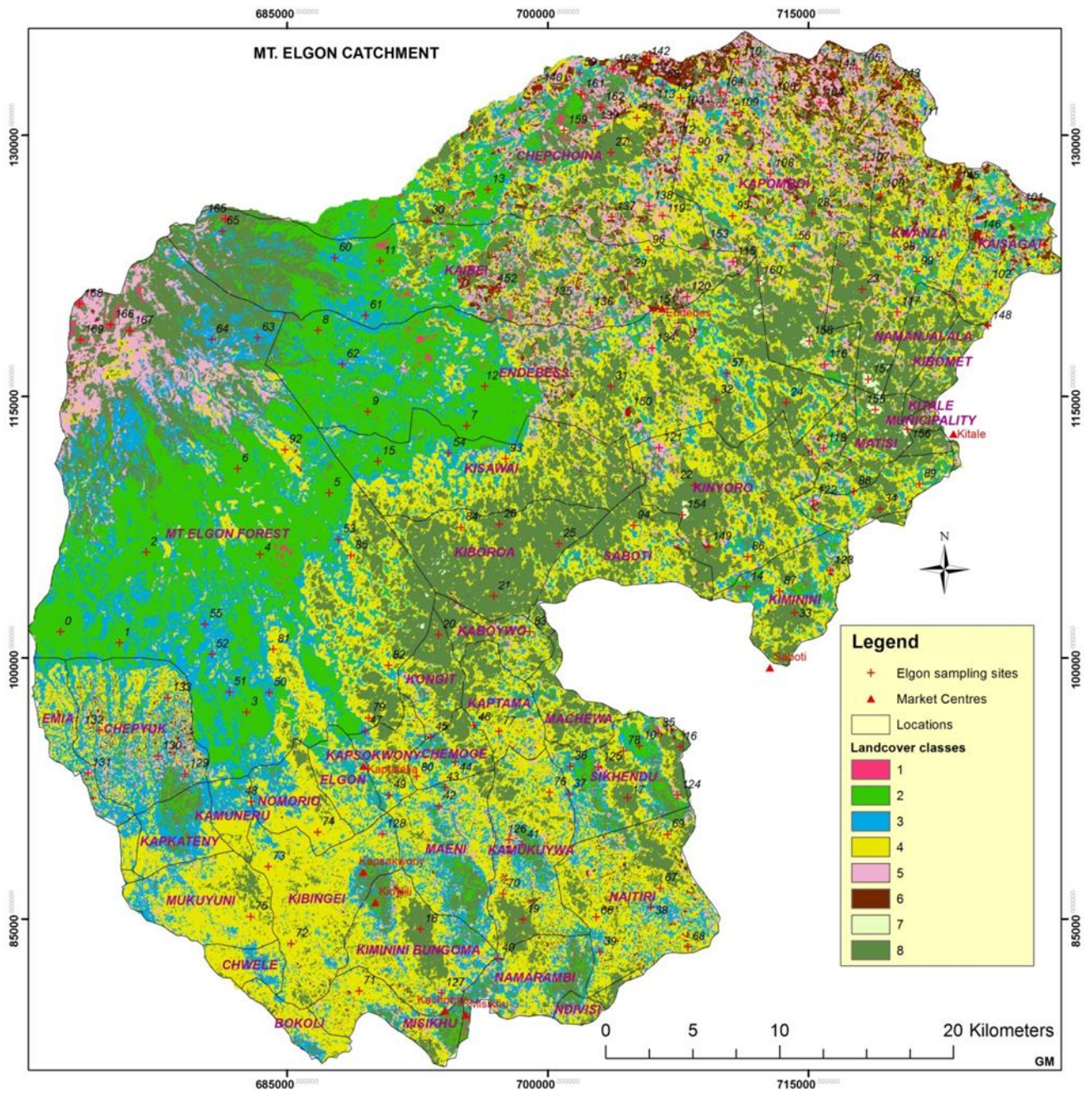
Figure 1 Mt. Elgon Ecosystem Land Cover Map (Source; KEFRI Land use land cover report-2016).

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

Affirmation

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.

The development of this report has been guided by the Terms of Reference, reference information provided by KEFRI and contributions of key informant interviews, Focus Group Discussions and individual respondents during this study.

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

List of Acronyms and Abbreviations

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
ITK	Indigenous Technical Knowledge
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

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 resource management and not just the opportunity to participate in conservation for its own sake.

The two ecosystems of Cherang'any Hills and Mount Elgon were chosen for this baseline survey study based on the fact that there is a good natural resource base already exploited for 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 that of establishing the basis for capacity building for nature based enterprises and turn 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 expected to conduct a capacity needs assessment and a feasibility study of Nature Based Enterprises (NBEs) for Cherang'any Hills and Mt. Elgon Water Towers/Ecosystems.

Chapter 1: Introduction

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, develops a baseline study on capacity needs assessment for the nature based enterprises, with a focus on understanding of NBEs, knowledge of identified NBEs, and understanding of (harvesting, processing and marketing) of NBEs in Mt. Elgon and Cherangany ecosystems.

The major impact of undergoing the capacity needs assessment will be to improve the operations of NBEs to enhance livelihoods and ensure a sustainable natural environment.

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 were;

1) To Identify the capacity need for the NBEs;

2) To rank NBEs based on a matrix;

1.2 Project Activities and Outcomes

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

Objective 1: To identify the capacity need for NBEs;

Activities:

a: To understand beekeeping practices;
b: To understand Indigenous Technical Knowledge;
c: To understand (harvesting, processing and marketing) of NBEs;

Objective 2: To rank NBEs based on a matrix;

Activities:

a: To develop the average income resulting from the sale of NBEs products;
b: To identify the priority of NBEs based on responses from the participants;

Outcome: Over eighty percent of the participants in the study undertook sales of NBEs within the two ecosystems. We found that this enterprise, especially for Beekeeping, Ornamentals and Medicinal Herbs, had higher participant's involved and generating income.

1.3 Rationale and Justification of Survey

This Capacity Needs Assessment Survey was undertaken for the purpose of prioritizing the NBEs which needs to be strengthened either through technical knowledge, capacity building or funding in the two ecosystems.

Thus, the assessment was to focus on examination of the following aspects:

⇨ *Membership of any social group*;
⇨ *Understanding NBEs (harvesting, processing and marketing);*
⇨ *Knowledge of NBEs;*
⇨ *Understanding Marketing feasibility;*

This Capacity Assessment Survey Report will inform science and will be useful in prioritizing NBEs that will need technical support, capacity building and funding.

1.4 Scope of the Capacity Needs Assessment Survey

The NBEs Capacity Assessment Survey was meant to specifically:

1) Identify the capacity needs of the NBE farmers; and
2) Assess the extent to which the two ecosystems understand production, processing and marketing of NBE products.

Chapter 2: Assessment Approach and Methodology

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

2.1   Assessment Approach

2.1.1   Capacity Needs Assessment Design

The assessment is structured as Section A (Capacity Needs Assessment) and Section B (Feasibility Study). Our overall approach to this assignment is structured in a Capacity Needs Assessment Design summarized in Figure 3 below.
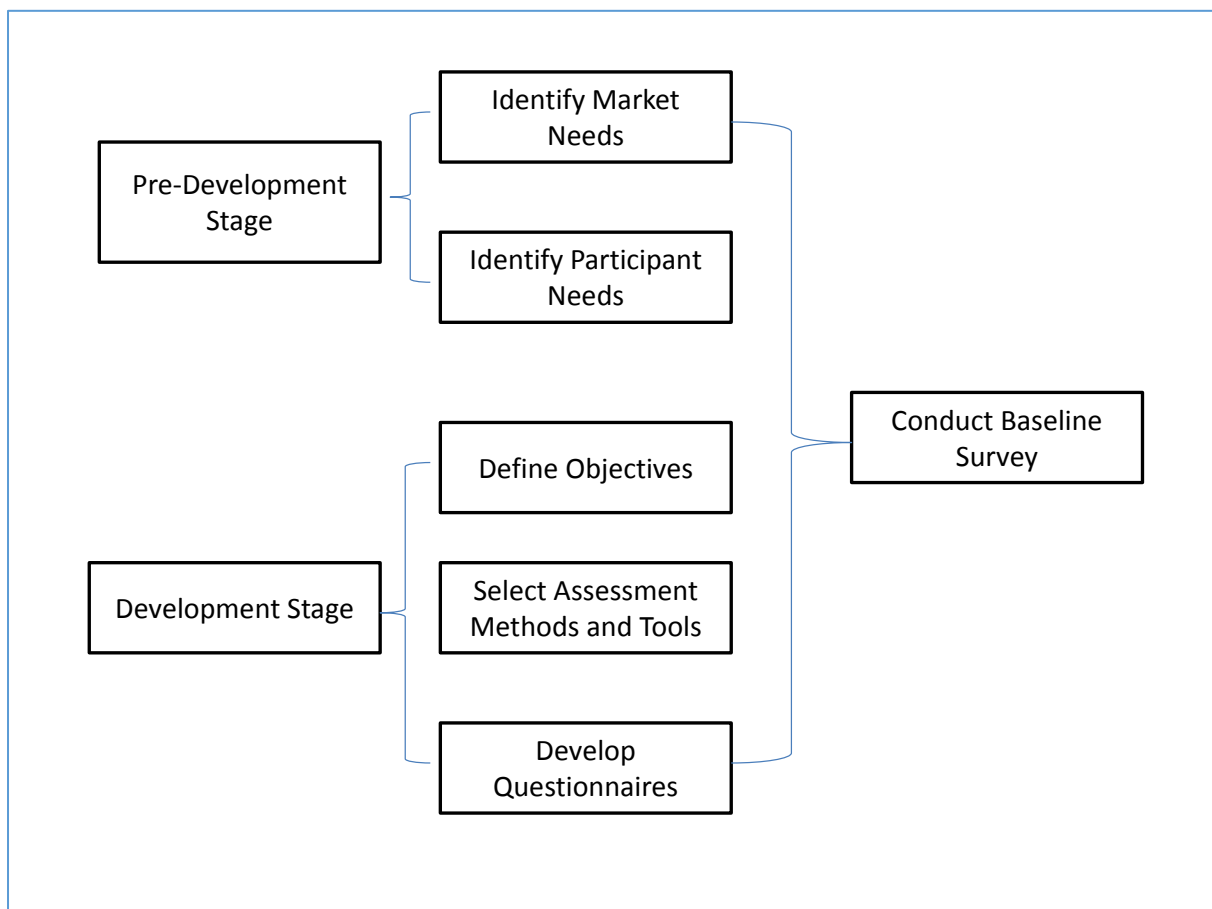
Figure 3 Capacity Needs Assessment Design.

2.1.2 Capacity Needs Assessment Framework

In order to address the ToR objectives, a Capacity Needs Assessment Framework (Table 1) was developed to link the objectives to the key dimensions of ranking and the criteria used.

Table 1. Capacity Needs Assessment Framework

• **ToR Objective(s):** *To Promote and develop nature based enterprises targeting women, youth and people with disabilities.*	
Assessment Aspect(s)	**Indicators**
Capacity Building	✓ Membership of any social group ✓ Understanding of NBEs ✓ Understanding of harvesting, processing and marketing ✓ Knowledge of NBEs ✓ Understanding Indigenous Technical Knowledge
Market feasibility	✓ Average income for the sale of NBEs products (see identification and prioritization report)

2.2   Assessment Methodology

This assessment was undertaken through the tasks demonstrated by Figure 4:
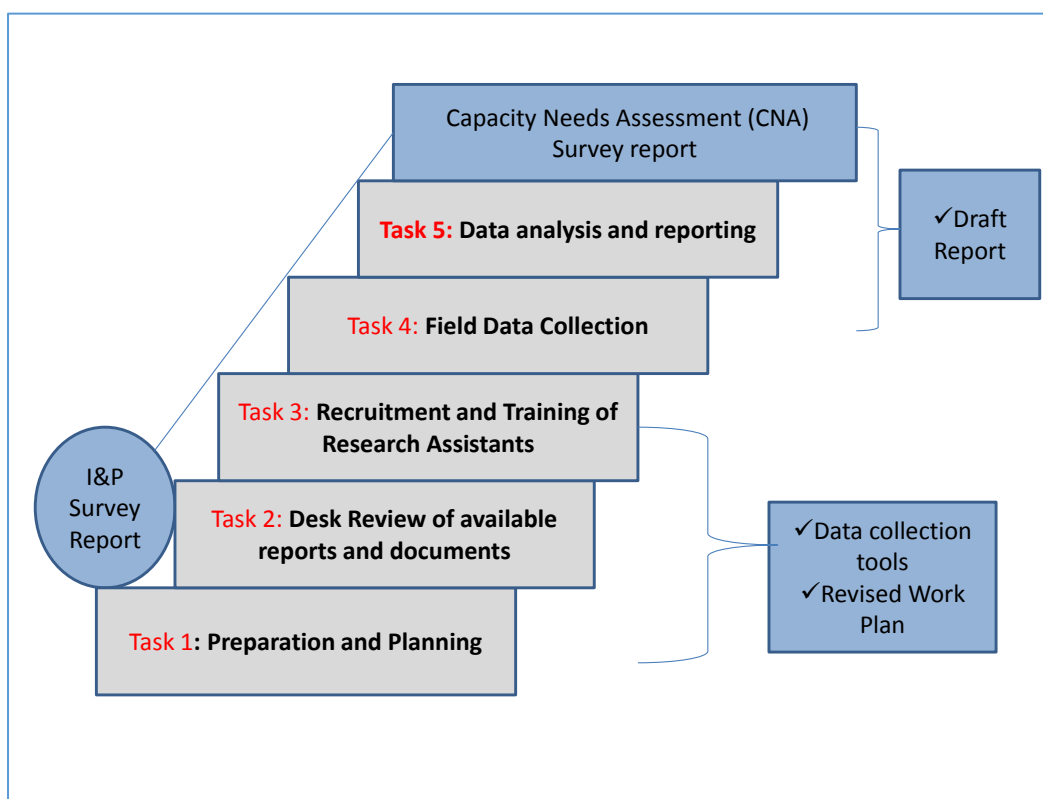
Figure 4 Key Tasks on Capacity Needs Assessment of NBEs

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 consultant reviewed the following project documents 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;

At this stage, the consultancy team prepared:

1) **Quantitative and qualitative data collection tools** that were used to collect baseline survey data in the area. The tools consisted of:

   ✓ Household survey questionnaire (Appendix A1);

   ✓ Key informant interview Guide (Appendix A3); and

   ✓ Focus Group Discussion Guide (Appendix A2)

The quantitative data collection tool (Household Questionnaire) was developed. The questionnaire was design to measure the following indicators:

⇨ Household Profiles;

⇨ Membership of common interest groups (CIGs);

⇨ Understanding of NBEs;

⇨ Identifying ongoing NBEs;

⇨ Processing of NBEs; and

⇨ Marketing of NBEs.

The FGD and KII questionnaires were developed to address the following key issues of the project impacts:

⇨ NBEs management;

⇨ Production, processing and marketing;

⇨ Capacity building and community participation; and

⇨ Feasibility (viability and sustainability) of NBEs.

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

A group 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 before the actual data collection.

2.2.4   Task 4: Field Data Collection

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.

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 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.

Key Informant Interviews (KII)

Key informant interviews were undertaken in order to gather qualitative information on the progress of the project. The choice of the key informants for the in-depth interviews was guided by the perceived level of influence, information expected from the persons

interviewed and intentional bias to gather information that meets the project intervention areas covering catchment management and flood mitigation.

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 interview

The Household Questionnaire was used to measure the following indicators: Household Profiles, membership of common interest groups (CIGs), Understanding of NBEs, identifying ongoing NBEs, processing of NBEs and marketing of NBEs.

2.2.5   Step 5: Data Analysis and Reporting

The analysis of these baseline survey questionnaires 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 Capacity Needs Assessment Survey Report. Reporting focused on comparative assessment of the various assessment indicators.

Levels of capacity; (understanding and existing knowledge) was conducted by the team in collaboration with county officials and heads of associations within the community. The ranking levels of capacity were (no level, low, medium and high).

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 the results and discussions based on the objectives as stated in the ToR for this baseline survey. A comparative analysis of the two ecosystems is presented as well. The high variability between Mount Elgon and Cherangany Hills is explained by the number of samples. This is based on 49 respondents (70%) from Mount Elgon and 21 respondent (30%) from Cherang'any Hills.

3.1 Household profiles of Cherangany and Mount Elgon Ecosystems

3.1.1 Household Size

The distribution of HHs size is as shown in Figure 5.
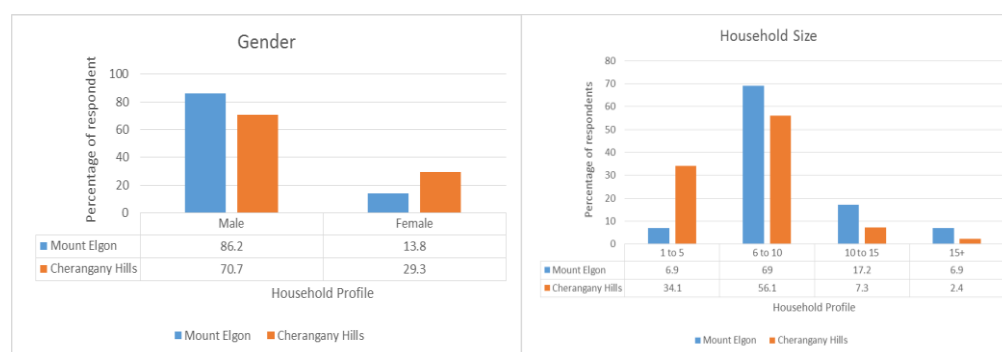
Figure 5 Household Size.

As per Figure 5 on household size above, comparisons between the 2 ecosystems for the range of 1 to 5 shows that Mount Elgon had 6.9% and Cherang'any Hills had 34.1%.

For the range of 6 to 10, it shows that Mount Elgon had 69% and Cherangany Hills had 56.1%.

For the range of 10 to 15 shows that Mount Elgon had 17.2% and Cherangany Hills had 7.3%. For the range of 15 and above shows that Mount Elgon had 6.9% and Cherangany Hills had 2.4%.

Household major occupation
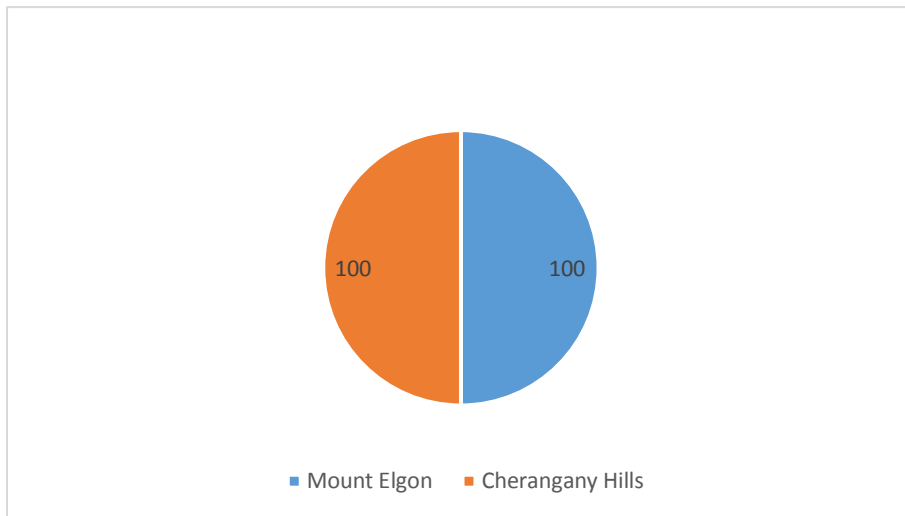
Figure 6 Major Occupation of Household Head

As per Figure 6 on Major occupation of household head above, all the respondents interviewed are farmers.

Household income
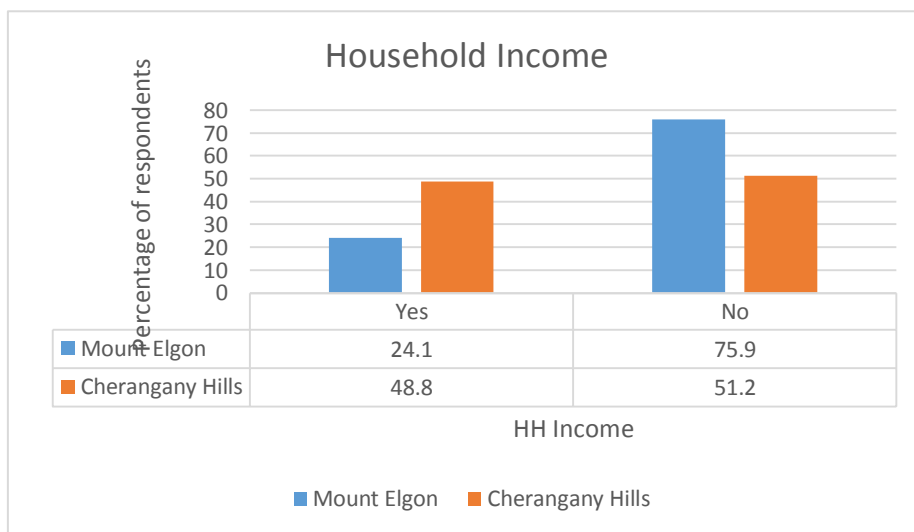
Figure 7 Household Head regular income

As per Figure 7 on household regular income above, comparisons between the 2 ecosystems, 24.1% of the respondent stated Yes for receiving regular income and 75.9% stating No for Mount Elgon. For Cherang'any Hills, 48.8% stated Yes for receiving income and 51.2% stating No.

3.1   Capacity Building

Identifying the capacity needs of the NBEs practitioners is key to the sustainability of the NBE projects and the introduction of the VSLA as an intervention. The survey sought to establish the capacity needs of the NBEs practitioners to enhance their contribution and participation in value addition, marketing and use of technology without destroying the environment, hence ensuring the sustainability of the project.

The Capacity Needs identified are on the following key areas:

- ⇨ Understanding of NBEs;

- ⇨ Membership of any social group;

- ⇨ Knowledge of NBE;

- ⇨ Understanding of Harvesting;

- ⇨ Understanding of Processing; and

- ⇨ Understanding of Marketing.

The lack of capacity within the NBEs has resulted in negative returns from the NBEs. The following was quoted from the WRUA Chairman-Kitalale 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 indicators of capacity needs were identified during the baseline survey and are presented with illustration diagrams below. This survey is based on 29 respondents (41%) from Mount Elgon and 41 respondent (59%) from Cheranga'ny Hills.

3.1.1 Understanding of NBEs

The levels of understanding of NBEs are as shown in **Error! Reference source not found.** below.
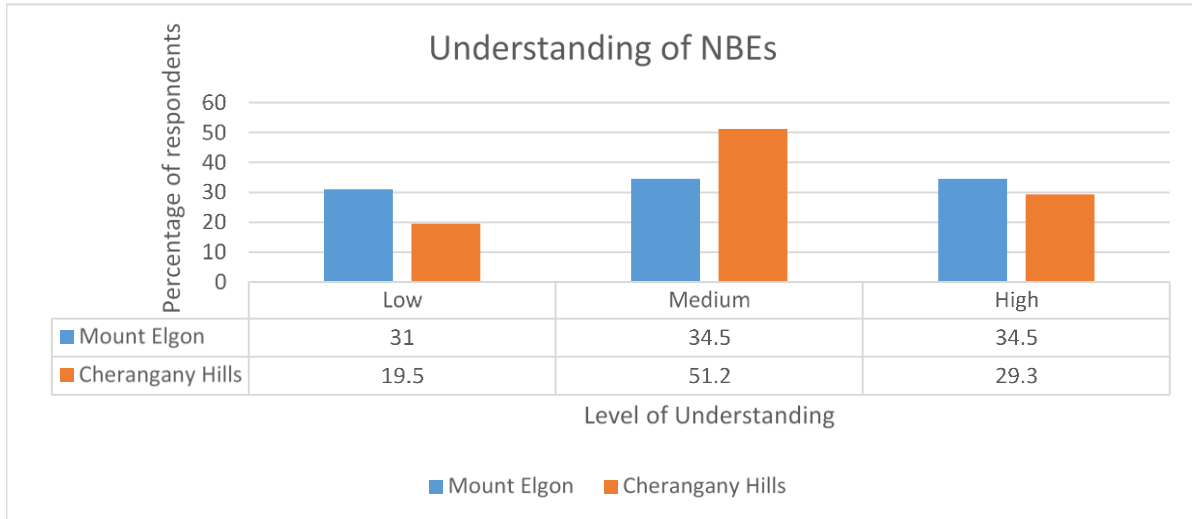
Figure 8 Level of Understanding of NBEs

As per Figure 8 on understanding of NBEs above, comparisons between the 2 ecosystems for understanding of NBEs, for low understanding, Mount Elgon had 31% preference and Cherangany Hills had 19.5%. For the Medium understanding, Mount Elgon had 34.5% and Cherangany Hills had 51.2%. For the High understanding, Mount Elgon had 34.5% and Cherangany Hills had 29.3%.

3.1.2 Membership of any Social Groups (CIG)

The levels of respondent to CIG membership are as shown in Figure 9 below.
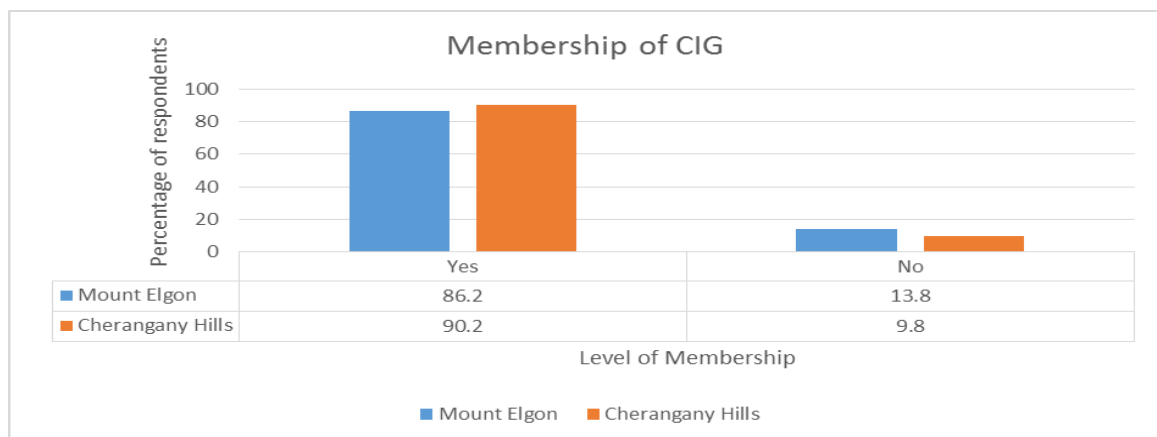
Figure 9 Membership of CIG.

Of the respondents interviewed, 86.2% and 90.2% in Mt. Elgon and Cherangany were members of CIGs while 13.8% and 9.8% were nonmembers of any CIGs Figure 9.

3.2 Nature Based Enterprises

3.2.1 Understanding of Beekeeping Practices
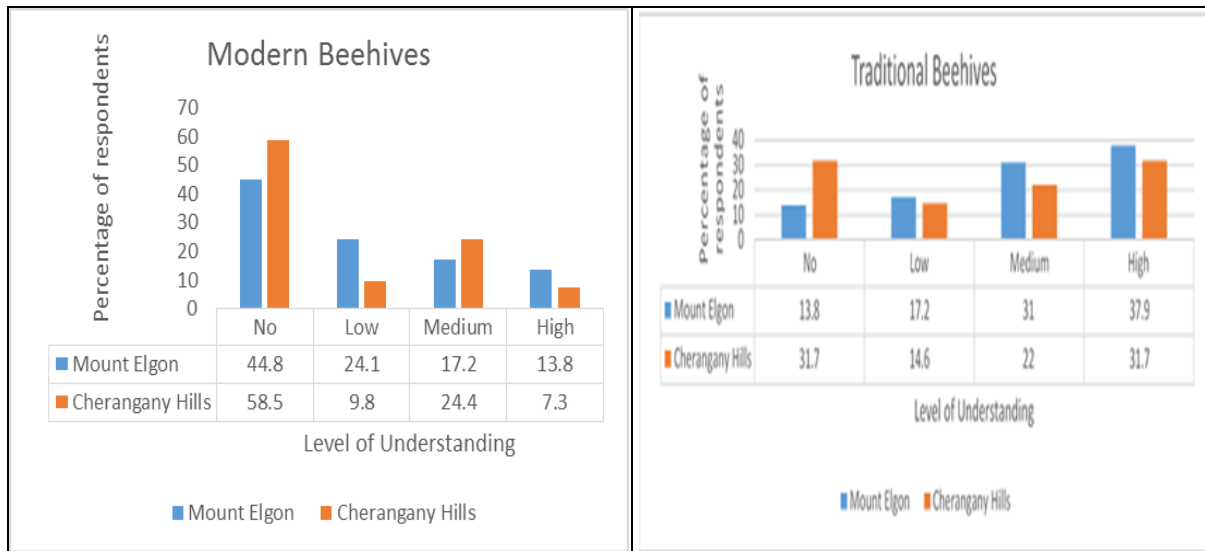
Figure 10 Level of Understanding of Beehives.

As per Figure 10 on understanding of Modern Beehives above, comparisons between the 2 ecosystems, Mount Elgon had 44.8% not understanding modern practices and Cherangany Hills had 58.5%. For Low understanding, Mount Elgon had 24.1% and Cherangany Hills had 9.8%. For the Medium understanding, Mount Elgon had 17.2% and Cherangany Hills had 24.4%. For High Understanding, Mount Elgon had 13.8% and Cherangany Hills Had 7.3%.

As per Figure 10 on understanding of Traditional Beehives above, comparisons between the 2 ecosystems, Mount Elgon had 13.8% not understanding traditional practices and Cherangany Hills had 31.7%. For Low understanding, Mount Elgon had 17.2% and Cherangany Hills had 14.6%. For the Medium understanding, Mount Elgon had 31% and Cherangany Hills had 22%. For High Understanding, Mount Elgon had 37.9% and Cherangany Hills Had 31.7%.

3.3.1 Understanding of Indigenous Technical Knowledge
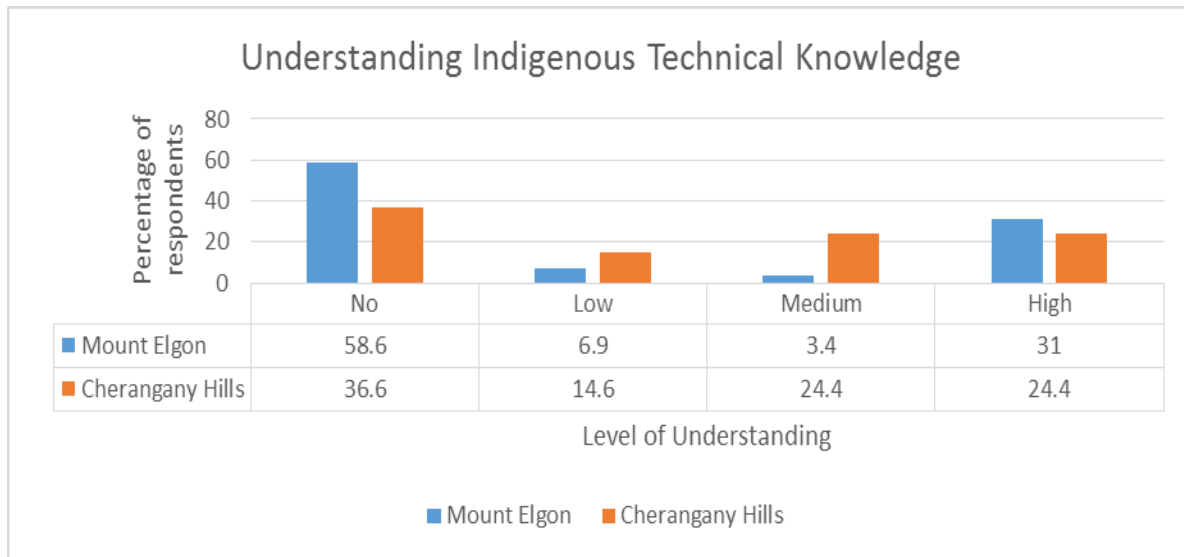
Figure 11 Level of Understanding of Indigenous Technical Knowledge.

As per Figure 11 on understanding of indigenous technical knowledge, the respondents, 58.6% and 36.6% in Mt. Elgon and Cherangany did not understand ITK. While 6.9% and 14.6% had a low understanding of ITK, 3.4% and 24.4% had a medium understanding and 31% and 24.4% had a high understanding of ITK in Mt. Elgon and Cherangany respectively.

3.4.1 Understanding of Ornamentals
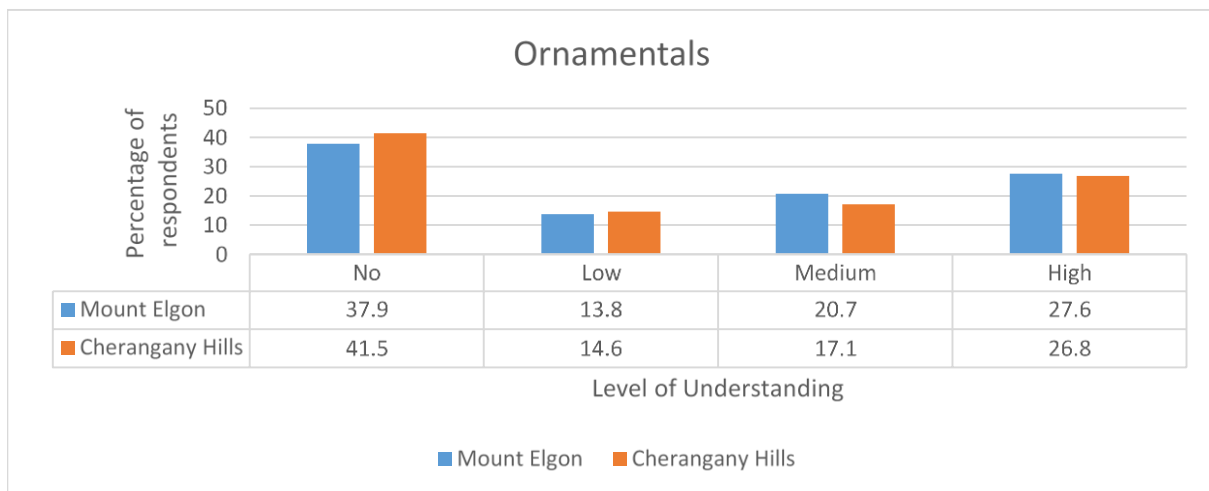
Figure 12 Level of Understanding of Ornamentals.

As per Figure 12 on Understanding of Ornamentals, comparisons between the 2 ecosystems, Mount Elgon had 37.9% with No Understanding and Cherangany Hills had 41.5%. For the Low Understanding, Mount Elgon had 13.8% and Cherangany Hills had 14.6%. For the

Medium understanding, Mount Elgon had 20.7% and Cherangany Hills had 17.1%. For High understanding, Mount Elgon had 27.6% and Cherangany had 26.8%.

3.3.2   Knowledge of Medicinal Herbs
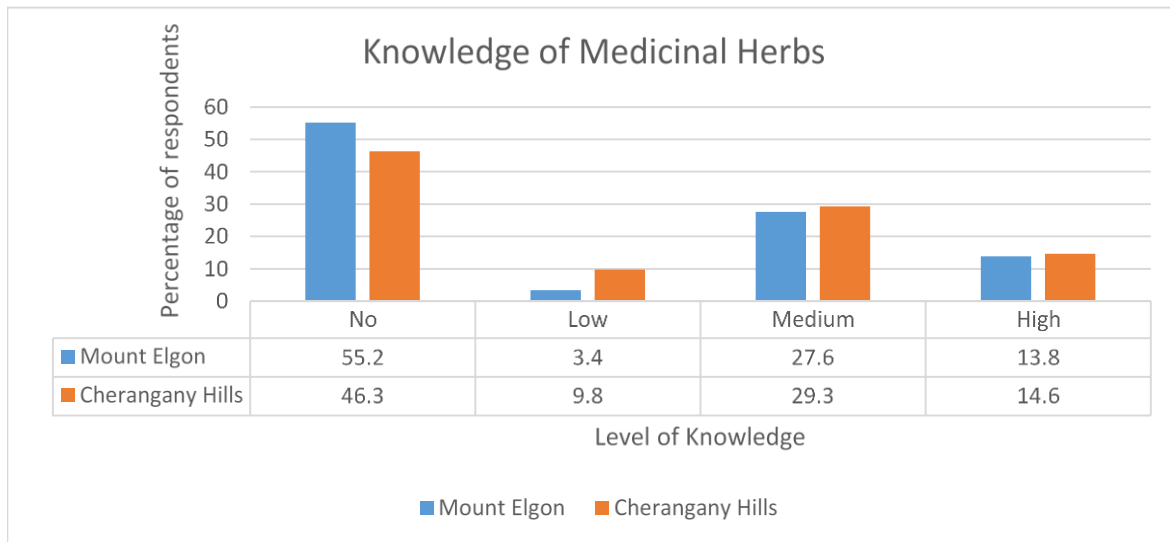
Figure 13 Level of Knowledge of Medicinal Herbs.

As per Figure 13 on Knowledge of Medicinal Herbs, comparisons between the 2 ecosystems, Mount Elgon had 55.2% with No Knowledge and Cherangany Hills had 46.3%. For the Low Knowledge, Mount Elgon had 3.4% and Cherangany Hills had 9.8%. For the Medium understanding, Mount Elgon had 27.6% and Cherangany Hills had 29.3%. For High understanding, Mount Elgon had 13.8% and Cherangany had 14.6%

3.2.2 Understanding of Harvesting of NBEs
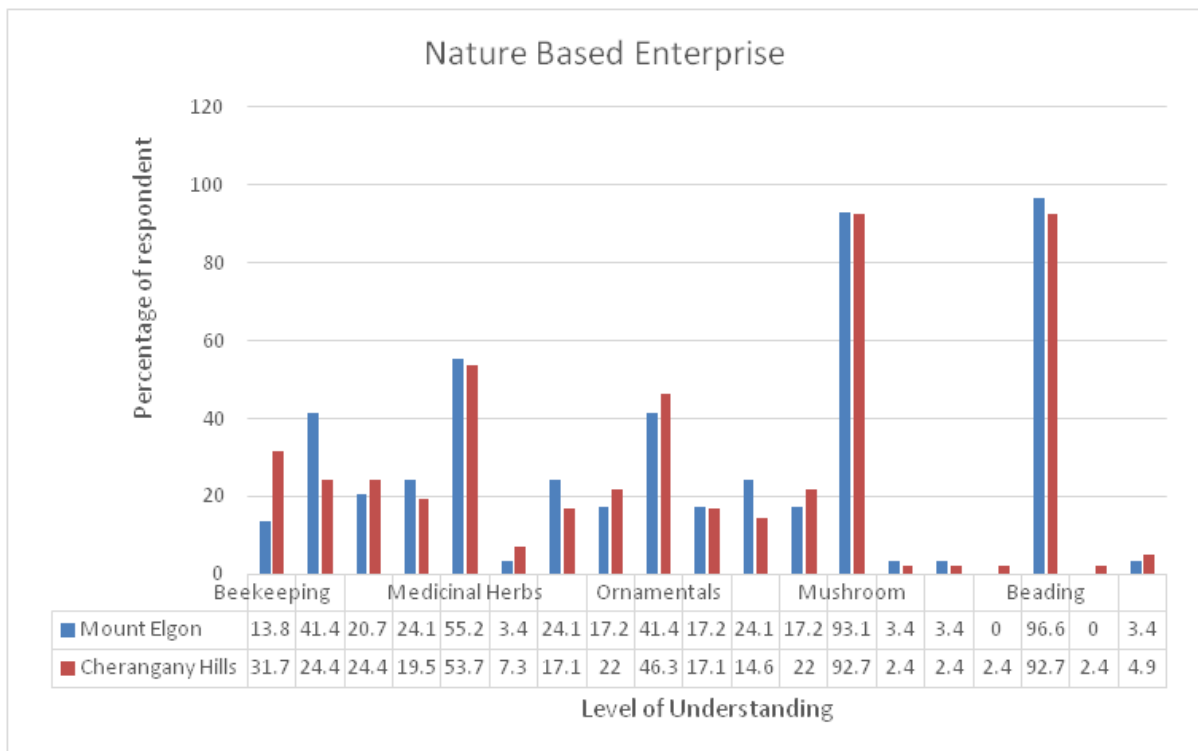
Figure 14 Level of Understanding of NBEs.

As per Figure 14 on understanding of Harvesting Honey above, comparisons between the 2 ecosystems, Mount Elgon had 13.8% with No understanding and Cherangany Hills had 31.7%. For the Low understanding, Mount Elgon had 41.4% and Cherangany Hills had 24.4%. For the Medium understanding, Mount Elgon had 20.7% and Cherangany Hills had 24.4%. For High understanding, Mount Elgon had 24.1 and Cherangany Hills had 19.5%.

As per Figure 14 on Understanding of Harvesting of Medicinal Herbs, comparisons between the 2 ecosystems, Mount Elgon had 55.2% with No Understanding and Cherangany Hills had 53.7%. For the Low Understanding of harvesting of medicinal herbs, Mount Elgon had 3.4% and Cherangany Hills had 7.3%. For the Medium understanding, Mount Elgon had 24.1% and Cherangany Hills had 17.1%. For High understanding, Mount Elgon had 17.2% and Cherangany had 22%.

As per Figure 14 on Understanding of Harvesting of Ornamentals, comparisons between the 2 ecosystems, Mount Elgon had 41.4% with No Understanding and Cherangany Hills had 46.3%. For the Low Understanding, Mount Elgon had 17.2% and Cherangany Hills had 17.1%. For the Medium understanding, Mount Elgon had 24.1% and Cherangany Hills had 14.6%. For High understanding, Mount Elgon had 17.2% and Cherangany had 22%.

As per Figure 14 on Understanding of Harvesting of Mushrooms, comparisons between the 2 ecosystems, Mount Elgon had 93.1% with No Understanding and Cherangany Hills had 92.7%. For the Low Understanding, Mount Elgon had 3.4% and Cherangany Hills had 2.4%. For the Medium understanding, Mount Elgon had 3.4% and Cherangany Hills had 2.4%. For High understanding, Mount Elgon had 0% and Cherangany had 2.4%

As per Figure 14 on Understanding of Harvesting of Beads, comparisons between the 2 ecosystems, Mount Elgon had 96.6% with No Understanding and Cherangany Hills had 92.7%. For the Low Understanding, Mount Elgon had 0% and Cherangany Hills had 2.4%. For High understanding, Mount Elgon had 3.4% and Cherangany had 4.9%

3.2.3 Understanding of Processing (value addition) of NBEs

	Beekeeping				Medicinal Herbs				Ornamentals				Mushroom				weaving				Beading			
Mount Elgon	28	41	21	10	66	21	6.9	6.9	59	14	21	6.9	97	3.4	0	97	0	0	3.4	97	3.4	0
Cherangany Hills	44	32	17	7.3	71	12	7.3	9.8	59	9.8	17	15	93	2.4	4.9	90	2.4	4.9	2.4	88	4.9	7.3
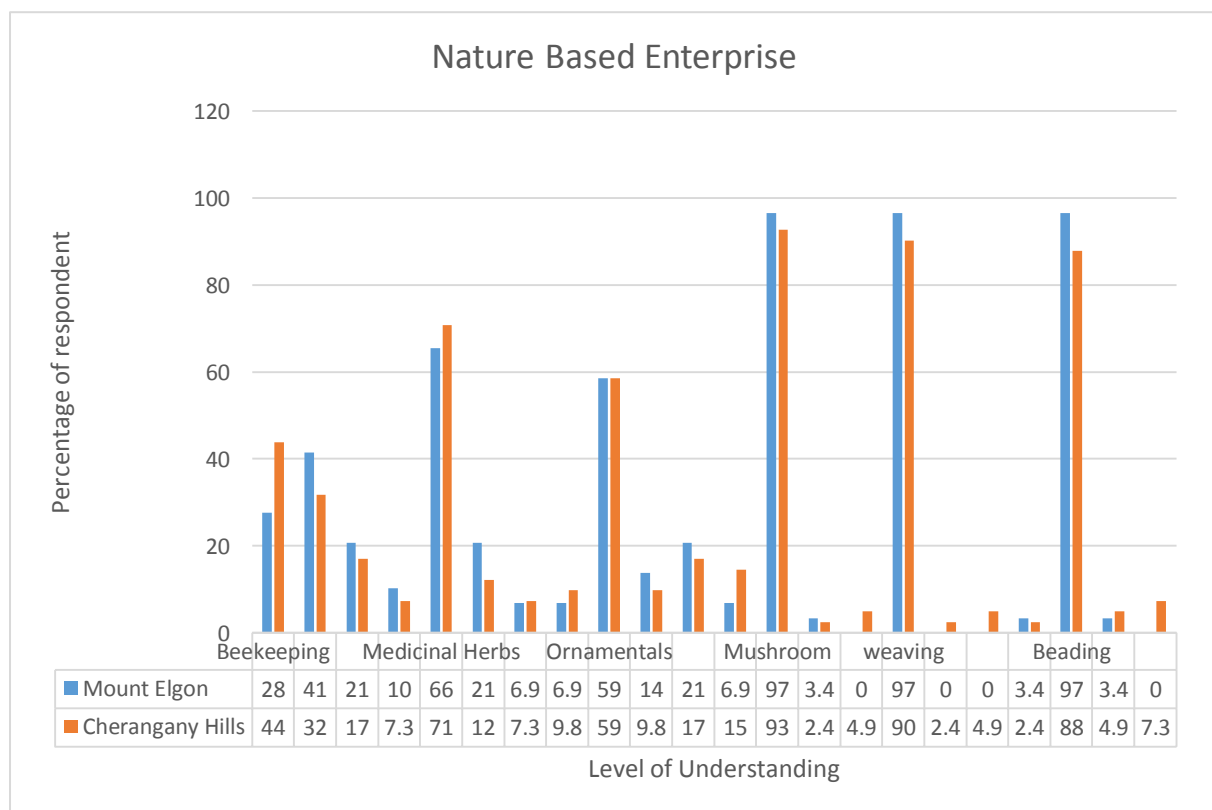
Figure 15 Level of Understanding of Processing NBEs.

As per Figure 15 on understanding of Processing Honey above, comparisons between the 2 ecosystems, Mount Elgon had 27.6 with No understanding and Cherangany Hills had 43.9%. For the Low understanding, Mount Elgon had 41.4% and Cherangany Hills had 31.7%. For the Medium understanding, Mount Elgon had 20.7% and Cherangany Hills had 17.1%. For High understanding, Mount Elgon had 10.3% and Cherangany Hills had 7.3%.

As per Figure 15 on Understanding of Processing of Medicinal Herbs, comparisons between the 2 ecosystems, Mount Elgon had 65.5% with No Understanding and Cherangany Hills had 70.7%. For the Low Knowledge, Mount Elgon had 20.7% and Cherangany Hills had 12.2%. For the Medium understanding, Mount Elgon had 6.9% and Cherangany Hills had 7.3%. For High understanding, Mount Elgon had 6.9% and Cherangany had 9.8%

As per Figure 15 on Understanding of Processing of Ornamentals, comparisons between the 2 ecosystems, Mount Elgon had 58.6% with No Understanding and Cherangany Hills had 58.5%. For the Low Understanding, Mount Elgon had 13.8% and Cherangany Hills had 9.8%. For the Medium understanding, Mount Elgon had 20.7% and Cherangany Hills had 17.1%. For High understanding, Mount Elgon had 6.9% and Cherangany had 14.6%

As per Figure 15 on Understanding of Processing of Mushrooms, comparisons between the 2 ecosystems, Mount Elgon had 96.6% with No Understanding and Cherangany Hills had 92.7%. For the Low Understanding, Mount Elgon had 3.4% and Cherangany Hills had 2.4%. For the Medium understanding, Mount Elgon had 0% and Cherangany Hills had 4.9%.

As per Figure 15 on Understanding of Weave Processing, comparisons between the 2 ecosystems, Mount Elgon had 96.6% with No Understanding and Cherangany Hills had 90.2%. For the Low Understanding, Mount Elgon had 0% and Cherangany Hills had 2.4%. For the Medium understanding, Mount Elgon had 0% and Cherangany Hills had 4.9%. For High understanding, Mount Elgon had 3.4% and Cherangany had 2.4%.

As per Figure 15 on Understanding of Processing Beads, comparisons between the 2 ecosystems, Mount Elgon had 96.6% with No Understanding and Cherangany Hills had 87.8%. For the Low Understanding, Mount Elgon had 3.4% and Cherangany Hills had 4.9%. For High understanding, Mount Elgon had 0% and Cherangany had 7.3%

3.4.4 Understanding of Marketing of NBEs
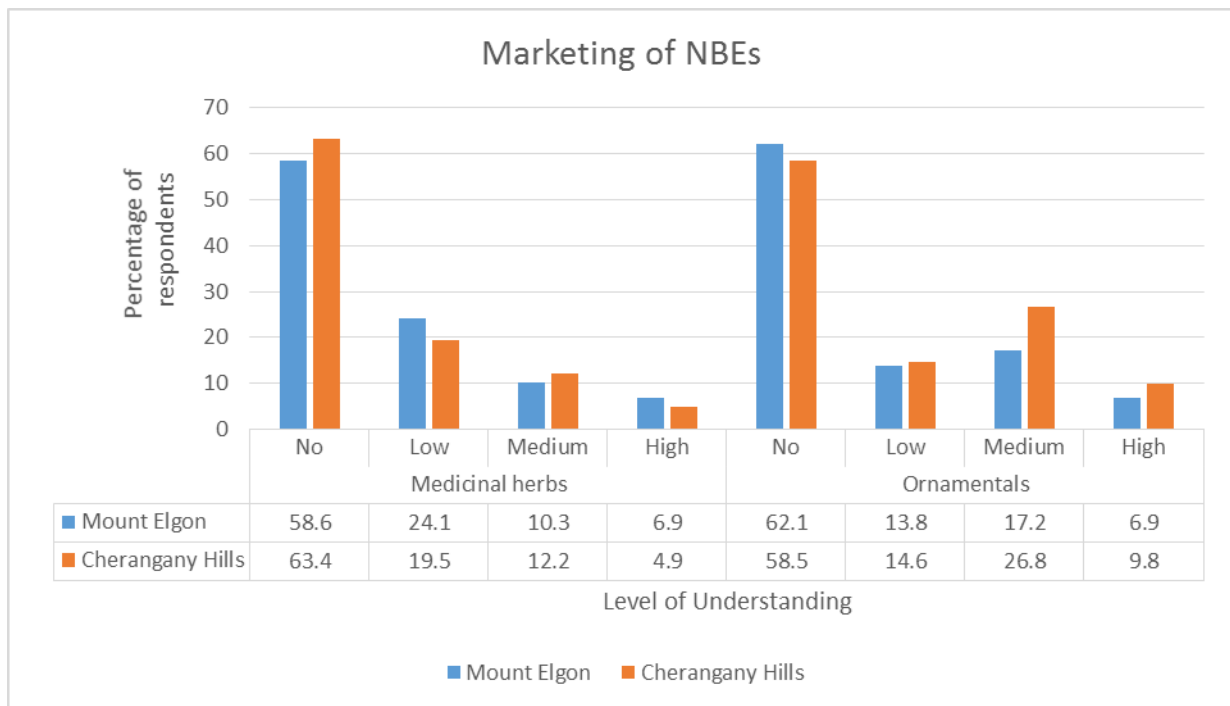
Figure 16 Level of Understanding of Marketing of NBEs.

As per Figure 16 on Understanding of Marketing of Ornamentals, comparisons between the 2 ecosystems, Mount Elgon had 62.1% with No Understanding and Cherangany Hills had 58.5%. For the Low Understanding, Mount Elgon had 13.8% and Cherangany Hills had 17.1%. For the Medium understanding, Mount Elgon had 17.2% and Cherangany Hills had 14.6%. For High understanding, Mount Elgon had 6.9% and Cherangany had 9.8%.

As per Figure 16 on Understanding of Marketing of Medicinal Herbs, comparisons between the 2 ecosystems, Mount Elgon had 61.2% with No Understanding and Cherangany Hills had 61.9%. This is based on 49 respondent (70%) from Mount Elgon and 21 respondent (30%) from Cherangany Hills. For the Low Understanding, Mount Elgon had 22.4% and Cherangany Hills had 19%. For the Medium understanding, Mount Elgon had 10.2% and Cherangany Hills had 14.3%. For High understanding, Mount Elgon had 6.1% and Cherangany had 4.8%

4. Feasibility Study

This feasibility study was conducted to determine the viability and sustainability of NBEs undertaken in Cherang'any Hills and Mount Elgon Ecosystems. The feasibility of NBEs was assessed mainly on Market and Financial feasibility.

Marketing and Financial Feasibility

Market and financial assessment is based on the average income from the sale of NBEs. The average of the various categories (less than 200; from 200 to 500; from 501 to 1000; from 1000 and none payment made) Table 2.

Table 2. Market feasibility Matrix.

Amount in (Kshs) NBEs	Less than 200	From 200 to 500	From 501 to 1000	From 1000	None	Total	Difference between Total and None	Priority level
Beekeeping	24.05	26.25	22.75	10.75	16.15	99.95	83.8	P1
Ornamentals	13	10.05	0	30.65	43.85	97.55	53.7	P2
Medicinal Herbs	25.25	12.45	2.45	6.6	53.2	99.5	46.3	P3
Mushrooms	3.65	4.15	1.7	0	90.4	99.9	9.5	P4
Weaving	5.35	1.2	0	2.45	89.75	98.75	9	P5
Beading	1.2	6.6	1.2	0	91	100	9	P5

Table 3. Priority Matrix for two ecosystems based on respondents' classification.

NBEs (Cherangany Hills)	Beekeeping	Ornamentals	Beading	Medicinal Herbs	Weaving	Mushroom
Priority Level (%)	41.5 P1	31.7 P2	31.7 P2	22 P3	19.5 P3	12.2 P4
Priority Classification	High (P1); Significant (P2); Moderate (P3); Low (P4)					

NBEs (Mt Elgon)	Beekeeping	Ornamentals	Medicinal Herbs	Mushroom	Weaving	Beading
Priority Level (%)	51.7 P1	27.6 P2	17.2 P3	6.9 P4	6.9 P4	6.9 P4
Priority Classification	High (P1); Significant (P2); Moderate (P3); Low (P4)					

5.   Conclusions and Recommendations

This feasibility study was conducted to determine the viability of NBEs located in the two study areas. Based on the framework set out in this feasibility study the following conclusions can be made regarding the feasibility of the NBEs based on level of priority, Beekeeping, Ornamental, medicinal herb, Mushrooms and weaving and beading.

Within the context of capacity assessment survey findings, the following recommendations are pertinent:

1. There should be periodic capacity building on harvesting, processing and marketing of NBEs;

2. Technical support to NBEs farmers should be provided.

Appendix A: Field Data Collection Tools

Appendix A1 Household baseline Survey Questionnaires

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) Ornamentals; (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				

SECTION B: PRIORITIZATION OF NATURE BASED ENTERPRISES (NBEs)

Bee keeping	2.3 What is your understanding of beekeeping practices (a) Modern beehives (b) Traditional beehives	No understanding (a) (b)	Low understanding (a) (b)	Medium understanding (a) (b)	High understanding (a) (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: (a)Individual farm (b) Communal land	None (a) (b)	Low (a) (b)	Medium (a) (b)	High (a) (b)
	Comments				

SECTION B: PRIORITIZATION OF NATURE BASED ENTERPRISES (NBEs)					
	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 (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				
	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				
SECTION B: PRIORITIZATION OF NATURE BASED ENTERPRISES (NBEs)					
	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	No knowledge	Low knowledge	Medium knowledge	High

	herbs				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				

SECTION B: PRIORITIZATION OF NATURE BASED ENTERPRISES (NBEs)

	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 medicinal herbs	No understanding	Low understanding	Medium understanding	High understanding
	Comments				
	3.8 What is the level of availability of medicinal herbs compared to ten - twenty years ago?	None	Low	Medium	High

	Comments				

SECTION B: PRIORITIZATION OF NATURE BASED ENTERPRISES (NBEs)

	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 products at (a) home (b) shop	None (a) (b)	Low (a) (b)	Medium (a) (b)	High (a) (b)
	Comments				

SECTION B: PRIORITIZATION OF NATURE BASED ENTERPRISES (NBEs)

	4.1 Level of understanding of harvesting ornamentals	None	Low	Medium	High
	Comments				
	4.2 level of understanding of processing (value addition) of	None	Low	Medium	High

		None	Low	Medium	High
	ornamentals				
	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	No use	Low usage	Medium usage	High usage

	family income				
	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 (a) Individual farm (b) Communal land	None (a) (b)	Low (a) (b)	Medium (a) (b)	High (a) (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 (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)

	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)

		None	Low	Medium	High
	5.9 Do you keep mushrooms (a) Individual farm (b) Communal land	None	Low (a) (b)	Medium (a) (b)	High (a) (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 (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				
	6.3 How much do you spend on production of mushrooms per kg (Kshs)	Less than 200	From 200 to 500	From 501-1000	More than 1000
	Comments				

SECTION B: PRIORITIZATION OF NATURE BASED ENTERPRISES

	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	Less than 200	From 200 to 500	From 501-1000	More than 1000

		No usage	Low usage	Medium usage	High usage
	mushrooms Kshs)				
	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				

SECTION B: PRIORITIZATION OF NATURE BASED ENTERPRISES

		None	Low	Medium	High
	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	None	Low	Medium	High

	harvesting of beads				
	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) (a) men (b) women (c) Youth	No involvement (a) (b) (c)	Low involvement (a) (b) (c)	Medium involvement (a) (b) (c)	High involvement (a) (b) (c)
	Comments				
	8.5 Who is involved in the NBE (processing) (a) men (b) women (a) Youth	No involvement (c) (d) (c)	Low involvement (c) (d) (c)	Medium involvement (c) (d) (c)	High involvement (c) (d) (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				

Appendix A2: Focus Group Discussion Guide

	Name	Signature	Date
Enumerator			
Field Supervisor			
Data Entry Clerk			

A. Identification

Question	*Option*	*Code/Value*	*Answer*
A 1: What are the NBEs undertaken by community members?	Beekeeping	**1**	
	Butterfly	**2**	
	Mushroom	**3**	
	Medicinal herbs	**4**	
	Ornamentals	**5**	
	Weaving	**6**	
	Beading	**7**	
A 2: Have any of this NBEs improved the livelihoods of the community	Yes	**1**	
	No	**2**	
A3: What support systems to NBEs exist within the ecosystem?	CDF	**1**	
	County government	**2**	
	NGOs	**3**	
	CBOs	**4**	
	Others specify	**5**	
A 4: Is there a difference in availability of NBEs compared to 10-20 years ago? (for each enterprise)	Yes	**1**	
	No	**2**	
	Specify reasons	**3**	
A5: Are you aware of available NBEs that impacts on the environment positively?	Yes	**1**	
	No	**2**	
	Other (specify)		
A6: Are you aware of available NBEs that impacts on youth, women and the physically challenged?	Yes	**1**	
	No	**2**	
	Others (specify)		

B. Prioritization

B1: Can you prioritise/ rank the NBEs in the ecosystem on the basis of preference? Please specify reason for preference	Beekeeping	**1**	
	Butterfly	**2**	
	Mushroom	**3**	
	Medicinal herbs	**4**	
	Ornamentals	**5.**	
	Weaving	**6.**	
	Beading	**7.**	
B2: Which NBEs will significantly contribute to ecosystem conservation?	Beekeeping	**1**	
	Butterfly	**2**	
	Mushroom	**3**	
	Medicinal herbs	**4**	
	Ornamentals	**8.**	
	Weaving	**9.**	
	Beading	**10.**	
C. Marketing			
C1: What products from NBEs are marketed by the community: see NBEs?	Individually	**1**	
	Group	**2**	
	Other (Specify)		
C2: Are there existing markets for the products?	Yes	**1**	
	No	**2**	
	Please specify	**3**	
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	**1**	
	Transportation cost	**2**	
	Lack of information	**3**	
	High cost of raw materials	**4**	
	Others (specify)	**5**	
C5: What challenges are experienced in value	Lack of skills/knowledge	**1**	

addition/processing of products?	High cost of inputs	**2**	
	Lack of facilities	**3**	
	Lack of access to affordable technology	**4**	
	Others (specify)	**5**	
C6: What challenges are experienced in marketing of the products?	Lack of information	**1**	
	Lack of Competitive advantage	**2**	
	Lack of favourable market channels/outlets	**3**	
	Others (specify)	**4**	
D. Feasibility of NBEs in ecosystems			
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
Enumerator			
Field Supervisor			
Data Entry Clerk			

A. NBE Issues of Concern in the two Ecosystems			
Question	**Option**	**Code/ Value**	**Answer**
A 1: What are the major NBEs undertaken by community members?	Beekeeping	1	
	Butterfly	2	
	Mushroom	3	
	Medicinal herbs	4	
	Ornamentals	5	
	Weaving	6	
	Beading	7	
A 2: What are some of the existing efforts to support NBEs	Capacity building/training	1	
	Extension services	2	
	Exposure tour	3	
	Agricultural shows/fair	4	
A3: What are the most important markets outlets where NBE products are sold? (for each enterprise)	Farm gate	1	
	Local market	2	
	Super markets	3	
	SACCO	4	
A 4: Who is involved in the NBEs?	Men	1	
	Women	2	
	Youth	3	
	Physically Challenged	4	
A5: Which formal or informal groups/ associations are involved in NBEs	NGOs	1	
	CBOs	2	
	FBOs	3	
	Women group	4	
	Merry go round/table banking	5	
	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	1	
	CBOs	2	
	FBOs	3	
	Women group	4	
	Merry go round/table banking	5	
	Others (specify)		

A7: Does the community have the capacity to develop viable and sustainable NBEs and to manage them independently	Yes	1	
	No	2	
A8: Are community members aware of the role of NBEs in addressing their needs and improving their livelihoods?	Yes	1	
	No	2	
	Give reasons (specify)		
A9: What are some of the challenges that hinder the success and establishment of NBEs	Lack of information	1	
	Lack of funding	2	
	Lack of training	3	
	Cultural beliefs	4	
	Lack of security	5	
	Extension services	6	
	Others (specify)		
D. Information about potential service providers/banks and microfinance institutions			
D1: What are the most common sources of loans in this ecosystem?	SACCO Loan	1	
	Merry go round/table banking	2	
	Bank loan	3	
	Others (specify)	4	
D2: Are there SMEs in this ecosystem?	Yes	1	
	No	2	
D3: Have trends in NRM investments changed during recent years?	Yes	1	
	No	2	
E. Information about potential technical and administrative support providers			
E1: Do frontline extension workers visit the villages in this ecosystem?	Yes	1	
	No	2	
E2: Do extension workers have the necessary skills and capacity to support NBEs in the ecosystem?	Yes	1	
	No	2	
	Specify reasons	3	

Appendix 4: Cherangany Hills and Mt. Elgon Ecosystems Questionnaires

Questionnaire No.	COUNTY	SUB-COUNTY	LOCATION	ECOSYSTEM	DATE OF INTERVIEW
1	TRANS NZOIA	Saboti	Kinyoro	**Mt.Elgon**	26.9.2016
2	E.MARAKWET	Marakwet East	Kapyego	**Cherangany**	29.9.2016
3	E.MARAKWET	Marakwet East	Kapyego	**Cherangany**	29.9.2016
4	E.MARAKWET	Marakwet East	Kapyego	**Cherangany**	29.9.2016
5	TRANS NZOIA	Trans Nzoia East	Makutano	**Cherangany**	27.9.2016
6	WEST POKOT	Chepareria	Ywalatekte	**Cherangany**	27.9.2016
7	TRANS NZOIA	Saboti	Kinyoro	**Mt Elgon**	26.9.2016
8	TRANS NZOIA	Cherangany	Makutano	**Cherangany**	27.9.2016
9	TRANS NZOIA	Trans Nzoia East	Cherangani	**Cherangany**	27.9.2016
10	TRANS NZOIA	Kitale East	Makutano	**Cherangany**	27.9.2016
11	TRANS NZOIA	Saboti	Matisi	**Mt. Elgon**	26.9.2016
12	E.MARAKWET	Marakwet	Embobut	**Cherangany**	29.9.2016
13	E.MARAKWET	Marakwet East	Kipchumwa	**Cherangany**	29.9.2016
14	E.MARAKWET	Marakwet East	Embobut	**Cherangany**	29.9.2016
15	E.MARAKWET	Marakwet East	Embobut	**Cherangany**	29.9.2016
16	E.MARAKWET	Marakwet East	Kapyego	**Cherangany**	29.9.2016
17	E.MARAKWET	Marakwet East	Embobut	**Cherangany**	29.9.2016
18	TRANS NZOIA	ENDEBBES	Chepchoina	**Mt. Elgon**	30.9.2016
19	TRANS NZOIA	ENDEBBES	Chepchoina	**Mt. Elgon**	30.9.2016
20	TRANS NZOIA	ENDEBBES	Chepchoina	**Mt. Elgon**	30.9.2016
21	TRANS NZOIA	ENDEBBES	Chepchoina	**Mt. Elgon**	30.9.2016
22	TRANS NZOIA	ENDEBBES	Chepchoina	**Mt. Elgon**	30.9.2016
23	TRANS NZOIA	ENDEBBES	Chepchoina	**Mt. Elgon**	30.9.2016
24	TRANS NZOIA	ENDEBBES	Chepchoina	**Mt. Elgon**	30.9.2016
25	TRANS NZOIA	ENDEBBES	Chepchoina	**Mt. Elgon**	30.9.2016
26	TRANS NZOIA	ENDEBBES	Chepchoina	**Mt. Elgon**	30.9.2016
27	TRANS NZOIA	ENDEBBES	Chepchoina	**Mt. Elgon**	30.9.2016
28	TRANS NZOIA	ENDEBBES	Chepchoina	**Mt. Elgon**	30.9.2016
29	TRANS NZOIA	ENDEBBES	Chepchoina	**Mt. Elgon**	30.9.2016
30	E.MARAKWET	Marakwet West	Kapsumai	**Cherangany**	29.9.2016
31	E.MARAKWET	Marakwet West	Koibarak	**Cherangany**	29.9.2016
32	E.MARAKWET	Marakwet West	Kapsowar	**Cherangany**	29.9.2016
33	E.MARAKWET	Marakwet West	Kapsowar	**Cherangany**	29.9.2016s
34	E.MARAKWET	Marakwet West	Kapsumai	**Cherangany**	29.9.2016
35	TRANS NZOIA	Trans Nzoia East	Makutano	**Cherangany**	29.7.2016
36	E.MARAKWET	Marakwet East	Embobut	**Cherangany**	29.9.2016
37	TRANS NZOIA	Saboti	Kinyoro	**Mt.Elgon**	26.9.2016
38	TRANS NZOIA	Trans Nzoia East	Makutano	**Cherangany**	28.9.2016
39	TRANS NZOIA	Trans Nzoia East	Makutano	**Cherangany**	27.9.2016
40	TRANS NZOIA	Trans Nzoia East	Makutano	**Cherangany**	27.9.2016
41	TRANS NZOIA	Saboti	Kinyoro	**MT.Elgon**	26.9.2016
42	E.MARAKWET	Marakwet East	Embobut	**Cherangany**	29.9.2016

Continued

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