ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

SUMMARY PROJECT REPORT (SPR)

PROPOSED CONSTRUCTION OF HONEY PROCESSING PLANT KAREMO DIVISIONAL HEADQUARTERS SOUTH EAST ALEGO WARD, ALEGO USONGA SUB COUNTY, SIAYA COUNTY

GPS COORDINATES: -0.01753595 N 34.343421496 E

Project site in Kogelo sub location South East Alego Location, Alego Usonga Sub County, Siaya County

PROJECT PROPONENT

PRODUCERS AND PROCESSORS CO- OPERATIVE SOCIETY L.T.D

P.O BOX 3 -40600,

SIAYA

PROJECT SPONSOR

GOVERNMENT OF KENYA/COUNTY GOVERNMENT OF SIAYA

WITH SUPPORT FROM THE WORLD BANK

CERTIFICATION

This Summary Project Report (SPR) has been prepared in accordance with NEMA regulations under the guidance and supervision of a registered NEMA Lead Expert. It meets statutory provisions stipulated in EMCA 2015, the Legal Notice No. 32 and the Environmental (Impact Assessment and Audit) (Amendment) Regulations, 2019.

The report is submitted on behalf of Kenya Climate Smart Agriculture Project (KCSAP), Siaya Coordinating Unit under the funding from the World Bank Group for the proposed**.** To our knowledge, all information contained in this report is accurate and a true representation of all findings as relating to the project.

LEAD EXPERT

Fredrick Aloo

P O Box 34188-0100

Nairobi

Tel. 0726589117

EIA/EA Registered Lead Expert No. 9049

Signed Date 18/3/2022

PROPONENT

Name: Patrick Obewa Signature  **Date 19/3/2022**

Designation: **Chairman**

On behalf of**: Producers and Processors Co- Operative Society L.T.D**

P.O Box 777-4060

Siaya

ACKNOWLEDGEMENT

Special gratitude goes to the proponent Kenya Climate Smart Agriculture Project (KCSAP) Siaya County Coordinating Unit for their most and timely needed assistance when conducting this environmental and social impact assessment for purpose of preparing SPR for the proposed Construction of a honey processing unit . Much thanks to all the members of the community who took part in the public participation. Appreciation goes to the funding institution, World Bank Group for considering Siaya County as beneficiary of the project and the National Project Coordinating Unit (NPCU) for their input in the process of writing the SPR. Our gratitude goes more specifically to Dr. Gilbert Muthee, Environmental Specialist, Ms. Jane Ngugi and all reviewers at the National Panel of Experts (PoE) for their role in review and their invaluable input into in the draft reports until submission of this SPR.

Table of Contents

CER TIFICATION ..... **ii**
ACKNOWLEDGEMENT ..... **iii**
ACRONYMS ..... **viii**
EXECUTIVE SUMMARY ..... **ix**
CHAPTEXR ONE **1**
INTRODUCTION **1**
1.1 Background 1
1.2 Project Justification 1
1.3 Rationale for Conducting the SPR 1
1.4 Objectives of the SPR 2
1.5 Approach and Methodology 2
1.5.1 Screening 2
1.5.2 Scoping 2
1.5.3 Desk Review 3
1.5.4 Field Data Collection 3
1.5.5 Reporting and documentation 3
1.6 Summary Project Report Organization 3
CHAPTER TWO **5**
PROJECT DESCRIPTION **5**
2.1. Introduction 5
2.2. Project Design 5
2.2.1 Honey processing unit 5
2.2.2 Activities in the processing unit 5
2.3 Project Planning 6
2.4. Construction process and sitting of beehives 6
2.5. Materials for Construction 6
2.6. Technology to be used 6
2.6.1 Honey processing technology 6
2.7. Project output 6
2.8. Aesthetic value considerations 7
2.9. Utilities 7
2.9.1 Power 7
2.9.2. Water supply 7
2.9.3 Government services 7
CHAPTER THREE **8**

LOCATION OF THE PROPOSED SITE **8**
3.0. Introduction 8
3.1 Project Location 8
3.2 Site description 8
3.2.1 Description of Physical environment of the project area 9
3.2.2 Description of the Socio-economic environment of the project area 9
3.2.2.6 Vulnerable and Marginalized Groups (VMGs) 11
3.2.2.7 Livelihood activities 11
3.3 Proof of Land Ownership 12
3.4 Environmentally Sensitive Areas within the Project Site 12
3.5 Availability of Supportive Environmental Management Infrastructure 12
3.5.1 Solid and liquid Waste management 12
3.5.2 Storm Water Management 12
3.5.3 Water Supply 12
3.6 Conformity to Land use plan/Zonation 12
CHAPTER FOUR **13**
PUBLIC PARTICIPATION AND STAKEHOLDERS' CONSULTATION **13**
4.2 Objectives of Community and Stakeholders Consultation 13
4.3 Categorization of Community Participants and stakeholders 13
4.4 Methodology of Public Participation 14
4.5 Summary of Issues Raised by the Community and Stakeholders and Responses 14
CHAPTER FIVE **17**
POTENTIAL PROFECT IMPACTS AND MITIGATION MEASURES **17**
5.1 Introduction 17
5.2 Anticipated Positive Environmental and Social Impacts 17
5.2.1 Positive Environmental Impacts 17
5.2.2 Positive Social Impacts 17
5.3 Anticipated negative Environmental and Social Impacts and their Mitigation measures 18
5.3.1 Preparatory Phase 18
5.3.1.2 Negative Social Impacts 19
5.3.2 Construction Phase 20
5.3.3 Operational Phase 26
5.3.3.1 Negative Environmental Impacts 26
5.3.3.2 Negative Social Impacts 27
v). Risk of bee sting 28
5.3.4 Decommissioning Phase 29
i). Reduction in spread of social diseases like HIV/AIDS 29

i). Economic decline 29
ii). Insecurity 30
iii). Safety risks 30
CHAPTER SIX 31
ENVIRONMENTAL AND SOCIAL MANAGEMENT & MONITORING PLAN (ESM & MP) ..31
6.1 Introduction 31
6.2 PROPOSED ENVIRONMENTAL AND SOCIAL MANAGEMENT & MONITORING PLAN (ESM & MP) FOR THE SIAYA BEE KEEPING AND HONEY PROCESSING PROJECT 32
CHAPTER SEVEN 45
CONCLUSIONS AND RECOMMENDATIONS 45
7.1. Conclusion 45
7.2 Recommendations 45
References 46
APPENDICES 47
ANNEX I: SCREENING CHECKLIST 47
..... 47
ANNEX II: LAND OWNERSHIP DOCUMENTS 52
..... 52
ANNEX I11: PUBLIC PARTICIPATION QUESTIONNAIRES 53
ANNEX IV: LIST OF ATTENDANCE 57
ANNEX V: MINUTES 59
ANNEX VI: BUILDING PLANS 61
ANNEX VII: EXPERTS PRACTICING LICENCE FOR YEAR 2022 62

TABLE OF TABLES

Table 1 Human population of South East Alego Sub Location 10
Table 2 Housing type in the Project Area 10
Table 3 Energy and their Sources in Subproject Site, NYANGOMA KOGELO 11
Table 4 ESMMP for the proposed project 32

TABLE OF FIGURES

Figure 1: Google Earth Map Location Site Of The Proposed Project 8
Figure 2 map of the agro-ecological ZONE..... 9

TABLE OF PLATES

Plate 1 Baraza session in progress at the proposed honey processing premise..... 14
Plate 2 Participants filling individual questionnaire 16

ACRONYMS

AIDS	-	Acquired Immunodeficiency Disease Syndrome
COVID 19	-	Corona Virus Disease
CPP	-	Consultation, Public involvement and Participation
DOHS	-	Department Of Health and Safety
EMCA	-	Environmental Management and Monitoring Act
EMMP	-	Environmental Management and Monitoring Plans
ESIA	-	Environmental and Social Impact Assessment
GBV	-	Gender Based Violence
GoK	-	Government of Kenya
HIV	-	Human Immunodeficiency Virus
IAPs	-	Interested and Affected Parties
KCSAP	-	Kenya Climate Smart Agriculture Project
KEBS	-	Kenya Bureau of Standards
MoH	-	Ministry of Health
NEMA	-	National Environment Management Authority
NGO	-	Non-Government al Organization
PoE	-	Panel of Experts
SEA	-	Sexual Exploitation and Abuse
SH	-	Sexual Harassment
SOP	-	Standard Operating Procedures
SPR	-	Summary Project Report
STD	-	Sexual Transmitted Disease
ToR	-	Terms of Reference
VCT	-	Voluntary Counseling Centre
VMG	-	Vulnerable and Marginalized Group
WHO	-	World Health Organization

EXECUTIVE SUMMARY

Siaya County honey producers and processors Co- operative Society limited is a County based Co- operative Society formed by Bee keepers across Siaya County, who came together with mutual understanding for mutual benefits. The aim of the proposed project is to establish a bee keeping unit entailing a honey processing premises (unit)

The proposed project will be located in kogelo South East Alego sub location, South Esat Alego location, Alego Usonga sub county, Siaya County. It lies within geographic co-ordinates ***Latitude:*** *0°1'3.22104"S and* ***Longitude:*** *34°20'49.9056"E Nyangoma Kogelo*

The beneficiaries are the residents of Kogelo village through a producer organization Siaya County honey producers and processors Co- operative Society limited

The objective of this project is to collect, crude honey and its products, process, package and market The Society is currently owned by 702 registered farmers who exist in the business as shareholders. The members are mainly Bee keepers who are registered and hold a minimum of 100 shares each of which is Kshs 20.

The ultimate objective of the project is to promote bee farming and process raw honey to be sold to a ready market in the region and beyond.

The objectives of conducting this SPR were to identify and assess the potential environmental, health, safety and social impacts of the proposed project during construction, operation, and decommissioning phases. Mitigation measures have been proposed to manage all the negative impacts.

This SPR is conducted in fulfillment of the requirements for such projects by the Government of Kenya as stipulated in EMCA 1999 (Revised 2015) and the Environmental (Impact Assessment and Audit) (Amendment) Regulations, 2019 as stipulated in the Legal Notice No. 31 and 32, the World Bank Group's Environmental and Social Safeguards as well as meeting the project proponent's desire to safeguard the environment.

The Methodology employed in the preparation of the SPR entailed environmental screening which considered Physical environment that encompasses flora and fauna, geology and soil types, air quality and noise pollution. A desk top review was done to collect secondary data especially from existing government records and documents. Questionnaires were used to collect information from the community during public participation with a total of 25 people. VMGs in the society were involved and their views incorporated in this SPR. Other methods used included Interview with key informants, 3 FGDs and actual site visits. COVID-19 prevention measures were followed during the whole process.

Discussion with participants and from data analysis and interpretation revealed the main issues of concern raised by the respondents was that VMGs and less fortunate in the society should be considered in this project. The County Government of Siaya was recommended to assist the cooperative in marketing honey produced while the project management committee was advised to have laws that ensure no discrimination of any kind.

All issues raised were well addressed openly and the lead expert advised the producer and processors Project management to ensure employment is synchronized and equitably done to include the VMGs and PADs in the community as suggested. The respondents and community at large supported and welcomed the projects full implementation.

Stakeholder public consultations were held on the dates of 11 and 15th March 2022 for the Siaya Honey Producers Processors Co- Operative Society at the proposed site in Nyangoma Kogelo Village where issues raised. The meeting was attended by a total of 60 people and integrated all genders (47-Males and 13-Females)

The project will have positive social impacts which include income to the local community, creation of alternative livelihoods in the community, job opportunities during construction, support of local businesses and revenue to Government. Positive environmental impacts include conservation of the environment and improved pollination by bees. Negative impacts include increase in social vices due to influx of people, social diseases e.g. HIV AIDS, health and safety of workers during construction of the processing unit. The mitigation for these impacts will include awareness and sensitization campaigns by the proponents, use of PPEs will also mitigate accidents in the work area by the workers and employees.

The Environmental Social Management and Monitoring Plan in this report suggest that impacts on waste water and effluents be mitigated by regularly checking the septic level and emptying regularly by the management. Activities will be limited to day time to reduce on noise and vibration especially during construction of the premises. The proponent shall ensure proper siting of buildings, erect warning signs and fence off the area to avoid bee stings. Where employment opportunities shall arise consideration should be given to VMGs and PLWDs, women and youths by being given equal opportunities.

The ESM & MP presented in this report shall be part of the contract with the contractor chosen by the producer and processors cooperative its implementation is expected to cost **Kshs. 10,618,000.00** (ten thousand six hundred and eighteen thousand) out of which monitoring is estimated to cost **Kshs. 490,000** (Four Hundred and ninety thousand). The cost of implementation at construction will be borne by the contractor while monitoring costs are taken care as part of the CPCU Operations Budget.

Given that the potential negative impacts are not significant to warrant environmental degradation, this Summary Project Report presents a "Findings of low Significant Impacts" that can be mitigated to levels of no significance.

It is therefore recommended that the proposed project be allowed to proceed, strictly on condition that the impact mitigation plans are implemented as recommended, and that a follow up Environmental Audit should be done annually just to cross check conformity and adherence to the regulations and recommendations made in this report.

The review of this Summary Project Report is undertaken during the Coronavirus Disease (COVID-19) pandemic outbreak. The preparation of the SPR including the relevant consultations have been undertaken in strict compliance with guidelines for infection prevention and control in the country. Additionally, specific mitigation measures have been introduced to prevent the spread of the pandemic during the construction period.

CHAPTEXR ONE
INTRODUCTION

1.1 Background

Siaya County honey producers and processors Co- operative Society limited is a County based Co- operative Society formed by Bee keepers across Siaya County, who came together with mutual understanding for mutual benefits.

When the Bee keepers realized that the initial capital outlay required for this farming practice to take off was too heavy for individual farmers to afford, the individual bee keepers found it necessary to form Common Interest Groups in order to pull resources together.

The Society is currently owned by 702 (310 males adults, 272 female adults, 43 male youths, 50 female youths) registered farmers who exist in the business as shareholders. The members are mainly Bee keepers who are registered and hold a minimum of 100 shares

Siaya County Honey Producers and Processors of Co- Operative Society Limited was registered on 14th June 2014. With registration number **CF/16638**

The Society has its rented office located **opposite Siaya- Akala Rd Junction** near Karemo Divisional Headquarters, but operates in five Sub- Counties namely Alego Usonga, Ugunja, Ugenya, Gem and Bondo.

Until now, the Society has been trading in **honey** as the main product, but they have identified six more highly demanded products to offload at the market. These are Bee wax, Pollen, Propollis, Venom, Royal Jelly and Bee hives.

1.2 Project Justification

The project is in response to the broader objective of KCSAP of increasing agricultural productivity and enhancing resilience/copying mechanisms to climate change risks in the targeted smallholder farming. The Siaya County Honey Producers and Processors of Co- Operative Society limited is a community-based farmer consortium with the aim of improving their economy and standard/quality of life. It seeks to contribute to community resilience to climate change by offering an alternative livelihood to the community. The project will also enhance environmental conservation which is a mitigation to climate change.

1.3 Rationale for Conducting the SPR

The SPR is prepared in accordance with the Legal Notice number 31 which has classified such a project as a low-risk project and requiring only SPR as the main tool for approval.

Documentation of this SPR has followed the format provided by NEMA (through both EMCA, 1999 and the Environmental Social Impact Assessment and Audit Regulations-legal Notice No.32 of April 2019) and the World Bank policy guidelines on social and environmental safeguards policies which require that certain types of projects be subjected to an ESIA to ensure compliance. This safeguards the social and environment aspects during project planning, design, construction, operation, monitoring, evaluation and decommissioning. It is also a

decision-making tool and guide whether a project should be implemented, abandoned or modified prior to implementation

1.4 Objectives of the SPR

The overall objective of carrying out this SPR is to fulfill the requirements of the Government of Kenya as stipulated in EMCA, 1999, and the World Bank Group's Environmental and Social Safeguards as well as meeting the project proponent's desire to safeguard the environment.

The specific objectives are:

- To identify and assess the potential environmental, health and safety impacts of the proposed Siaya County Honey Producers and processing unit and siting of beehives.
- To propose appropriate mitigation measures for the management of environmental, health and safety impacts emanating from the processes.
- To develop environmental management plan for the project.
- To conduct public participation and ensure that issues raised by stakeholders are mainstreamed into the environmental and Social management plan developed for the project.

1.5 Approach and Methodology

1.5.1 Screening

This project was screened by the NEMA County Director of Environment (CDE) in order to make a determination as to whether or not a full ESIA is to be carried out. A decision was made in reference to the NEMA Public Notice on ESIA and Legal Notice No 31 and 32 of April 2019 that the report should only conduct and submit SPR for decision making by the Authority.

During the environmental and social screening exercise, issues which were identified and considered pertinent and important for coverage also determined the decision made by the CDE. Environmental and social safeguards screening checklist was the main tool used to keep records**.(*AnnexI: Screening checklist attached*)**

1.5.2 Scoping

Site visits were made by the experts together with the representatives of the Project management committee and members of the public. This was done to ensure that critical issues pertaining to the ESIA were identified to enable the experts understand the area and collect baseline information in preparation for undertaking the task.

1.5.3 Desk Review

A desk top review was done to collect secondary data especially from existing government records that involved review of literature and information available from national Government, County Government of Siaya and reference to other ESIA project reports on similar subject submitted to NEMA.

1.5.4 Field Data Collection

The study employed various tools and instruments for data collection. These included pre-determined checklists; camera for taking pictures of the site, questionnaires with both open-ended and closed format used to gather primary data and information from neighbors, notebooks for recording notable observations and site layout which included environmental screening and Physical environment that encompasses flora and fauna, geology and soil types, safety issues as well as noise pollution. Interview guide was used to get information from 7 key informants who included officials in the County Government of Siaya and the national Government. were also interviewed and data captured on tree cover and species available in the forest where the beehives will be sited.

Data from the general public was obtained using a closed and open-ended questionnaire circulated among the sampled respondents in the community. During assessment and public participation, all the laid down containment measures against the spread of COVID-19 were followed. Sampling included the Vulnerable and Marginalized Groups in the community and their views were taken.

The data gathered was evaluated, analyzed to determine the required level of environmental performance. Recommendation action plans were made with a view to ensure compliance with the National Environmental Management Authority requirements and/or guidelines relating to issues listed in Environmental Management and Coordination Act. Sampled questionnaires have been attached to the appendices of this report. *(Appendix 4).*

1.5.5 Reporting and documentation

The reporting and documentation followed the format provided by NEMA (through both EMCA, 1999 and the Environmental Social Impact Assessment and Audit Regulations-Legal Notice No.32 of 2019) and World Bank policy guidelines on social and environmental safeguards. The CPCU was continually informed throughout the period of report preparation to ensure that they were aware of the issues raised and the recommendations that were likely to be made regarding the best practices to mitigate environmental impacts.

1.6 Summary Project Report Organization

The report has several major Chapters presented as follows;

Chapter One (Introduction): This gives the background information, objectives and justification of the project and SPR; approach and methodology for SPR and the outline of the organization of SPR report. In **Chapter**

Two (Nature of the Project): The section covers project description including the project components, design, layout, activities, materials, equipment and project cost.

Chapter Three (Project Location): This section gives description of the project site and immediate neighborhood including land ownership details (public, community or private); land documents (title dead, Allotment, Lease, Land Consent, MoU etc); conformity with land use plan or zonation plan; environmentally sensitive area to be affected and supportive environmental management infrastructure.

Chapter Four (Public Participation and Stakeholder Consultation): This section gives detailed description of public participation and stakeholder consultation including objectives, categorization of participants involved; approach/methodology of engagement and summary of issues raised by the community and stakeholders and response.

Chapter Five (Potential Environmental Impacts and Mitigation Measures): This section gives Potential environmental and social impacts and mitigation measures of the entire project cycle phases: Planning, Construction, operation and decommissioning.

Chapter Six (Environmental Management Programme and Monitoring Plan): This section gives Environmental and Social Management and Monitoring Plan for the entire project lifecycle including ESM&MP matrix, Project monitoring and Evaluation; Audits and Reviews; Water Quality Monitoring; the tasks, roles/responsibilities, timelines and costs involved.

Chapter Seven (Conclusion and Recommendation): This section gives the summary of the overall findings and recommendation on the way forward in the implementation of the project and environment and social compliance with respect to SPR.

References: This section sections gives the list of sources of information used in compilation and preparation of SPR report.

CHAPTER TWO

PROJECT DESCRIPTION

2.1. Introduction

The chapter focuses on how the project has been designed to fit into the existing site, it describes in detail what the project entails and how it has been projected to operate through the project life, i.e design, construction, operation and decommissioning. It is from this that the environmental impacts have been drawn with appropriate suggested mitigation measures given.

2.2. Project Design

The proposed producer and processor cooperative project in East Alego sub location in Alego Usonga Sub County will comprise of honey aggregation, honey processing, packaging and marketing unit(ANNEX VII), The project is estimated to cost a total of **Kshs. 10,618,000.**.

2.2.1 Honey processing unit

The honey processing unit will consist of the following features (*see building plan in appendix II):* Raw materials store, Mini laboratory, finished product store, Sales office, Quality control room, Processing room, Lobby area and a Verandah.

2.2.2 Activities in the processing unit

Maintain cleanliness of the plant

Standard rough serrated floor

Drainage system must allow waste and to be deposited in a soak pit so that there is no stagnant water

The processing unit will be stocked with: Honey processing machine, Automatic labeling machine, Double hand filling machine, Honey bottle capping machine Honey comb uncapping machine, Honey dehydrator

Honey filling machine

Honey mixing machine

Honey flittering machine, honey uncapping machine, manual uncapping machine, mini honey filling machine, single head honey flittering machine small honey filling machine

2.3 Project Planning

This is the current phase that also includes preparation of EIA report and subsequently submitting it to NEMA for licensing purposes. The subsequent phases are; Site layout designs which have already been prepared, design works for the site, including earth works, building and structures, electrical equipment and other related accessories and Confirmation of acquisition of all permits and especially SPR approval from NEMA.

2.4. Construction process and sitting of beehives

The construction of the Siaya honey aggregation processing and marketing project will involve tendering for the construction work and the actual construction activities for the processing unit. The construction work will be undertaken by contractor and labor sourced locally. There will be opportunity to mainstream the indigenous knowledge of honey aggregation and processing.

2.5. Materials for Construction

Structural construction of the honey processing premises will largely apply to ordinary materials that are not expected to have significant impact on the environment. Among the material to be used in the construction includes: gravel, sand, ballast, cement, paint, wood and fittings poles, timber and nails which will be used for making the structure. All materials will be sourced from within the locality and hardware shops within.

2.6. Technology to be used

There will be use of equipment and machinery mainly for concrete mixing during the construction of the processing unit. Other machinery will include delivery trucks and an assortment of hand tools. As such dust and noise are likely to be issues of concern especially if construction is done during the dry season. This means that the contractor will undertake to use appropriate technology that will reduce the impact of both noise and dust at the construction site.

2.6.1 Honey processing technology

The processing of honey technology will use the following tools and equipment: Centrifugal honey extractor 9 frames, 250 litre honey warmer (stainless-steel), 750 litre stainless steel settling tanks and its stand, stainless steel honey press, digital refractometer and a 750 liter packaging/filling tank with four filling drain valves made of stainless steel with stand

2.7. Project output

The final project will entail a complete honey processing unit, packaging material, laboratory analysis equipments for testing and setting standards on various types and quantities of honey from the proposed industry .

2.8. Aesthetic value considerations

The proponent will appreciate the need to have minimal impact on the aesthetic value of the project site. The integrity of the vegetative profile of the site will be maintained.

2.9. Utilities

2.9.1 Power

The proposed honey processing unit will have a power source installed from the nearby 240V Kenya Power Line. There will also be a solar powered energy to reduce the cost of electricity.

2.9.2. Water supply

Water supply for the facility will be sourced from the nearby well. Water from the well will be pumped into an overhead tank where water should be treated before use in the facility.

2.9.3 Government services

All Government services are found within the ward, sub county and in the County headquarters if need be, and thus all other dependent services to this project will be easy to find.

CHAPTER THREE

LOCATION OF THE PROPOSED SITE

3.0. Introduction

This Section gives the site description in terms of siting, location and land ownership. It includes existing services in the proposed site such as infrastructural services. The description also provides the baseline against which impacts of the proposed project will be determined as well as any environmentally sensitive area to be affected. Availability of supportive environmental management infrastructure and conformity to land use plan or zonation plan are also covered.

3.1 Project Location

The project will be implemented KOgelo Sub-location, South East Alego location , ward Alego Usonga sub-county in Siaya County. The site lies on Global Positioning Satellite (GPS) coordinates; ***Latitude: 0º1'3.22104"S and Longitude: 34°20'49.9056"E Nyangoma Kogelo*** at approximately 4114ft above sea level *(see Figure 1 below).*

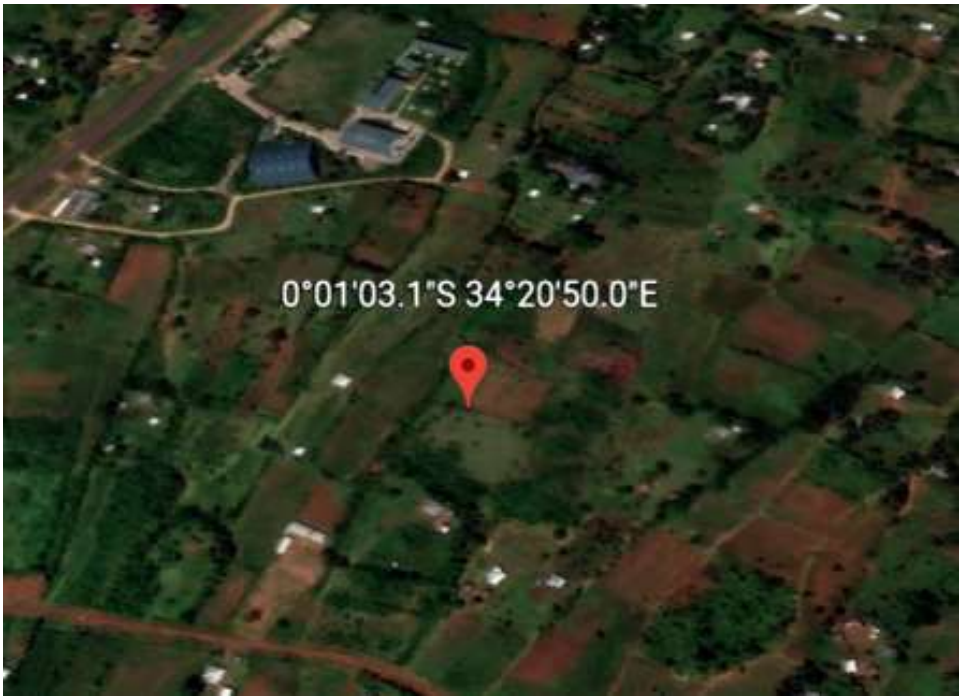


FIGURE 1: GOOGLE EARTH MAP LOCATION SITE OF THE PROPOSED PROJECT

3.2 Site description

The project site is relatively flat but begins a tender slope to the east of the project culminating to the seasonal tributary. The site is accessible through Ngiya Ndori tarmac road, branching off 400 meters the site.

3.2.1 Description of Physical environment of the project area

3.2.1.1 Climate

The County spreads across agro-ecological zones LM1 to LM 5. According to the Kenya Soil Survey and Integrated Regional Development plan for the Lake Basin Development Authority, the lower part of the County and especially the shores of Lake Victoria can be categorized into semi-humid, semi-dry Lower Midland zones (LM4 and LM5). Within the proposed site in South East Alego Usonga are classified as the low-midland zones (LM2 and LM3).These are sub-humid and humid zones with reliable precipitation. These zones cover the whole of Alego Usonga Sub-County.

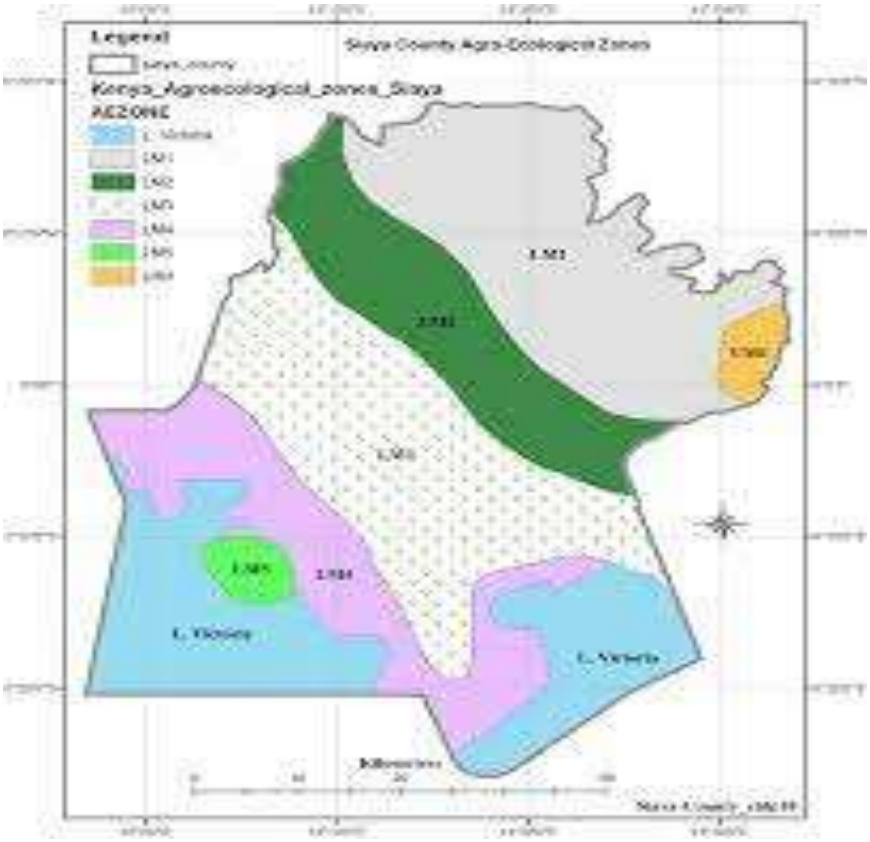


FIGURE 2 MAP OF THE AGRO-ECOLOGICAL ZONE

3.2.1.2 Soils and Terrains

The project site is characterized by level terrain culminating to raised uplands, tributary to the east and generally the project site is underlain by tertiary intermediate volcanic rocks. Soils on upper middle-level uplands are soils developed on tertiary or older basic igneous rocks (basalts, nepheline phonolites) are well drained, extremely deep, dark reddish brown, friable clay while those developed on undifferentiated Basement System rocks are well drained, deep, red to yellow red, friable sandy clay.

3.2.2 Description of the Socio-economic environment of the project area

3.2.2.1 Population

Of the six sub-counties, Alego Usonga is the largest with an approximate area of 605.8 km^2 while Ugunja is the smallest with an approximate area of 200.9 km^2 .South East Alego have an estimated population of 24,558 as indicated in the table below:

Human Population of South East Alego Sub Location

TABLE 1 HUMAN POPULATION OF SOUTH EAST ALEGO SUB LOCATION

	Total	Male	Female
Masumbi	6,012	2,804	3,208
Bar Agulu	6,965	3,306	3,659
Mur Ngiya	5,783	2,775	3,008
Nyangoma Kogelo	5,978	2,735	3,063
	24,558	11,620	12,938

.3.2.2.2 Education /Literacy levels

The literacy levels in the area are more than 85%, which is relatively higher than the national average. The county has many learning institutions among them Jaramogi Oginga Odinga University, a public chartered university and many middle level colleges. About 25 % of the population are children in primary school with 12 % in secondary school. The County has 652 primary schools with a total enrolment of 248,336 pupils of which 124,381 are boys and 123,955 are girls. There are over 237 secondary schools with an enrolment of 78,468 students. The enrolment consists of 40,463 boys and 38,005 girls. The ward has 21 schools, 19 of which primary schools and 2 are secondary schools. The primary schools in the area are Katuda Primary and Kogelo Primary. The Secondary school around is Kogelo Secondary.

3.2.2.3 Poverty level

Siaya County has a poverty rate of 33.8% and food insecurity level of 42% pointing out that most households are faced with hunger for most part of the year.

Source: Siaya County development profile from the state department of devolution and planning, May 2018.

3.2.2.4 Housing and house types

The major housing type in the area is mud walled iron roofed houses. Table 3 provides a comparison of housing type in the area with the county aggregated statistics. As housing type reflect wealth status, the Project are could be said to be relatively rich to other areas of the county.

TABLE 2 HOUSING TYPE IN THE PROJECT AREA

Housing type	% of Households in the Project site	County indicators
Earth floor	83	90
Cement Floor	17	12
Mud walled	85	82
Corrugated Iron Roof	78	61
Grass thatched	22	25
Brick /Stone wall	15	5%

Source: ESIA team field data analysis, 2020

3.2.2.5. Energy sources and their accessibility

Energy is critical driver in development, livelihood activities, food security and health outcomes. Among the sources of energy and lighting in the subproject area are fuelwood (3%), tin lamp (10%), paraffin lantern (10%), solar (3%) and battery lamp/torch about 12%. The main source of energy for cooking is fuelwood (firewood and charcoal) and about 92%.. The use of solar in the pumping water may spur its adoption at household level and indirectly contribute to green growth development and climate mitigation. Clearly there is need for household energy source interventions with agroforestry providing an opportunity for meeting household fuel wood needs while providing for other co-benefits such as soil fertility improvement and carbon sequestration. This intervention should go hand in hand with technologies that mitigate indoor pollution risks for fuel wood. Table 2 provides the energy sources and their accessibility at household level in the project area.

Table 4:

TABLE 3 ENERGY AND THEIR SOURCES IN SUBPROJECT SITE, NYANGOMA KOGELO

Energy source Type	%Households
Paraffin	75 (70)
Electricity	18 (24)
Gas Lamps	10(6)
Fuel wood	92(84)
Charcoal	13 (15)

Source: Field data analysis, 2020; Parenthesis refer to county aggregated levels and basis of comparison

3.2.2.6 Vulnerable and Marginalized Groups (VMGs)

The KCSAP PAD recognizes VMGs as the unemployed youth, elderly women and men, widows and orphans and people living with HIV/AIDS. Orphan hood in Siaya County is estimated at 15 per cent (KNBS, 2018). Percentage distribution of orphans between the ages of 0-14 years is about 12 as per the same survey. According to the KIHBS survey old age dependency ratio is 13% of the population of Siaya (KNBS, 2018). Vulnerability is driven largely driven by the HIV/Aids related mortalities. About 30% of the subproject residents are wage earners against 15 % for the county. The higher than average proportion of wage earners in the sub Project area could be attributed to fisheries along the lake

3.2.2.7 Livelihood activities

Agriculture, principally crop and dairy activities, is the back bone of the community within the project area. The various crop varieties which include maize, vegetables, sorghum and millet are the cash earners and

source of food. Also, dairy farming is practiced in the area hence most of these crops are grown under mixed farming. The land tenure system in the project area is privately owned and has titles and allotment letters.

3.3 Proof of Land Ownership

The Siaya honey processors cooperative society have ownership of land Registration Number EAST ALEGO/NYANGOMA/1325. The Registry Map is Sheet Number 12(ANNEX II)

3.4 Environmentally Sensitive Areas within the Project Site

There are no areas of significance, environmentally sensitive of cultural importance established at or near the proposed project.

This SPR concludes that the project is not located in an ecologically sensitive or protected area. The processing premises will be located in the settlement area with no any endangered species of flora and fauna.

3.5 Availability of Supportive Environmental Management Infrastructure

3.5.1 Solid and liquid Waste management

Solid wastes within project area managed by individual household homes systems which include open burning and composting within the homestead. The nature of these wastes is not hazardous as it comprises mainly of a typical upcountry homestead. Liquid wastes are managed mainly by pit latrines which are commonly used by homesteads in up country.

3.5.2 Storm Water Management

Storm water system in the project area is the typical open system commonly seen in villages. The agricultural farms and scattered home steads render the option of common and structured storm water management option impractical. This was observed during the assessment where water flows freely following the gradient of the land to the east down to the tributary leading to the main river in the area.

3.5.3 Water Supply

Water in the area is largely sourced from hand dug wells and many households depend on these wells for their daily water needs. The project area has a piped water supply which is not regular. A few households have endeavored to harvest rain water and store them in tanks for use at dry season. This is encouraged and if practiced largely it will reduce strain on the ground water.

3.6 Conformity to Land use plan/Zonation

The proposed site is an agricultural land which is in Eco-Climatical zone 3. The average land holdings is about 2.5 acres

CHAPTER FOUR

PUBLIC PARTICIPATION AND STAKEHOLDERS' CONSULTATION

4.1 Introduction

Public participation and stakeholders' consultation is a very important aspect of the ESIA process. It is the best opportunity to interact with the project components and activities hence ownership is assured and finally leading to sustainability of the project.

4.2 Objectives of Community and Stakeholders Consultation

The main objective of the consultations with stakeholders was to discuss the proposed project environmental and social implications and to identify alternatives for consideration. Specifically, the consultations sought to achieve the following objectives:

- To provide information about the proposed sub project and its objectives;
- Build up confidence between the stakeholders and the proponent to minimize the risk of delays in the implementation of the sub project.
- To seek views, concerns and opinions of people in the area concerning the sub project;
- To provide forum for discussions on identified concerns;
- To identify and verify significance of environmental, social and health impacts; and
- To inform the process of developing appropriate mitigation and management options

4.3 Categorization of Community Participants and stakeholders

One Stakeholder's consultative meeting was held on **14th March, 2022** during the ESIA study with the representatives from the following government departments:

i. Department of environment, natural resources, tourism, and wildlife
ii. Water Resource Authority (WRA)
iii. Department of Agriculture Livestock and Fisheries
iv. Local administration (chiefs and sub-chiefs)
v. Vulnerable and marginalized group members; male and female

Key informants who included technical persons from the key departments were consulted and a pre designed checklist was used to obtain their views about the project.

The key informants interviewed were:

i. KCSAP – Siaya coordinating unit officials (3 officials)
ii. NEMA – Siaya county officials (1 official)

iii. Local Administration (Village elder and assistant Chief) (2 officials)

iv. Ward administrator and Member of county Assembly (2 officials)

v. Siaya Agriculture office (1 official)

vi. Siaya Livestock Office (1official)

4.4 Methodology of Public Participation

The following different techniques and instruments were used for public consultations:

First, a notice inviting the members of public for the baraza was posted at the Chief's Office and shopping Centre on **02nd March, 2022** calling for attendance on **15th March, 2022** at the proposed honey processing premises site.

Secondly, one public meeting (baraza) was conducted on **15th March 2022** for the Siaya Honey Producers Processors Co- Operative Society at the proposed site in Nyangoma Kogelo Village (Annex VI) where issues raised were captured and listed below in 4.5.

The meeting was attended by a total of 60 people and integrated all genders (47-Males and 13-Females) *(See Annex IV-list of attendance3 (see Plate 1 below)* during public and stakeholders consultations, all the MOH set guidelines on prevention of spread of COVID-19 were strictly followed.

PLATE 1 BARAZA SESSION IN PROGRESS AT THE PROPOSED HONEY PROCESSING PREMISE

4.5 Summary of Issues Raised by the Community and Stakeholders and Responses

The discussion provides the details of the outcome of the public consultations successfully carried out.

4.5.1. Reactions from the General community (Baraza)

Being a community-based project; it was highly welcomed by all community members and the stakeholders.

General reactions made include:

- Employment opportunities shall arise, the youths from the community should be given priority for employment. The expert responded and that during construction the contractor will ensure to give employment to the locals.
- Project after realization of profits from sale of honey should sponsor the less fortunate in the society under the corporate responsibility role
- KCSAP should continue with the capacity building of farmers especially for the proponent in the best practices and modern techniques in making high quality honey
- County Government of Siaya should assist the proponent in marketing honey produced
- Membership to bee keeping society should be open to all and should not have restrictions and discriminations of any manner, should include people abled differently

4.5.2 Reactions from People with special needs (Persons Abled Differently (PAD) and VMGs

The people with special needs in this community also known as persons abled differently (PAD) gave their views which include the following:

- Any employment opportunity that may be created during the project implementation and operation, they should be given consideration.

  Response: The lead expert emphasized to the Siaya Bee Keeping Project management to ensure employment is synchronized and equitably done to include the VMGs and PADs in the community as suggested.

- As a corporate responsibility for the project at operation phase, a sponsorship program for the identified vulnerable PADs, may be launched to assist them.

  Response: The project management indicated that upon the successful implementation and realization of the broader objective of being the lead producer of honey in the region, sponsorship programs shall be rolled out to benefit all in the community with priority being given to the VMGs and PADs.

4.5.3 Reactions from the Key informants

The key informants consulted included officials from the County, the Agriculture Office , Chiefs, village elders and opinion leaders at the community level. None had major concern. Their views were as highlighted below:

- From the County officials, a positive concern was that the project was going to help in marketing the County of Siaya as honey containers may be branded as products manufactured in the county
- The KCSAP Siaya County assured full support and capacity building to the honey processors as this is one of the aims of the project. Additionally, it will aid in achieving the overall objectives of KCSAP as envisioned
- The opinion leaders who included the area MCAs and religious leaders also welcomed the project saying it was timely as it will help address issues of unemployment in the community.

The Siaya honey pressing project committed to planting tree seedlings every season.

No objection to the sub-project was raised during the consultation with the community and the stakeholder and the minutes of the public consultative meeting is attached in the report in Annex VI

PLATE 2 PARTICIPANTS FILLING INDIVIDUAL QUESTIONNAIRE

CHAPTER FIVE

POTENTIAL PROFECT IMPACTS AND MITIGATION MEASURES

5.1 Introduction

The impact identification brings together both the environmental & social baseline and project characteristics in the previous sections. The project will change both the biophysical, environmental and socio-economic character of the proposed project area. Environmental impacts are expected to arise from the construction, operation and possible decommissioning phases. The impacts are categorized as positive and negative in environmental and social aspects. This assessment is done for construction, operational and possible decommissioning phases.

5.2 Anticipated Positive Environmental and Social Impacts

5.2.1 Positive Environmental Impacts

i. Protection of natural habitats

Part of this project is constructing the honey processing facility in a clean safe environment with minimal disturbance this is because the collection center will be in an isolated place where bees are in low numbers and may not attack people. with this in mind, farmers are gearing up to construct a honey aggregation centre, by doing this the extended advantage is conserving the entire ecosystem where other animals live and depend.

ii. Aesthetic Value

The proposed project will incorporate well-designed architectural structures and improved landscaping in the area, the availability of this project improves the social sense of belongings in the area, the community may seek to have other social attachments to the project as it grows; the proponent will however ensure best methods to support in beautifying the compounds.

5.2.2 Positive Social Impacts

i. Skills transfer

The employment of the skilled personnel will have both from the economic and social point of view. The community members will learn new skills in handling honey production structures and this will enhance the community skills.

ii. Income to other businesses

During construction, there will be need for transporters, suppliers of raw materials and other service providers who will benefit from the proposed project.

iii. Income Generation to Community and to the Government in terms of taxes

The Government intends to get income/revenue in terms of taxes generated during the acquisition of operational licenses e.g single business permit. The construction material to be used during construction will also be taxable (16% VAT). Through the revenues generated, the Government will be capable of financing its obligations to her citizens.

The proponent; processors Sacco will also reap big from the project as their financial economy and standards of living is set to be better after the project successfully manages to sell as much honey as possible to the ready market, this being the main objective of the entire project chances of succeeding is high thus the reward to member farmers.

iv. Permanent Employment creation

Employment opportunities will arise from the need for employees to process raw honey and package them appropriately for sale in the market, this chain of production will involve many who will be paid for their service. The proponent will further source for services in waste management, and general project maintenance thus indirectly creating employment for the services providers.

v. Improved nutrition and food security

The proposed Project aims at producing honey for sale and by extension consumption by the local market. The farmers and the community will benefit from improved nutrition from consumption of honey which may boost immunity among other benefits like the medicinal value of honey.

vi. Increased participation of women and VMGs in socio-economic development

The proposed project is community based with participation of all members of the society including women and VMGs. The processes of ensuring bees get enough nectar by planting specified trees and nurturing is a collective responsibility. The harvesting of honey and processing will also include participation of this group for a financial gain. The outcome will be increased household well-being.

5.3 Anticipated negative Environmental and Social Impacts and their Mitigation measures

5.3.1 Preparatory Phase

5.3.1.1 Negative Environmental Impacts

i. Change in land use

The project will introduce new land uses where the processing plant will be constructed and to those farmers who were not practicing bee keeping in the past. This is necessary because not all farmers are bee keepers, the proposed project may entice the neighbouring communities to start bee keeping as enterprise. It t might be a new method

to some people who may not be in a better position to cop up with, or may not coincide with the available land uses in the community. To mitigate these, the proponent should:

- Sensitizing the members of the community who were not bee keepers in the past on the new farming systems (bee keeping) so that they can be fully involved in the transition process
- Encourage the growth of both modern and indigenous honey production systems where possible

5.3.1.2 Negative Social Impacts

i. Labor Influx

As a new project is being proposed, the area is likely to have an increase in interested persons. There is likelihood of experiencing seasonal resident population increase in the area. This might trigger and introduce new behaviors in the project site such as SEA.

To mitigate these, the proponent should:

- Sensitize the community on how to uphold morals with new project developments.
- Effective community engagement and strong grievance mechanisms on matters related to labour.
- Effective contractual obligations for the contractor to adhere to the mitigation of risks against labour influx, including sexual exploitation and abuse
- Proper records of labour force on site while avoiding child and forced labour
- Fair treatment, non-discrimination and equal opportunity of workers.
- Comply to provisions of Labour Relations Act 2012 and Work Place Injuries and Benefits Act (WIBA 2007)
- The Contractor shall require his employees, sub-contractors, sub-consultants, and any personnel thereof engaged in construction works to individually sign and comply with a Code of Conduct with specific provisions on protection from sexual exploitation and abuse.

ii. Social Conflicts

During planning and preparation phase, the community members will be informed about the project and consulted. One of the key aspects of preparation is to constitute a Project management committee which is done at community level. This process can result in minor and temporary differences between members of the community as they propose leaders of their choice.

To mitigate these, the proponent should:

- Advise the community while allowing them to make their own choice and emphasize the need for striking a balance in terms of gender and including VMGs.

5.3.2 Construction Phase

5.3.2.1 Negative Environmental Impacts

i. Solid waste

Solid waste will be generated during construction phase of the honey processing premises project. This will include metal cuttings, rejected materials, surplus materials, surplus spoil, excavated materials, plastic paper bags, empty paint containers among others. The generated waste needs proper handling and disposal.

Mitigation measures

- Hire licensed waste collectors for proper disposal of all wastes
- Provide liter bins in strategic locations within the working facility
- Reduce and re use policy be implemented in the work place

ii. Increased traffic

Considering the size of the project may not be a menace, but always traffic is pronounced at construction stage as contractors' vehicles would bring in deliveries at the site and as employees leave or come back from work.

Mitigation

- Hire traffic marshals to control traffic
- Phase delivery and haulage of material into and from site

iii. Increased water demand

Construction projects utilize significant quantities of water for mixing and casting concrete. Water will also be required for human use including cooking, bathing and drinking.

Mitigation measure

- Explore alternative sources of water which include rain water harvesting and storage
- Sensitize workers on efficient use of water
- Recycle used water where possible

iv. Air pollution

During the construction of the proposed project, some activities like trucks and other vehicles may generate fumes detrimental to clean air, may offset dust or such dry grounds may be dusty especially during dry seasons to a point of affecting the environment, to control this, the following mitigation measures should be followed:

Mitigation measures

- Provide dust masks to workers
- Sprinkle water on the soil during excavation and land filling;
- Control speed of hauling trucks
- Trucks emitting excessive fumes should be mechanically checked before being allowed to operate in the project

v. Water pollution

The construction of such project always entails use of water and released back to the environment where lack of proper waste water management mechanisms may lead to pollution of clean water resources.

To control this:

iii. Ensure all machines have no leakages and spillage within the site

iv. Compaction of loose material/soils

v. All repairs and maintenance work should be done at the contractor's yard

vi. Promote recycling and reuse of water as much as possible

vi. Soil erosion

This may happen during construction if storm water is not managed properly.

Mitigation measures

- There should be erosion control measures on areas prone to erosion especially water drainages in the construction site
- There should be intensive re-vegetation on bare grounds

5.3.2.2 Negative Social Impacts

i. Risk of accidents and safety concerns

During construction activities, it is expected that the construction workers may encounter occupational health hazards as a result of coming into contact and handling hazardous waste e.g. engine oil and grease.

Mitigation measures

Ensure compliance with occupational health and safety act, 2007 as indicated below

i). Ensure workers are provided with first aid kits;

ii). Ensure all equipment are inspected before use for appropriate safeguards and that the machine operators are trained on machine safety;

iii). Ensure the working hours are controlled and that employees are not allowed to extend the working hours beyond an acceptable limit for purposes of gaining extra pay;

iv). Ensure appropriate road safety signage are strategically placed and drivers adhere to the requirements of such signage (on speed limits)

v). Provision of suitable PPEs and procuring insurance for workers and machinery/ vehicles

ii. Risk of Contracting HIV/AIDS and other STI s

An influx of new people to the project area especially construction workers can affect the number of new cases of HIV because they often interfere with an otherwise stable situation, but the contrary can also happen where the newcomers find themselves at higher risk.

Mitigation measures

i). Programs will be developed and integrated into the sub-project implementation for sensitizing the local community and project workers on HIV/AIDS and/or other sexually transmitted diseases (STDs);

ii). Review the construction activities to integrate with the HIV/AIDS campaigns.

iii). Develop appropriate training and awareness materials for Information, Education, and Communication (IEC) on HIV/AIDS; and

iv). Identify other players (local CBOs, NGOs, and government organizations) on HIV/AIDS for enhanced collaboration.

v). The contractor shall be tasked through the ESMP to comply with the Code of conduct for workers which outlaws sexual relations with underage children

vi). Provide well stocked condom dispensers at the siate

iii. Risk of increased spread of COVID-19

Covid-19 pandemic spread among people during construction may occur in the project area. The human interactions may increase the risk of spread of the pandemic.

Mitigation Measures against spread of COVID-19:

- Mandatory provision and use of appropriate Personal Protective Equipment (PPE) shall be required for all project personnel including
- Avoid concentrating of more than 15 persons or workers at one location. Where more than one person are gathered, maintain social distancing at least 2 meters.
- All workers and visitors accessing worksites every day or attending meetings shall be subjected to rapid Covid-19 screening which may include temperature check and other vital signs;

- Install hand-washing facilities with adequate running water and soap, or sanitizing facilities at entrance to work sites.
- Ensure routine sanitization of shared social facilities and other communal places routinely including wiping of workstations, door knobs etc.

iv. Social risk - Spread of COVID-19 amongst community members during consultations

During implementation of the ESIA, various consultative activities will be undertaken, these activities can lead to close interaction between the proponent and the community members leading to a high risk of spreading COVID-19 amongst community members during the consultation process.

Mitigation measures against spread of COVID-19 amongst community members

- Electronic means of consulting stakeholders and holding meetings shall be encouraged whenever feasible. One-on-one engagements for the PAPs while observing social distance and adhering to PPE wearing shall be enforced;
- Avoid concentrating of more than 15 community members at one location. Where two or more people are gathered, maintain social distancing of at least 2 meters;
- The team carrying out engagements within the communities on one-on-one basis will be provided with appropriate PPE for the number of people they intend to meet;
- Use traditional channels of communications (TV, newspaper, radio, dedicated phone-lines, public announcements and mail) when stakeholders do not have access to online channels or do not use them frequently. Allow participants to provide feedback and suggestions
- Hold meetings in small groups, mainly in form of FGDs if permitted depending on restrictions in place and subject to strict observance of physical distancing and limited duration.
- In situations where online interaction is challenging, disseminate information through digital platform (where available) like Facebook and WhatsApp & Chart groups.
- Online registration of participants, distribution of consultation materials and share feedback electronically with participants.

v. Gender Based violence

This impact is triggered during Project Construction Phase when the Contractor fails to comply with the following provisions.

(i) Gender inclusivity requirements in hiring of workers and entire Project Management as required by Gender Policy 2011 and 2/3 gender rule.

(ii) Failure to protect human risk areas associated with, Disadvantaged groups, interfering with Participation Rights, and interfering with Labour Rights.

Mitigation Measures

- Ensure clear human resources policy against sexual harassment that is aligned with national law.
- Integrate provisions related to sexual harassment in the employee code of conduct.
- Ensure appointment of human resources personnel to manage reports of sexual harassment according to policy
- The Contractor shall require his employees, sub-contractors, sub-consultants, and any personnel thereof engaged in construction works to individually sign and comply with a Code of Conduct with specific provisions on protection from sexual exploitation and abuse
- The contractor will implement provisions that ensure that gender-based violence at the community level is not triggered by the Project, including:

    a) Effective and on-going community engagement and consultation, particularly with women and girls.

    b) Review of specific project components that are known to heighten GBV risk at the community level, e.g. compensation schemes; employment schemes for women; etc.

vi. Gender- Based Violence (GBV) at the community level.

GBV constitutes acts of gross misconduct and are therefore grounds for sanctions, penalties and/or termination of employment. This impact refers to gender-based violence at the community level that women and girls may experience as a result of project implementation. This includes, for example, an increase in intimate partner violence (IPV) when compensation schemes that share funds equally between husband and wife at the household level do not provide adequate sensitization and safety measures to reduce potential for increased tensions due to females receiving funds. This also refers to other GBV-related risks incurred as a result of project implementation that do not adequately consult women and adolescent girls in the community about safety and security issues.

Mitigation:

- The contractor and the proponent will implement provisions that ensure that gender-based violence at the community level is not triggered by the Project, including:
- Effective and on-going community engagement and consultation, particularly with women and girls;
- Review of specific project components that are known to heighten GBV risk at the community level, e.g.

compensation schemes; employment schemes for women; etc.

- Specific plan for mitigating these known risks, e.g. sensitization around gender equitable approaches to compensation and employment.
- The contractor will ensure adequate referral mechanisms are in place if a case of GBV at the community level is reported related to project implementation
- Continuous awareness creation on reduction of to be carried out GBV

vii. Sexual Exploitation and Abuse (SEA) of community members by project workers

This impact refers to sexual exploitation and abuse committed by project staff against communities, and represents a risk at all stages of the project, especially when employees and community members are not clear about prohibitions against SEA in the Project.

Mitigation:

- Develop and implement a SEA action plan with an Accountability and Response Framework as part of the C-ESMP. The SEA action plan will follow guidance on the World Bank's Good Practice Note for Addressing Gender-based Violence in Investment Project Financing involving Major Civil Works (Sept 2018).
- The SEA action plan will include how the project will ensure necessary steps are in place for:
  - Prevention of SEA: including Code of Conduct (COC) and ongoing sensitization of staff on responsibilities related to the COC and consequences of non-compliance; project-level IEC materials;

viii. Child labour & Abuse

Child labour is defined as any situation where a child provides labour in exchange for payment including: Where a child's labour is used for gain by any individual or institution whether or not the child benefits directly or indirectly, where a child provides labour as an assistant to another person and his/her labour is deemed to be the labour of that other person for the purposes of payment and where there is a written contract of service and the employee is a child.

Increased opportunities for the host community to sell goods and services to the incoming workers can lead to child labor to produce and deliver these goods and services, which in turn can lead to enhanced school dropout.

Mitigation measures

- The contractor and the proponent will ensure that children are protected from economic exploitation and any work that is likely to be hazardous or interferes with the child's education, or is harmful to the child's health or physical, mental, spiritual, moral or social development.
- The contractor will ensure that no child under 18 years is employed in the project
- The requirements for recruitment will be made public and will specify the appropriate age bracket for the job opportunities. Age will be verified by use of IDs.
- The KCSAP Grievance Redress Mechanism will be used to solve issues of child exploitation

5.3.3 Operational Phase

5.3.3.1 Negative Environmental Impacts

i. Effluent generation

The processing of honey may require some water usage especially for cleaning purposes, workers on the premises will also use a lot of water in their daily activities; all these will result in increased effluent discharge to the environment, all wastes shall be managed using the most appropriate mechanism as suggested in the EMP of this report, they include the following mitigation:

Mitigation measure:

- Contract a NEMA licensed waste handler to regularly empty liquid waste receptor and properly dispose.
- Check regularly for any leakages and fix if any in all plumbing systems

ii. Increase in electricity consumption

On completion, the honey processing premises will be connected to a nearby 240kv line hence creating an impact on energy consumption rate for the area. Electricity consumption for the facility is estimated at moderate since it will only be used for lighting, running electronic gadgets for small scale processing premises. Since electric energy in Kenya is generated mainly through natural resources, namely water and geothermal resources, increased use of electricity has adverse impacts on these natural resources base due to accelerated depletion.

Mitigation measure

- Explore other sources of energy including harnessing solar energy for use especially for heating purposes
- Fitting all lighting points with energy saving lights and gadgets
- Practice day light switch off campaign to switch unnecessary lights off

iii. Noise generation

During the operation of the project, noise may be generated from the daily operations of the processing unit, even though the risk is not high on this sub project honey processing being the major activity but in case there are avenues of noise as the premises grow, any noise may affect the tranquillity of the environment.

Mitigation measures

- Abate noise by sensitizing drivers in the project
- Use manual labour as much as possible.
- Restriction of activities to daytime
- Workers within the vicinity of high-level noise to be provided with adequate PPE.
- No idling of vehicles and machinery if not in use, they should be switched off.
- Noisy machines to be fitted with silencers and activities during construction of honey processing premises to minimize noise impact to neighbouring communities
- Unnecessary hooting is to be avoided as much as possible

5.3.3.2 Negative Social Impacts

i). Occupational accidents

The movement of materials into the construction site by workers is a potential hazard, however with the mitigation measures given these accidents may not occur as measures will be followed to the later.

Mitigation measures

- Proper signage of danger zones with clear indication of EXIT routes
- Proper and regular use of PPEs
- Regular training on OSH
- First Aid Kits be made available in strategic locations
- Sensitize workers on first aid provision and on emergency preparedness and response.

ii). Injuries

Injuries during operational phase will mainly affect employees. Injuries can arise from use of tools and equipment's during honey harvesting or processing. This includes use of simple tools. The likely injuries can include cuts and bruises form falls from trees when trying to reach the bee hives.

Mitigation measure

- Proper and regular use of PPEs by all workers
- Securing workers insurance cover
- Controlled honey harvesting activities and allowing experienced harvesters to handle such specific assignments

iii).*HIV/AIDs and STDs*

There is always a concern of moral decay in the society that would arise from sexual relationships between residents and new workers leading to cases of increased transmission of HIV/AIDs and STDs.

Mitigation measures

- Sensitization of the workers to adhere to work ethics and awareness creation at the community level on safe sex.
- Collaborating with other entities to put up a VCT centers

iv). Employment

Operation of the project in its entirety life span will require workers and employees to do certain assigned operations. To abate conflicts resulting from employment in the community the proponent should follow the following mitigation measures:

Mitigation measures

- Both skilled and non-skilled labour to be accessed locally as much as possible
- Equal opportunities to people of all gender, youths and VMGs
- Engage local stakeholders in such employment issues

v). Risk of bee sting

There is a possibility of bee sting to the people during the operation if measures are not adhered to, this may be caused by disturbance of beehives or noisy activities within the beehive area. The mitigations for this will include:

- Fencing off the bee hive area
- Put warning signs (written in English and local languages) at bee hive sites
- proper siting of bee hives away from busy routes or areas prone to obvious natural disasters like wind, storm water and accidental falling of trees

5.3.4 Decommissioning Phase

5.3.4.1 Positive Environmental Impacts

i). Reduction effluent generation and discharge

Decommissioning the project will mean a decrease effluent discharge to the environment and generation of other forms of wastes

ii). Rejuvenation of destroyed environment

As the bee hives are removed from trees, shrubs and other forms of vegetation, pressure on these forms of trees will be reduced. Also, cases of forest fires that might have accidentally occurred during honey harvesting will be reduced allowing the nature to rejuvenate.

5.3.4.2 Positive Social Impacts

i). Reduction in spread of social diseases like HIV/AIDS

As the projects closes down, it means that people who had in fluxed into the project area will have to move away or migrate to other areas to seek economic gains; this reduces social interaction which is often blamed for increasing spread of these diseases

ii). Reduced insecurity incidences

Project decommissioning would mean that insecurity incidences caused by high population will reduce as people move away to other areas.

5.3.4.3 Negative Environmental Impacts

i. Increased Solid waste

Solid waste will be generated during decommissioning phase of the honey processing premises project. This will include metal cuttings and demolition ruble among others. The generated waste needs proper handling to prevent disease outbreak on the site.

Mitigation measures

- Hire licensed waste collectors for proper disposal of all wastes
- Controlled demolition of structures
- Largely re use policy to be implemented to the decommissioned project where materials may be donated to individuals or institutions for re use.

5.3.4.4 Negative Social Impacts

i). Economic decline

The national economic gain got from the investment activities will be lost in the event of decommissioning of the project occasioning huge losses to the Siaya bee keeping farmers.

Mitigation

- seek and support diversification of other economic activities
- capacity building of other existing members of the cooperative and self help groups

ii). Insecurity

Insecurity may result from the site being abandoned following the decommissioning. Unoccupied structures within the site may act as a den for criminals, and the security boost that had been provided would be lost.

Mitigation

- Liaise with security agencies in improving security
- Strengthen community policing

iii). Safety risks

Decommissioning of projects would normally be accompanied by safety risks from any leftover electrical cables, uncovered manholes and structures that may collapse and injure passers-by if left on site for a long time. There may also be environmental hazards from exposed left-over substances which may cause soil and water contamination or generate noxious odor.

Mitigation

- Ensure proper and fulltime use of appropriate PPEs and train workers on safety.
- Mark potentially dangerous areas and warning signs during decommissioning.

CHAPTER SIX

ENVIRONMENTAL AND SOCIAL MANAGEMENT & MONITORING PLAN (ESM & MP)

6.1 Introduction

An Environmental Social Management and Monitoring Plan (ESM & MP) is a comprehensive approach to managing environmental issues, integrating environment-oriented thinking into every aspect of project management. An ESM & MP ensures environmental considerations are a priority with other concerns such as costs, product quality, investments, productivity and strategic planning.

It generally makes a positive impact on an investment's bottom line. Thus, it increases efficiency and focuses on customer needs and marketplace conditions, improving both an investment returns and environmental performance. By using an ESM & MP to convert environmental problems into commercial opportunities, investments usually become more competitive.

6.2 PROPOSED ENVIRONMENTAL AND SOCIAL MANAGEMENT & MONITORING PLAN (ESM & MP) FOR THE SIAYA BEE KEEPING AND HONEY PROCESSING PROJECT

TABLE 4 ESMMP FOR THE PROPOSED PROJECT

ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN DURING CONSTRUCTION						
Environmental impact	**Proposed Mitigation Measures**	**Indicator**	**Responsibility**	**Means of verification**	**Timeframe /frequency**	**Estimated costs in (Kshs)**
Air Pollution (Dusty construction site)	-Ensure sprinkling of water on all dry soils and exposed areas. -Control speed of hauling trucks -Trucks emitting excessive fumes should be mechanically checked before being allowed to operate in the project.	-Level of dust seen -Number of complaints recorded on dust emission -Number of bumps erected to reduce speed -Frequency of vehicle/ machine servicing	-Contractor	-Records of quantity of water sprinkled and vehicle servicing. -Complaints register -Availability of speed pumps and signage	-When undertaking dusty construction activities	Contractor cost
Noise	-Abate noise by sensitizing drivers in the project -Use manual labour as much as possible. -Restriction of activities to daytime -Workers within the vicinity of high-level noise to be provided with adequate PPE. -No idling of vehicles and machinery if not in use, they should be switched off. -Noisy machines to be fitted with silencers and activities during construction of honey processing premises to minimize noise impact to neighbouring communities -Unnecessary hooting is to be avoided as much as possible	-Level of noise emitted -Number of sensitization forums conducted -Number of equipment's fitted with silencers	-Contractor	-Attendance registers -Purchase orders and Receipts	-Once weekly	-Contractor cost

Water pollution	-Ensure all machines have no leakages and spillage within the site -Having workable standard operating procedures while working along water resources - -Compaction of loose material/soils -All repairs and maintenance work should be done at the contractor's yard -Promote recycling and reuse of water as much as possible -Promptly detect and repair of plumbing works at the honey processing premises	-Level of pollutants seen in water -Existence of SOPs - Cases if leakages and spills Area of loose soil compacted Presence of contractor repair yard	-Contractor	-Analysis results/records for quality of water tested from the site -SOPs displayed -Records of maintenance.	-Monthly	Contractor cost
Soil Degradation (Removal of topsoil covers thus exposing soil to erosion agents)	-Install erosion control measures on areas prone to erosion especially water drainages in the construction site -Practice intensive re-vegetation on bare grounds -Restore the undeveloped part through landscaping and re-vegetating with flora. -Prevent unnecessary disturbance of flora and fauna outside the project area.	-Condition of grounds and notable level of erosion -Types and number of trees planted -Landscaped and revegetated areas.	-Contractor	-Record sheet with types and number of trees planted -Delivery books	Once weekly	Contractor cost
Solid waste	-The wastes produced should either be reduced reused or recycled -There should be provision of adequate littering facilities -Waste disposal sites should be located away from the water sources to prevent the possibility of potential run off into the water system -Burning of chemical or hazardous wastes should not be done on site	-Quantity of solid generated in volumes -Types of waste skips provided -Reduced waste volumes/quantity -Number of litter bins available	-Contractor	-Available waste bins, disposal site and recycle mechanisms in the sub project. -Contract agreements with licensed waste collectors	-Once weekly and continuous	Contractor cost

	-There should be adequate awareness raising on proper solid waste handling and disposal -Proper containment and disposal of solid waste at all project phases -engage a licensed waste collector to regularly collect and dump wastes appropriately					
Change in land use	-Sensitizing the community on the new farming systems (bee keeping) so that they can be fully involved in the transition process -Encourage the growth of both modern and indigenous honey production systems where possible	-Number of people engaged	-Community	-Attendance sheets of sensitization fora held. -Minutes of forums held	-Once at the project start up	10,000
Increased water demand	-Sensitize the construction workers on conservation of the resource	-Quantity of water consumed - Sensitizations on water conservation conducted	--Contractor	-Conservation notice	-Once at the project start up	Contractor cost
SOCIAL MANAGEMENT AND MONITORING PLAN DURING CONSTRUCTION						
Social impact	**Proposed Mitigation Measures**	**Indicator**	**Responsibility**	**Means of verification**	**Timeframe /frequency**	**Estimated costs in (Kshs)**
Labor influx	-Both skilled and non-skilled labour as much as possible to be accessed locally -Equal opportunities to gender and youth; -Engage local stakeholders in such employment issues	- No of locals as a proportion of all workers at the site	-Contractor	-Staff employment records	-One off and recurrent if need arises at project life	Contactor cost

Increased incidences of HIV/AIDS and STDs.	-Implement awareness creation of eminent social evils such as HIV/AIDS and other STDs -Organizing community sensitization drives on the prevention and management of the HIV/AIDS -Liaising with the local NGOs and CBOs for the training and education on the right prevention mechanisms -Opening up of VCTs in partnership with the local health facilities should be enhanced	-Level of adoption of awareness and sensitization by the public - Presence of VCT centre in the project area - Number of HIV/AIDS programs conducted by the MOH and PHOs	-Contractor	-Records of disease prevalence -HIV/AIDS programs -Records at VCT centre	-Once every month	Contractor cost
Risk of spread of COVID-19	-Hold meetings in small groups, mainly in form of FGDs -strict observance of physical distancing and limited duration. -The Contractors to develop SOPs for managing the spread of Covid-19 during project execution and submit them for the approval of the Supervision Engineer and the Client before mobilization. The SOPs shall be in line with the World Bank guidance on COVID-19, Ministry of Health Directives and site-specific project conditions; -Subject all visitors to rapid COVID-19 screening which may include temperature check and other vital signs;	-No. of Covid-19 cases reported -Existence of SOPs displayed at the workplace -Number of people screened -Existence of thermo guns - number of PPEs provided	-KCSAP CPCU -Contractor	-Reports on disease prevalence -SOPs -Incidence report -Purchase orders/receipts	Daily monitoring	50,000 weekly
Occupational Health and	-The contractor should have a comprehensive health and safety policy. -Carry out regular risk assessments of the workplace	- Sensitizations on OSH conducted	-Contractor	-Accident statistics	-Once daily	Contractor cost

Safety (OHS) concerns including injuries	-Establish a standard code of practice for the project workers including drivers and suppliers so as to promote safety in the entire project life -Install fully equipped first Aid Kits at strategic points at the working areas -Ensure there is adequate sanitation facilities to be installed on sites -Warning signs/bumps to be erected and/or placed at risky points -Provide adequate emergency procedures for the facility staff;	-Evidence and number of risk assessments available -First aid kits provided - Signage provided		-Incident occurrence reports -Supply records		
Sexual Exploitation and Abuse (SEA) by construction workers	- Develop and implement a SEA action plan with an Accountability and Response Framework as part of the C-ESMP. The SEA action plan will follow guidance on the World Bank's Good Practice Note for Addressing Gender-based Violence in Investment Project Financing involving Major Civil Works (Sept 2018).	• - SEA Action Plan • Code of Conduct • Number of staff trainings • SEA FP • Community Liaison trained in PSEA • IEC materials for workers' sites and community • Discrete SEA reporting pathway	- Contractor Proponent Siaya Honey processors -GBV Expert	• - SEA action plan • Attendance registers	1 month	30,000
ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN DURING OPERATION						
Environmental impact	**Proposed Mitigation Measures**	**Indicator**	**Responsibility**	**Means of verification**	**Timeframe /frequency**	**Estimated costs in (Kshs)**
Increase in electricity consumption	-Install solar panels to harness solar power for use in lighting and heating -Replace lighting points with energy saving lights and gadgets	-Number of solar panels and energy saving lights fitted	- Proponent Siaya Honey processors	-Purchase records and orders -Electricity bills	-Once for installation and	200,000

	-All lighting not necessary to be switched off during day time where natural light is abundant	- Energy-saving bulbs and accessories installed			continuous in project life	
Change in land use	-Sensitizing the community on the new farming systems (bee keeping) so that they can be fully involved in the transition process -Encourage the growth of both modern and indigenous honey production systems where possible	-Number of sensitization meetings -Number of forums held	-honey processing society management	-Attendance lists	-Once monthly and continuous in project life	10,000
Possibility of effluent discharge to the environment	-Minimize the quantity of waste water generated as much as possible. -Pollution incidences on site should be acted upon speedily and any repairs done when necessary. -Provide proper systems for management of effluent generated from the premises	-Properly installed drainage system and effluent management systems available -Number of times the septic tank is exhausted	-Siaya honey processing management	-Records of exhauster services offered -Contract agreements for repairs done	-Continuous monitoring	60,000
Solid waste	-The wastes produced should either be reduced, reused or recycled -Provide waste skips for temporary holding before proper disposal -Waste disposal sites should be located away from the water sources to prevent the possibility of potential run off into the water system -Burning of chemical or hazardous wastes should not be done on site -There should be adequate awareness raising on proper solid waste handling and disposal. -Proper containment and disposal of solid waste at all project phases	-Level of use and adoption of the solid management systems --Number of litter bins available - Licensed waste handlers engaged Trainings on waste management conducted	-Siaya honey processing management	-Contract agreements with licensed waste collectors	-Once daily	50,000

	-Engage a licensed waste collector to regularly collect and dump wastes appropriately. -Reuse of honey cobs to make by-products like soap					
Water pollution	-Ensure all machines have no leakages and spillage within the site -Having workable standard operating procedures while working along water resources - -Compaction of loose material/soils -All repairs and maintenance work should be done at the contractors' yard -Promote recycling and reuse of water as much as possible -Promptly detect and repair of plumbing works at the honey processing premises	-Level of pollutants seen in water within the sub project -frequency of repairs done on wastewater pipes/channels at the premises - Cases of leakages and spills - Presence of contractor yard for repair and maintenance	-Siaya honey processing management	-Analysis records	-On weekly basis	20,000
Noise	-Abate noise by sensitizing drivers in the project -Use manual labour as much as possible. -Restriction of activities to daytime -Workers within the vicinity of high-level noise to be provided with adequate PPE. -No idling of vehicles and machinery if not in use, they should be switched off. -Noisy machines to be fitted with silencers and activities during construction of honey processing premises to minimize noise impact to neighbouring communities	-Level of noise within the sub project -Quantity of PPEs provided - Number of equipment's fitted with silencers	-Siaya honey processing management	-Attendance lists of sensitization forums held - SOPs -Delivery books	-Daily check	-5,000

	-Unnecessary hooting is to be avoided as much as possible					
Increase in traffic	-Place appropriate signage's -Ensure phased delivery of materials i.e. those to be used express as opposed to bulking of materials	-Level of traffic within the sub project -Availability of signage's	-Siaya honey processing society management	-Vehicle movements and material delivery records maintained -Registers	-Once every day	10,000
Increased water demand	-Sensitize workers on efficient use of water with installing of auto shut taps -Recycle water whenever possible -Use of auto shut taps on site	-Volume of water consumption within the sub project - Auto shut taps installed - Sensitization of water conservation	-Siaya honey processing management	-Water bills	-Once every month	10,000
SOCIAL MANAGEMENT AND MONITORING PLAN DURING OPERATION						
Social impact	**Proposed Mitigation Measures**	**Indicator**	**Responsibility**	**Means of verification**	**Timeframe /frequency**	**Estimated costs in (Kshs)**
Employment Related issues	-Both skilled and non-skilled labour as much as possible to be accessed locally -Equal opportunities to gender and youth, VMGs; -Engage local stakeholders in such employment issues -Establish a Grievance Redress Mechanism (GRM) to address grievances	-Level of balanced employment within the public in the sub project Number of staff employed -Number of VMGs employed -Formulated and existence of a GRM	-Siaya honey processors management -GRM team	-Records of staff employed -Signed contracts -GRM records	-One off and continuous on need-based basis	Varying as per the contract agreement
Sanitary Conveniences	- Provide suitable, efficient, clean, well-lit and adequate sanitary conveniences for all workers and visitors in the project (Males separate from Females)	-No of sanitary facilities provided	- processors management	-Routine of cleaning records -Supply records	-One off and continuous monitoring	80,000

Risk of bee sting	-Put warning signs (written in English and local languages) at bee hive sites. -Proper siting of bee hives away from busy routes or areas prone to obvious natural disasters like wind, storm water and accidental falling of trees	-Level of safety from bee stings -Number of incidences of bee stings/ invasions -Number of disturbances on the bee hives recorded	-Siaya honey processing society farmers	-Incident occurrence reports	-Daily check for caution	10,000
Increased incidences of HIV/AIDS and STDs	-Implement awareness creation of eminent social evils such as HIV/AIDS and other STDs -Organizing community sensitization drives on the prevention and management of the HIV/AIDS -Liaising with the local NGOs and CBOs for the training and education on the right prevention mechanisms -Opening up of VCTs in the local health facilities should be enhanced	-Level of adoption of awareness by the public -Number of HIV/AIDS programs conducted by the MOH and PHOs -Presence of VCT centre in the project area	-M.o.H -PHOs	-Awareness materials on site -Drawn programmes -Registers and recorded statistics	-Once every month	10,000
Risk of spread of COVID-19	-strict adherence to all the set SOPs in line with the World Bank guidance on COVID-19, Ministry of Health Directives and site-specific project conditions;	-Existence of SOPs displayed at the workplace - number of PPEs provided	-Siaya honey processing society management -M.o.H -PHOs	-Records -Reports on disease prevalence.	Daily monitoring	30,000 weekly
Occupational Health and Safety concerns (OHS)	-The contractor should have a comprehensive health and safety policy -Ensure there is compliance to all health and safety regulations -Carry out regular risk assessments of the workplace	-Level of use and adoption of OHS -Number of accident and incidents cases recorded.	-Siaya honey processing and marketing society management	-Accident statistics -Incident occurrence reports	-Once monthly	35, 000

	-Establish a standard code of practice for the project workers including drivers and suppliers so as to promote safety in the entire project life -Install fully equipped first Aid Kits at strategic points at the working areas -Warning signage's placed at risky points -Provide adequate emergency procedures for the facility staff;					
ENVIRONMENTAL MANAGEMENT AND MONITORING PLAN DURING DECOMMISIONING						
Environmental impact	**Proposed Mitigation Measures**	**Indicator**	**Responsibility**	**Means of verification**	**Timeframe /frequency**	**Estimated costs in (Kshs)**
Solid waste	-The wastes produced should either be reduced reused or recycled -There should be provision of adequate littering facilities -Waste disposal sites should be located away from the water sources to prevent the possibility of potential run off into the water system -Burning of chemical or hazardous wastes should not be done on site -There should be adequate awareness raising on proper solid waste handling and disposal -Proper containment and disposal of solid waste at all project phases	-Number of litter bins available -Availability of contract agreement with licensed waste collectors -Number of sessions on awareness done on proper solid waste disposal	-Contractor -Siaya honey processing and marketing society management	-Collection schedules -Contract agreements with licensed waste collectors -Attendance lists	-Daily check	100,000
SOCIAL MANAGEMENT AND MONITORING PLAN DURING DECOMMISIONING						

Social impact	Proposed Mitigation Measures	Indicator	Responsibility	Means of verification	Timeframe /frequency	Estimated costs in (Kshs)
Economic decline in case of decommissioning	-Gradual scaling down of operations before final halt to soft land the farmers -capacity building of farmers on other ventures -An informed Investment should be encouraged at operation time	-Number of beneficiary community with declined economy -Visible Scaling down of activities	-Siaya honey processing and marketing management committee	-Decommissioning plan	-Once weekly check	150,000
Vandalism and Insecurity after the decommissioning	-Pull down all abandoned structures to avoid being used as criminal dens -Increased vigilance by both the public and security agencies with timely reports to security on suspicious undertakings leading to vandalism	-Level of insecurity in the project area and the number of Incidences recorded	-Siaya honey processing and marketing -Community in the project area	-Incident register	-Once every day	85,000
Safety risks during decommissioning	-Proper restoration of project site back to its near natural state -Fill up all man holes, trenches and collect and dispose all debris at an approved site -All electric installations including cables to should be removed to avoid electrocution	-Level of adoption of safety mechanism in the sub project area -Visible site clearance and structures removed -Number of electric cables removed and man holes filled up	-Siaya honey processing and marketing -	-Records of Decommissioning progress -Compliance letters	-Once every week	110,000
Spread of COVID -19 among construction workers	The Contractors will develop a SOPs for managing the spread of Covid-19 during project execution. • Mandatory provision and use of appropriate Personal Protective Equipment (PPE) shall be required for all project personnel.	-Availability of SOP(s), Training material, PPE, sanitizing facilities -No. of workers sensitized on COVID 19 -Hand-washing facilities installed/ Sanitizers provided;	Contractor, Proponent, County health officer, Supervising engineer, Communication officer	SOPs. Training programs, Minutes, POs	Weekly	100,000

	• The project shall put in place means to support rapid testing of suspected workers for covid-19; • Install handwashing facilities with adequate running water and soap, or sanitizing facilities at entrance to work sites	-PPEs including Masks procured/ Workers wearing masks -Temperature monitoring checks conducted				
Spread of COVID-19 amongst community members during consultations processes	-Electronic means of consulting stakeholders. -Avoid concentrating of more than 15 community members at one location. -The team carrying out engagements within the communities on one-on-one basis will be provided with appropriate PPE for the number of people they intend to meet;	-Availability of SOP(s), Training material, PPE, sanitizing facilities -Availability of SOP(s), Training material, PPE, sanitizing facilities -No. of participants registered online.	All the Project components Supervising Eng. & Contractor Communication / stakeholder engagement expert in the Team	SOPs. Training programs, Minutes, POs	During Public Participation	100,000
Gender based Violence (GBV)	• The contractor will implement provisions that ensure that gender-based violence at the community level is not triggered by the Project, including: • Effective and continuous community engagement and consultation, particularly with women and girls; • Review of specific project components that are known to heighten GBV risk at the community level, e.g. employment schemes for women; etc. • The contractor will ensure adequate referral mechanisms are in place if a case of GBV at the community level is	• Number of sensitizations on GBV • Presence of plans for reducing GBV risks Established referral mechanism on GBV	• Contractor • Proponent • County Gender Department GBV Expert/ Local CBO/Local NGO	Occurrence Registers	monthly	-40,000

	reported related to project implementation					
Sexual exploitation and abuse of community members by project workers l exploitation members by project workers	• Response to SEA: including survivor-centered coordinated multi-sectoral referral and assistance to complainants according to standard operating procedures; staff reporting mechanisms; written procedures related to case oversight, investigation and disciplinary procedures at the project level, including confidential data management;	-No of grievances registered on sexual exploitation -No. of people sensitized on sexual exploitation	• Contractor • Proponent • CESSCO • County commissioner Local CBO/NGO	• Occurrence register • SOPs	monthly	-20,000

CHAPTER SEVEN

CONCLUSIONS AND RECOMMENDATIONS

7.1. Conclusion

Consideration was given to the proposed mitigation measures that will be put in place and the project's contribution towards alleviating poverty in the community. Therefore, this project is considered important and beneficial to sustainably strengthening the sources of livelihoods in the Siaya community.

7.2 Recommendations

Given that the potential negative impacts are not significant to warrant environmental degradation, this SPR presents a "Findings of Low Significance Impacts" that can be effectively mitigated.

It is therefore recommended that the proposed project be allowed to proceed on strict condition that the impact mitigation measures (key ones are as highlighted below) are implemented as recommended.

- Ensure safe siting of all bee hives (before colonization) far away from busy areas e.g roads, footpaths, open grazing fields and areas prone to obvious natural disasters like wind and storm water ways..
- The contractor should register the site as a workplace with the Directorate of Occupational Health and Safety (DOHS).
- It is recommended that solid wastes be handled through a registered collector with both NEMA and the County government and proper records kept for collection and disposal.
- The proponent will provide for solid waste management through a hierarchy of options that includes reduction at source, separation of wastes to make it easier to undertake recycling.
- Firefighting equipment will be provided and an emergency evacuation plan be clearly indicated.
- An outstanding requirement will be adequate provision of replenishment water supply for fighting any fire outbreaks and installation of firefighting equipment.
- NEMA, having evaluated this report and the project site should license the project on condition that all the ESMMP recommendations and mitigations offered in this report are implemented in totality.

References

Africa Union. (1968). African Convention on the Conservation of Nature and Natural Resources.

GoK. (1986). The Public Health Act: Cap. 242. GoK. (1995). National Tourism Master Plan.

GoK. (1999). Environmental Management and Coordination Act (EMCA) No. 8 of 1999: Government Press.

GoK. (1999). Sessional Paper No.6 on Environment and Development.

GoK. (2011). Draft Wildlife Policy, Ministry of forestry and Wildlife.

GoK. (2012). National Environment Policy, Draft 4, Ministry of Environment, Water and Natural Resources. GoK. (2012). National Water Policy.

IFC. (2007). Stakeholder Engagement: A Good Practice Handbook for Companies Doing Business in Emerging Markets. Washington D.C: International Finance Corporation.

UCG. (2018-2022). County Integrated Development Plan. County Government of Siaya .

KNBS. (2009). Kenya Population Census Report 2019. Siaya : Kenya National Bureau of Statistics.

United Nations. (1992). Convention on Biological Diversity.

United Nations. (1992). United Nations Framework Convention on Climate Change. New York.

ANNEX I: SCREENING CHECKLIST

WORLD BANK GROUP
Agriculture

Producer Organization Screening Checklist 2022

Section A: Background information

Name of County.....SIAYA.....
Name of CPCU/NEMA ....VIOLET ATIENO.....
Producer Organization Ward..SOUTH EAST ALEGO.
Name of CBO/Institution.SIAYA HONEY PRODUCERS.
Contact Person..ANDREW OUMA.....Cell phone..0710180464.....
Producer Organization name.SIAYA HONEY PRODUCERS AND PROCESSORS.
Estimated cost (Ksh.) .....9M.....
Approximate size of land area available for the producer organization..1/4 ACRE
Objectives of the producer organization..PROCESSING OF HONEY AND MARKETING.
Activities/enterprises undertaken...PRODUCTION AND PROCESSING OF HONEY.
How was the producer organization chosen?..IT IS CLIMATE RESILIENT
Expected producer organization duration.....1 YEAR.....

Section B: Environmental Issues

Will the producer organization:	Yes	No
Create a risk of increased soil erosion?	✓	
Create a risk of increased deforestation?	✓	
Create a risk of increasing any other soil degradation?	✓	
Affect soil salinity and alkalinity?		✓
Divert the water resource from its natural course/location?		✓
Cause pollution of aquatic ecosystems by sedimentation and agro-chemicals, oil spillage, effluents, etc.?		✓
Introduce exotic plants or animals?	✓	
Involve drainage of wetlands or other permanently flooded areas?		✓
Cause poor water drainage and increase the risk of water-related diseases such as malaria?	✓	
Reduce the quantity of water for the downstream users?		✓
Result in the lowering of groundwater level or depletion of groundwater?		✓
Create waste that could adversely affect local soils, vegetation, rivers and streams or groundwater?	✓	
Reduce various types of livestock production?		✓
Affect any watershed?		✓
Focus on Biomass/Bio-fuel energy generation?	✓	

If the answers to any of the above is 'yes', please include an EMP with micro-project application.

Section C: Socio-economic Issues

Will the producer organization:	Yes	No
Displace people from their current settlement?		✓
Interfere with the normal health and safety of the worker/employee?	✓	
Reduce the employment opportunities for the surrounding communities?		✓
Reduce settlement (no further area allocated to settlements)?		✓
Reduce income for the local communities?		✓
Increase insecurity due to introduction of the project?	✓	
Increase exposure of the community to HIV/AIDS?	✓	
Induce conflict?	✓	
Have machinery and/or equipment installed for value addition?	✓	
Introduce new practices and habits?		
Lead to child delinquency (school dropouts, child abuse, child labour, etc.?		✓
Lead to gender disparity?		✓
Lead to poor diets?		✓
Lead to social evils (drug abuse, excessive alcohol consumption, crime, etc.)?	✓	

Section D: Natural Habitats

Will the producer organization:	YES	NO
Be located within or near environmentally sensitive areas (e.g. intact natural forests, mangroves, wetlands) or threatened species?		
Adversely affect environmentally sensitive areas or critical habitats – wetlands, woodlots, natural forests, rivers, etc.)?		
Affect the indigenous biodiversity (Flora and fauna)?		
Cause any loss or degradation of any natural habitats, either directly (through project works) or indirectly?		
Affect the aesthetic quality of the landscape?		
Reduce people's access to the pasture, water, public services or other resources that they depend on?		
Increase human-wildlife conflicts?		
Agrochemical use		
Will the producer organization:		
Involve the use of pesticides or other agricultural chemicals, or increase existing use?		
Cause contamination of watercourses by chemicals and pesticides?		
Cause contamination of soil by agrochemicals and pesticides?		
Experience effluent and/or emissions discharge?		
Export produce? Involve annual inspections of the producers and unannounced inspections?		
Require scheduled chemical applications?		
Require chemical application even to areas distant away from the focus?		
Require chemical application to be done by vulnerable group (pregnant mothers, chemically allergic persons, elderly, etc.)?		

Use irrigation system in its implementation?		

If the answers to any of the above is 'yes', please include an EMP with sub-project application.

Section E: Pesticides and Agricultural Chemicals

This questionnaire will be used with the farmer's groups for purpose of implementing the IPMF

1) *Pest Control practices*

a) Do you use any pesticides to control pests (Insects, diseases, weeds) of crops each season?

Yes___ No If yes, Name them:	Name of pesticide	Name of pest, disease, weed controlled	Number of times applied/ season	When did you apply (growth stage or month) Quantity purchased

If No, WHY?_____

b) If you use any of the above pesticide types, do you keep records of the:

Application location: Yes..... No.....

Date of application: Yes..... No.....

Pesticide product trade name: Yes...No.....

Operator name: Yes..... No.....

If No, WHY?

c) How do you decide when to use the pesticides (tick all that apply)?

(i) We use pesticides at regular intervals throughout the season(calendar)

(ii) We use pesticides when we see pests in the field(control)

(iii)We use pesticides after field sampling and finding a certain number of pests or a certain level of damage (scouting)

(iv)Told by someone to apply (specify who)_____

(v) Other(specify)____

d) Do you use a knapsack sprayer? Yes No____

If yes,

(i) Do you own it Yes No?

(ii) Do you rent it Yes No?___

(iii)Do you borrow it Yes No?_____

e) From your experience, are there any negative/harmful effects of using pesticides?

Yes..... No.....

f) If yes, list the negative effects:

(i) .....

(ii) .....

(iii).....

g) Do you use any kind of protective clothing while applying or handling pesticides?

Yes..... No.....

Why?_____

marketing?

_____

_____

6.Training

a) Have you ever received any training on any of the following topics related to crop production?

Integrated Pest Management Yes..... No.....
No. of times/past year. .....

b). Pesticide Usage Yes..... No.....
No. of times/past year. .....

c). Pesticide Safety: Yes..... No.....
No. of times/past year. .....

d). Insect Identification Yes..... No.....
No. of times/past year. .....

e). Disease Identification Yes..... No.....
No. of times/past year. .....

f). Quality aspects of production Yes..... No.....
No. of times/past year.....

7)Is there anything else that you want us to know about your crop production?

If the answer to the above is 'yes', please consult the IPM that has been prepared for the project.

Section F: Vulnerable and Marginalized Groups meeting requirements for OP 4.10

Are there:	Yes	NO
People who meet requirements for OP 4.10 living within the boundaries of, or near the project?		
Members of these VMGs in the area who could benefit from the project?		
VMGs livelihoods to be affected by the sub project?		

If the answer to any of the above is 'yes', please consult the VMGF that has been prepared for the project.

Section G: Land Acquisition and Access to Resources

Will the producer organization:	Yes	No
Require that land (public or private) be acquired (temporarily or permanently) for its development?	✓	
Use land that is currently occupied or regularly used for productive purposes (e.g. gardening, farming, pasture, fishing locations, forests)	✓	
Displace individuals, families or businesses?		✓
Result in temporary or permanent loss of crops, fruit trees and pastureland?		✓
Adversely affect small communal cultural property such as funeral and burial sites, or sacred groves?		✓

Result in involuntary restriction of access by people to legally designated parks and protected areas?		✓
Be on monoculture cropping?		✓

If the answer to any of the above is 'yes', please consult the mitigation measures in the ESMF, and if needed prepare a (Resettlement Action Plan) RAP.

Section H: Proposed action

(i) Summarize the above:	(ii) Guidance
☐ All the above answers are 'No' ☐ There is at least one 'Yes'	• If all the above answers are 'No', there is no need for further action; • If there is at least one 'Yes', please describe your recommended course of action (see below).

(iii) Recommended Course of Action

If there is at least one 'Yes', which course of action do you recommend?

☐ CPCUs and County Director of Environment (CDE) will provide detailed guidance on mitigation measures as outlined in the ESMF; and

☐ Specific advice is required from CDE and CPCUs regarding sub-project specific EIA(s) and also in the following area(s)

☐ All sub-project applications/proposals MUST include a completed ESMF checklist. The KCSAP-CPCU and CDE will review the sub-project applications/proposals and the CDEs will sign off;

☐ The proposals will then be submitted to NPCU for clearance for implementation by communities in the proposed subprojects.

Expert Advice

☐ The National Government through the Department of Monuments and Sites of the National Museums of Kenya can assist in identifying and, mapping of monuments and archaeological sites; and

☐ Sub-project specific ESIAs, if recommended, must be carried out by experts registered with NEMA and be followed by monitoring and review. During the process of conducting an EIA the proponent shall seek views of persons who may be affected by the sub-project. The WB policy set out in OP 4.01 requires consultation of sub-project affected groups and disclosure of EIA's conclusions. In seeking views of the public after the approval of the sub-project, the proponent shall avail the draft ESIA report at a public place accessible to project-affected groups and local NGOs/CSOs.

Completed by: _____

Name: ANDREW OUMA OBEWA

Position / Community: CHAIRPERSON

Date: 8/2/2022

Field Appraisal Officer (CDE): William Odeyo

Signature: _____

Date: 8/2/22

ANNEX II: LAND OWNERSHIP DOCUMENTS

REPUBLIC OF KENYA

THE LAND REGISTRATION ACT

(No. 3 of 2012, section 108)

THE REGISTERED LAND ACT

(Cap. 300 (REPEALED)

Title Deed

Title Number EAST ALEGO/NGEDA KYANGOMA/1325

Approximate Area (0.25)ha

Registry Map Sheet No. 12

This is to certify that SIAYA COUNTY HONEY PRODUCERS AND PROCESSORS CO-OPERATIVE SOCIETY LIMITED

REG NO CS/16638

is (~~are~~) now registered as the absolute proprietor(~~s~~) of the land comprised in the above-mentioned title, subject to the entries in the register relating to the land and to such of the overriding interests set out in section 28 of the Land Registration Act (No. 3 of 2012) as may for the time being subsist and affect the land.

GIVEN under my hand and the seal of the SIAYA District Land Registry this 23RD day of FEBRUARY, 20 22

Land Registrar

ANNEX I11: PUBLIC PARTICIPATION QUESTIONNAIRES

PROJECT: ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR PROPOSED CONSTRUCTON OF A HONEY COLLECTION, PROCESSING AND PACKAGING UNIT LOCATED OPPOSITE SIAYA- AKALA RD JUNCTION NEAR KAREMO DIVISIONAL HEADQUARTERS IN ALEGO USONGA SUB COUNTY, SOUTH EAST ALEGO WARD, SIAYA COUNTY

The Ministry of Agriculture, Livestock, Fisheries and Cooperatives (MOAL, F&C), the state department of Crops through World Bank Funded Kenya Climate Smart Agriculture Project (KCSAP), intend to support the proponent SIAYA HONEY PRODUCERS AND PROCESSORS CO-OPERATIVE SOCIETY to construct a multipurpose honey processing and marketing unit. The activities of the proposed project will cover construction works, purchase of equipment, collecting, processing packaging and marketing It will establish aggregation centers from where farmers will take crude honey and its products which will be processed and packaged as per desired qualities guided by market demands. In a bid to ensure safe and sustainable environment, the National Environmental Management Authority (NEMA) under EMCA (Amendment) of 2015 Section 58 requires that an Environmental Impact Assessment is done and public participation be undertaken to establish the views and concerns of the interested and/or affected stakeholders. Thus as a member of the local community/group/institution within/around the proposed project area we kindly request for your comments on the expected socio-economic and environmental impacts of the proposed project.

Your response will be treated with utmost confidentiality

Section A
Response details

Name	Institution/Organization	Telephone
IRENE ALOO	SIAYA HONEY	0112443805

1. Gender
   Male [ ] Female [✓]

2. Age of the Respondent..... 20 years .....

3. For how long have you known or worked with the Society .....7.....(years)

Section B
Human Natural Environmental Concerns

1 Are you aware of the proposed multipurpose honey and hive products unit

Yes [✓] No [ ]

2 Do you think the proposed construction/establishment of the unit and its activities pose any danger to the environment

Yes ☐ No ☑

If yes explain .....

3 Do you have any rejection/reservation on proposed construction/establishment of the multipurpose honey and hive product processing unit

Yes ☐ No ☑

If yes explain .....

4 What do you think are the positive and negative socio economic and environmental impacts on the proposed project

Positive	Negative
- Employment opportunities. - Improved production level for the farmers. - Enhance easy extraction of other associative productive - Increase income	Bees can easily attack neighbours Might endanger life of others Bees may end up being killed by chemicals sprayed on the surrounding farms

5 Suggest mitigation measure for any negative impact that may result from implementing the project

fencing and Protection of the Site.

6 a) Do you anticipate any conflict or complain against the proposed honey and hives products unit , selling and marketing project with respect to:

- Land Yes ☐ No ☑

  If yes indicate.....

- Water Yes ☐ No ☑

  If yes indicate.....

- Public health and safety? Yes ☐ No ☑

  If yes indicate .....

- Loss of livelihood? Yes ☐ No ☑

  If yes indicate .....

- Cultural/heritage? Yes ☐ No ☑

  If yes indicate .....

  Others .....

(b) If any in 6(a) above what are the mechanism to put in place to resolve the conflicts/complaints amicably

i. .....

ii. ..... NOT

iii. .....

7 On the whole, would you have any objections to the project being implemented?.....

8 In which category do you fall? (tick where applicable: you can tick more than one box)

Neighbour resident ☐ Project official ☐ Stakeholder ☐

Stakeholder ☐ Community leader/Member ☑

Other Specify ☐

3

PERSONAL INFORMATION

.Signature……

Thank you for your cooperation

[*Please provide these details for the purpose of authentication in this EIA study only*

ANNEX IV: LIST OF ATTENDANCE

LIST OF ATTENDANCE FOR SIAYA HONEY PROCESSING & MARKETING PUBLIC PARTICIPATION FOR SPR

Kenya Climate Smart Agriculture Project (KCSAP)

Office of the CPCU - Siaya

REGISTRATION FORM

ACTIVITY: PUBLIC PARTICIPATION WITH SIAYA HONEY PCU DATE 15/03/2022.

NO	NAME	ORGANIZATION	DESIG	CONTACT		SIGN
				MOBILE	EMAIL	
1.	EDWARD ORANGO OGOLLA.	SIAYA HONEY	MEMBER	0723108107		
2.	[illegible]	SIAYA HONEY	MEMBER	0728785621		
3.	[illegible]	SIAYA HONEY	MEMBER	0717606614		
4.	JAMES O. OLUOCH	SIAYA HONEY	MEMBER	0728548228		
5.	LAWRENCE O. WASONGA	SIAYA HONEY	MEMBER/ SUPPLIER	0798353894	Pioneer@gmail.com	
6.	IRENE ALOO	SIAYA HONEY	MEMBER	0112443605	Nyandiki2@gmail.com	
7.	JACKLINE ANYANGO	SIAYA HONEY	MEMBER	0740071263		
8.	IGNATIUS CLEMENT OUMA	UGUNJA HONEY	MEMBER	0727671677		
9.	SAMSON WAMANGO	UGUNJA HONEY	MEMBER	0712445508		
10.	JENNIFER A. OTIENO	UGUNJA HONEY	SECRETARY	0729882946		

P. O. Box 3 - 40600, SIAYA

Mob: +254 722 943269

Kenya Climate Smart Agriculture Project (KCSAP)

Office of the CPCU - Siaya

REGISTRATION FORM

ACTIVITY: VISIT SITE AND MARKET CATCHMENT DATE 14/03/2022

NO	NAME	ORGANIZATION	DESIG	CONTACT		SIGN
				MOBILE	EMAIL	
1.	CHARLES OTIENO OGUDA	UGUNJA HONEY	MEMBER	0720448296		
2.	PAMELA AKINYI ODUOR	SIAYA HONEY	MEMBER	0717043477		
3.	DAVIS OCHIENG SHIMLA	SIAYA HONEY	MEMBER	0748426631		
4.	ROSELYNE AWUOR AGUNDA	SIAYA HONEY	MEMBER	0724308934		
5.	SALIM OYINDO	HONEY	MEMBER	0716297373		
6.	RICHARD O. OKIYO	DOALF	[illegible]	0780126656		
7.	CONSOLATA ATIENO ODUOR	SIAYA HONEY	MEMBER	0702217268		
8.	Elizabeth Akinyi Obonyo	Siaya Honey	Member	0791298323		
9.						
10.						

P. O. Box 3 - 40600, SIAYA

Mob: +254 722 943269

Kenya Climate Smart Agriculture Project (KCSAP)

Office of the CPCU - Siaya

REGISTRATION FORM

ACTIVITY: MEETING WITH SIAYA HONEY PMC DATE 11/03/2022

NO	NAME	ORGANIZATION	DESIG	CONTACT		SIGN
				MOBILE	EMAIL	
1.	Florence Akoth Aruku	Siaya Honey	Secretary	0729014929	florencjaster12@gmail.com	
2.	Pheleshia Auma Onyango	Siaya Honey	Treasurer	0723030656	[illegible]	
3.	Andrew Ochieng Ogeya	Siaya Honey	Chair	0720180464	andrewochieng382@gmail.com	
4.	John Odhiambo Bita	Siaya Honey	Vice Chair	0715376159		
5.	Matheyo O. Ongimbo	Siaya Honey	Member	0728057844		Ongijo
6.	Pamela Auma Ochieng	Siaya Honey	Marketing	0716 078 716		
7.	Samuel Matera	Siaya Honey	Member	0722277307	Materasam@gmail.com	
8.	Joakim Odhiambo Otieno	Siaya Honey	Member	0759876992	Otieno3chokim@gmail.com	
9.	Emmanuel Onyango Ochieng	Ugenya bee keepers	Member	0746016505	emmanuelochieng204.com	
10.	Alice Akinyi Owuor	Siaya Honey	Member	0706594301	[illegible]	

ANNEX V: MINUTES

MINUTES OF PUBLIC ENGAGEMENT: SIAYA HONEY PROCESSING & MARKETING SOCIETY AT KOGELO VILLAGE ON Date: 15/3/2020

AGENDA

1. Public views on the proposed project
2. AOB

MEMBERS PRESENT

- *(see attached list of participants attached at ANNEX IV of the report)*

The Chairman called the meeting to order at 10:18am which was followed by a word of prayer from Ms. Florence Akuku.

MIN 1/2022 PUBLIC VIEWS ON THE PROPOSED PROJECT

KCSAP official Mr. County Environment Social Safeguards Officer introduced the team from the office including the environmental expert team.

In his opening remarks he informed the members that the project has been approved for funding by the World Bank and challenged members of the Siaya Honey Cooperative to be proactive and engage more stakeholders especially the CIGs. These CIGs should be composed of the youth, women, PLWDs etc. He added that the CIGs should be liberal and able to handle all dispute resolution mechanisms in their groups, as a follow up, he asked for the lists of nominated CIG to be forwarded to the KCSAP office in Siaya.

The lead expert Mr Aloo Ns Mr Elijah Lwevo stood and introduced briefly the scope of the EIA/ESIA objectives and what it is based on the proposed project.

He sought to get information on why the group chose the proposed site. He added that bee project was chosen since by rearing bees it will help in conserving the environment in form of ecosystem services and biodiversity conservation a point that was agreed by all members.

On the benefits of the project, Mr. Patrick Obewa that the benefits will directly to the Siaya community as a consortium and by extension other members of the society through employment creation, he said the members may be sent far places to seek for raw honey to be processed in the unit if the supply may go down at any given point.. However with modern digital technology once the members of the cooperative harvest their honey, it is possible to aggregate, process package and market..

MIN 2/2022 POSITIVE AND NEGATIVE IMPACTS PRESENTED BY THE MEMBERS

Positive Aspects

Florence Akuku reported that the facility will create employment among the youth and it is also not a labour intensive enterprise

Richard Okiya Informed the participants that income levels of the honey producers will be increased because there will be reduction of post-harvest loses. Standards will also be established so that targeted markets can be identified

Negative impacts

Mr Andrew Obewa appreciated the proposed project, however he raised concern of a possibility of increased presence of wild bees around the facility the moment it starts operating. The wild bees may attack the surrounding neighbors

Answer: It was agreed that the site will be fenced off and it will be approximately 20 meters from any residential area

Mrs Roselyne Agunda: Wanted to know how wastes will be disposed from the sita especially packaging materials and liquid wastes

Answer It was agree that there will be a soak pit and an waste recycling bin for collecting plastic and other paper based wastes

The chairman Mr. Obewa said that the cooperative have put in place strategies to assist in seeking more raw honey from all over to ensure the processing plant succeeds. Currently there is a center point in Siaya town

On the inclusion of PLWD he acknowledged that one member has been elected to champion their interests, in addition special preferences shall be given to them in the entire project life.

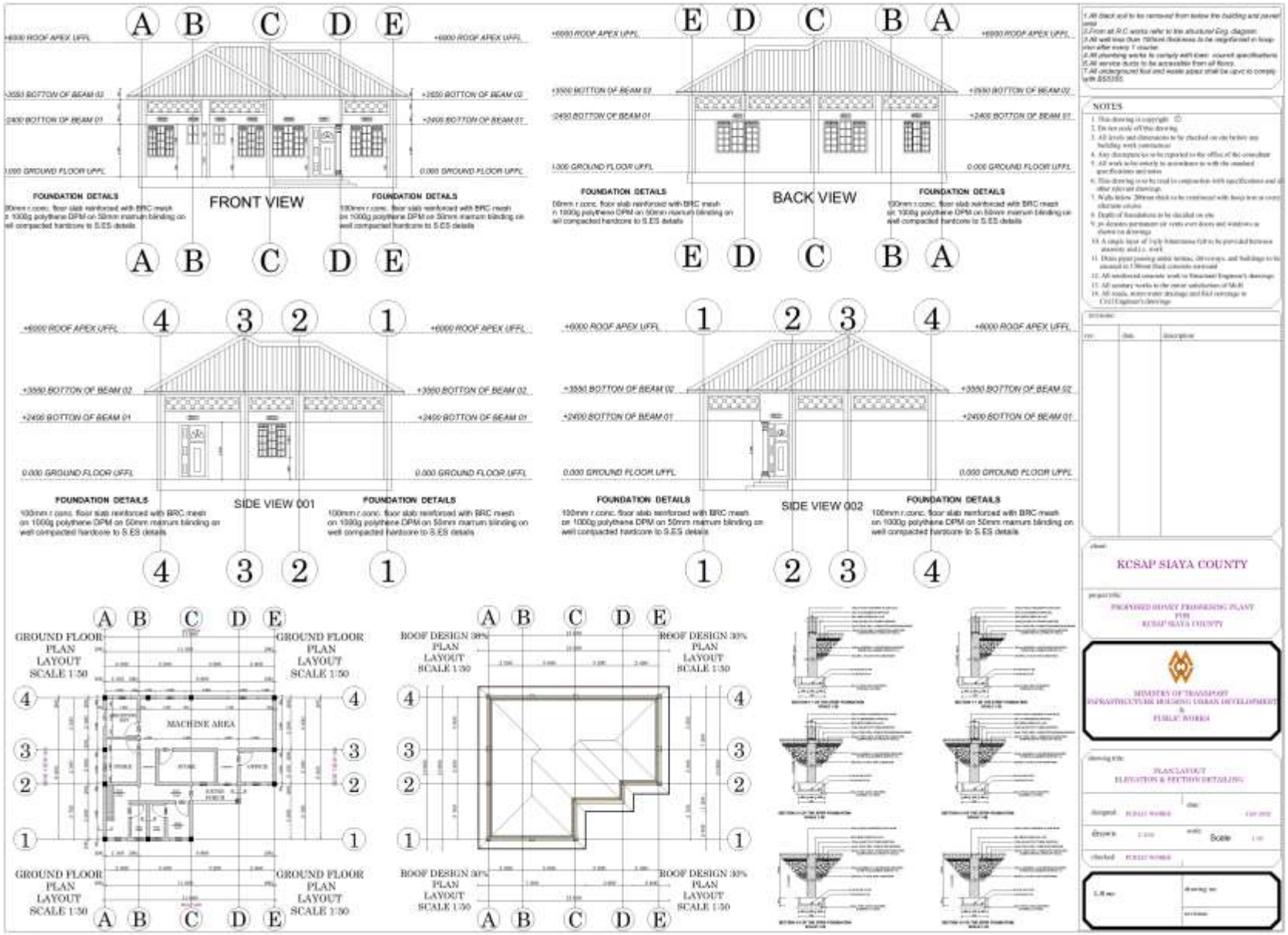
On transportation of honey, the cleanest way of transporting raw honey from the producers shall be agreed upon by the consortium and all members working in the processing unit shall maintain cleanliness of high order, this will also prevent other bees from coming near the processing unit.

On the by-products of processing honey the consortium will seek to partnership with other institutions which may want the honey combs as raw materials, training on this shall be made when the right time arrives.

There being no other business, the meeting ended at 1:20pm with a prayer from Ms Florence Akuku .

Minutes confirmed by Lead Expert Mr Aloo Fredrick

ANNEX VI: BUILDING PLANS



ANNEX VII: EXPERTS PRACTICING LICENCE FOR YEAR 2022

FORM 7 (r.15(2))

NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY(NEMA)

THE ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT

ENVIRONMENTAL IMPACT ASSESSMENT/AUDIT (EIA/EA) PRACTICING LICENSE

License No : NEMA/EIA/EPPL/15388

Application Reference No: NEMA/EIA/EL/21343

M/S **Fredrick Onyango Aloo**
(individual or firm) of address

P.O. Box 34188 - 00100, Nairobi

is licensed to practice in the

capacity of a (Lead Expert/Associate Expert/Firm of Experts) **Lead Expert**
registration number **9049**

in accordance with the provision of the Environmental Management and Coordination Act Cap 387.

Issued Date: **1/17/2022** Expiry Date: **12/31/2022**

Signature.....

(Seal)
Director General
The National Environment Management Authority

P.T.O.