



ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT SUMMARY PROJECT REPORT FOR THE
PROPOSED MANDERA HONEY PROCESSING, PACKAGING AND MARKETING

Proposed Project site at coordinate N 3°55'48.18076, E 41°48'10.88622



PROPONENT
DAUA LIMITED
P.O BOX 560-70300
MANDERA

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CERTIFICATION

This Environmental and Social Impact Assessment (ESIA) Summary Project Report (SPR) has been prepared by a registered Lead Expert (NEMA Reg. No. 8679) and Associate Expert Reg No 10944. It has been prepared in accordance with the Environmental Management and Coordination Act no. 8 of 1999 and the Relative Amendments No 5 of 2015, the Environmental (Impact Assessment and Audit) Regulations, 2003 as well as legal notice no. 31 & 32 of the Environmental (Impact Assessment and Audit) (Amendment) Regulations, 2019, for NPCU Clearance and subsequent submission to NEMA for approval.

We, the undersigned, confirm that the contents of this report are a true representation of the assessment process for the proposed honey processing, packaging and marketing in Mandera County. The experts' registration details and signatures are as follows:

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Submission of the ESIA Summary Project Report

I, Amis Hassan Hussein..... on behalf of the proponent submit this ESIA Summary Project Report for the proposed honey processing, packaging and marketing in Mandera East Sub County in Mandera County. To the best of my knowledge all information contained in this report is accurate and a truthful representation of all findings as relating to the project.

Signature  Date 14/01/2022

ACKNOWLEDGEMENT

The preparation and production of this report has been made possible through the contribution of several actors who played vital roles at various stages in the preparation of this report. In this respect, I do hereby extend my most sincere gratitude to the Manager Daa Limited who helped in members' mobilization. I would also like to recognize the participation of members of the Mandera Sorghum Farmers' Cooperative Society Limited, CIG/VMG Groups and the community for their participation and input during the exercise.

Much thanks to the KCSAP-CPCU Mandera team, led by the CPC for their efficient facilitation of the ESIA activities and provision of all the necessary technical support and guide as well as the ESIA-SPR team who worked tirelessly to ensure compilation and production of this report. I would also wish to thank NEMA – Mandera Office team for their guide especially during the screening exercise.

Finally, I wish to dedicate a special thanks to the Environmental and Social Safeguards NPCU team led by Dr. Muthee for their constant and timely support and guidance during the preparation of this SPR.

Table of Contents

CERTIFICATION.....	2
ACKNOWLEDGEMENT	3
Table of Contents	4
LIST OF FIGURES.....	9
LIST OF TABLES	9
EXECUTIVE SUMMARY	9
CHAPTER ONE: INTRODUCTION	1
1.1 Background Information	1
1.2 projective objective	2
Specific Objectives.....	2
1.3 Justification of the project	2
1.4 Justification of conducting the SPR.	3
1.5 Objectives of the Project Report.....	3
1.6 SPR Approach and Methodology.....	3
1.6.1 Screening and scoping.....	3
1.6.2 Desk Review of Documents	3
1.6.3 Field Data Collection.....	3
1.6.4 Project Data Synthesis.....	3
1.6.5 Public Consultation	4
1.7 Organization of report chapters	4
CHAPTER TWO: NATURE OF THE PROJECT.....	5
2.1 Introduction	5
2.2 Project equipment and materials	5
2.3 Production Process	5
2.4 Proposed Project Phases and Activities.....	6
2.4.1 Construction phaseExcavations	6
Construction	6
2.4.2 Operations phase	7

2.4.3	Decommissioning stage.....	7
CHAPTER 3: THE LOCATION OF THE PROJECT		8
3.1	Introduction	8
3.2	Project Location	8
3.4	Environmental Sensitive area to be affected	8
3.5	Environmental Management Infrastructure.....	9
3.6	Conformity of land use plan/Zonation	9
3.7	Land use	9
3.8	Water Resources.....	9
3.9	Energy Supply	9
3.10	Agricultural Activities.....	9
3.10.1	Livestock farming.....	9
3.11	Infrastructure and Access	9
3.11.1	Roads.....	9
3.12	Climate	10
3.12.1	Biodiversity around project area	10
3.12.1.2	Fauna.....	10
CHAPTER FOUR: PUBLIC PARTICIPATION AND STAKEHOLDERCONSULTATIONS		11
4.1	Introduction	11
4.2	Objectives of the community and public participation.....	11
4.3	Categorization of community participant and stakeholders	11
4.4	Consultation and public participation (CPP) Methodology	11
4.4.1	Public participation baraza	11
4.4.2	Structured questionnaires	12
4.5	Positive impacts.....	12
4.6	Highlights of issues that arose during the public meeting	12
b.	Interruption of water supply, electricity	12
c.	Gaseous Emissions.....	12
d.	Accidents during operation	13

CHAPTER FIVE: POTENTIAL IMPACTS AND MITIGATION MEASURES.....	14
5.1 Introduction	14
5.2 Positive social and environmental benefits	14
5.3 Negative Social Impact During Planning	14
Mitigation measures	14
5.4 Negative environmental impacts of construction activities.....	15
5.4.1 Extraction and use of construction materials.....	15
Mitigation Measure	15
5.4.2 Dust emissions.....	15
Mitigation Measure	15
5.4.3 Exhaust emissions	15
Mitigation measure.....	16
5.4.4 Noise and vibration	16
Mitigation Measure	16
5.4.5 Risks of accidents and injuries to workers	16
Mitigation Measure	16
5.4.6 Increased soil erosion	16
Mitigation Measure	17
5.4.7 Solid waste generation.....	17
Mitigation Measure	17
5.4.8 Energy consumption.....	17
5.4.9 Water use.....	17
Mitigation Measure	17
5.5 Positive environmental impacts of construction activities	18
5.5.1 Creation of temporary employment opportunities	18
5.5.2 Provision of market for supply of construction materials	18
5.5.3 Increased business opportunities	18
5.6 Negative Social Impacts During Construction	18
5.6.1 Labor Influx Effects	18

Mitigation measures	18
5.6.2 Spread of COVID 19 Among the Workers	18
Proposed Mitigation Measures	18
5.7 Negative environmental impacts of operational activities	19
5.7.1 Increased storm water flow	19
Mitigation measures	19
5.7.2 Worksite health and safety	19
Mitigation Measure.	19
5.7.3 Operation of quarries and borrow pits.....	19
Proposed Mitigation Measures	19
5.7.4 Traffic management	20
Proposed Mitigation measure	20
5.7.5 HIV/AIDs.....	20
Proposed Mitigation measure.	20
5.8 Positive environmental impacts of operational activities.....	20
5.8.1 Revenue to national and local governments.....	20
5.8.2 Positive social impacts of operational activities.....	20
5.9 Negative social impacts during operation phase	21
5.9.1 Influx of labour.....	21
Proposed Mitigation measures	21
5.9.2 Spread of COVID 19 Among the Workers	21
Proposed Mitigation measures	21
5.9.3 Gender-based violence at the community level.....	22
Proposed Mitigation measures	22
5.10 Negative environmental impacts of decommissioning activities	22
5.10.1 Solid waste	22
Proposed Mitigation Measure	22
10.6.2 Dust	22
Proposed Mitigation Measure	22

10.6.3	Noise and vibration	22
	Mitigation Measures.....	23
5.11	Positive environmental impacts of decommissioning activities.....	23
5.11.1	Rehabilitation	23
5.11.2	Employment Opportunities	23
5.12	Anticipated Negative Social Impacts during Project Decommissioning Phase.	23
5.12.1	Livelihoods and Economic Loss.....	23
	Proposed mitigation measures.....	23
	CHAPTER SIX: ENVIRONMENTAL AND SOCIAL MANAGEMENT& MONITORING PLAN (ESMMP)	24
6.1	Significance of ESMMP.....	24
	CHAPTER SEVEN: CONCLUSION AND RECOMMENDATIONS	35
	REFERENCES.....	36
	ANNEXES	37
	Annex 1: Land ownership.....	37
	Annex 2: Confirmation of Land ownership.....	38
	Annex 3: Screening Checklist.....	39
	Annex 4: Registration Certificate.....	43
	Annex 5: Proposed Project site at coordinate N 3°55'48.18076, E 41°48'10.88622	44
	Annex 6: Structured Questionnaires	45
	Annex 7: Public Participation Minute.....	51
	Annex 8: Attendance list.....	56
	Annex 9: photos of public participation.....	59
	Annex 10: MoU between Daua Limited and one of the CIG groups.....	60
	Annex 11: Approved proposed plan	62
	Annex 12 : photos beehives	63
	Annex 13: Expert License.....	64

LIST OF FIGURES

Figure 1: Google Map showing the proposed project site 8

LIST OF TABLES

Table 1: The proposed ESMMP for the proposed project..... 24

LIST OF ACCRONYMS

ASAL	Arid and Semi-arid lands
BMPs	Best Management Practices
CF	Cash flow
CIGs	Common Interest Groups
CPCU	County Project Coordination Unit
EIA	Environmental Impact Assessment
ESIA	Environmental Social Impact Assessment
GDP	Gross Domestic Product
GMPs	Good Manufacturing Practices
HACCPs	Hazard Analysis and Critical Control Points
IRR	Internal Rate of Return
KCSAP	Kenya Climate Smart Agriculture Project
KTBH	Kenya Top Bar Hive
NALEP	National Agriculture Livestock Extension Program
NEMA	National Environment Management Authority
NGO	Non-governmental Organization
NPCU	National Project Coordination Unit
NPV	Net Present Value
PPE	Personal Protective Equipment
VMGs	Vulnerable and Marginalized Groups

EXECUTIVE SUMMARY

Daua Limited herein referred to as the proponent or Company Limited, wish to establish a modern processing plant for value addition of bee products, to create a market through bulk purchasing from over 1,100 beekeepers in Mandera County, to improve livelihoods of at least 1,100 households with over 7,700 household members, to educate the suppliers particularly CIG/ VMG members on modern bee keeping and honey processing technologies, Enhance access to modern bee hives and other production equipment. The company has signed an MoU with about 55 CIGs and VMG groups which will supply the honey for processing.

The proposed processing plant will be established on a parcel of land that belong to the company (see annex 1), located in Green County, Shafshsfafey location of Mandera town, Mandera County. The parcel of land lies on the GPS coordinate of N 3°55'48.18076, E 41°48'10.88622 and measures 50x100ft. The whole project is estimated to cost Kshs. 14,000,000. The proponent through Yahya Chenge (Lead Expert) and Abdirahman Hussein (Associate Expert) prepared this SPR for the proposed project.

The objectives of the proposed project will be to promote beekeeping, enhance uptake of technologies and improve honey marketing in order to increase income and improve livelihoods for small scale producers in Mandera County thus contributing to KCSAP development objective.

Daua limited will be involving in various activities, including; Farming activities i.e. Apiculture/Beekeeping, Provision and sale of modern beekeeping equipment beekeeping farmers

Marketing farmers' produce (raw honey and wax), Environmental protection through tree planting and soil conservation, supporting bee farmers through training and education to increase their yield and Civic education on health and sanitation issues as well as support to the vulnerable groups.

The bee keeping sector in Mandera county has faced challenges ranging from the use of less productive traditional log hives, poor marketing and market linkages, lack of processing facilities for raw honey, poor quality of the product and inadequate production skills.

The preparation of this report (SPR) was as a result of the recommendation of the County Director Environment (CDE) after the EDP/proposals of the proposed projects has been subjected to ESS Screening, (*see annex 3 for screening checklist*) and was prepared in accordance with the provisions and requirements of the Environmental Management and Coordination Act (EMCA) Cap 387 and subsidiary regulation - Environmental (Impact Assessment and Audit) Regulations, 2003 and Legal Notice 31 and 32 of 2019. The Bank also requires that all environmental and social risks and impacts of the project be addressed as part of the environmental and social assessment conducted in accordance with OP 4.01 (Environmental Assessment) that set out the obligations of the Borrower in identifying and addressing environmental and social risks and impacts that may require particular attention.

The public participation Baraza was attended by 60 participants, comprising of 44 males and 16 females (*refer to annex 8*). The meeting was undertaken on 8th and 9th January, 2022 at Banisa social hall. These are recorded as Minute of the Stakeholders' Meeting, (*refer to annex 7*). Some of the environmental and social impacts identified for the various phases of the project and their proposed mitigation measures are summarized below;

The likely adverse environmental and social impacts during the construction phase include; increased dust from construction activities, improper disposal of excavated materials and

construction waste; spillage of oil, Sexual Exploitation and Abuse (SEA), spread of HIV/AIDS and COVID -19 as a result of intermingling between the locals and foreigners, injuries, GBV, child labor, resource-based conflict etc.

Some of the proposed mitigation measures for the aforementioned impacts include; sprinkling of water to settle dust particles, proper disposal of excavated materials and construction waste, sensitization of locals on STIs, adherence to COVID-19 MoH protocols, establishment of functional GRM system to address cases of social abuse including child abuse/labor cases and complaints, provision of incident register, provision of PPEs, installation of first-aid kit, training of workers and observation of safety measures by all within the site.

During the operation and maintenance phase, the negative impacts are: Increase energy and water demand, influx of laborers, increased gaseous emission, accidents, spread of Covid-19, SEA, HIV/AIDS.

The aforementioned impacts can be mitigated through; utilization of alternative sources of energy which includes installation of solar systems, construction of rain water harvesting infrastructure, installation of water efficient taps, recruitment of both skilled and unskilled workforces while ensuring ethnic balances to avoid conflict, close working relationship with the local leaders and community elders when doing recruitment, harvesting of rain waters proper disposal of both solid and liquid waste, sensitization of locals on STIs, adherence to COVID-19 MoH protocols, establishment of functional GRM system to address cases of social abuse including child abuse/labor cases and complaints, and provision of incident register.

To implement the aforementioned mitigation measures, an elaborate ESMMP is provided in this report.

The implementation of the proposed project is estimated to cost **Kshs. 14,000,000**, while the Implementation of the ESMP is estimated to cost **Kshs. 1,233,400.00**. To ensure adequate implementation of the proposed mitigation measures, the ESMP will be shared with the contractor prior to commencement of the project to enable the contractor understand its content and for proper planning for implementation of the same.

In Conclusion, considering that the positive impacts of the project outweigh the negative impacts which can be mitigated through the implementation of the proposed mitigation measures and that the Project received favourable support from local people and other stakeholders during consultations, I would recommend the implementation of the proposed project for the benefit of the locals. However, the proposed ESMP must be shared with the respective contractor for implementation in order to avoid or reduce both negative environmental and social impacts associated with the proposed project.

CHAPTER ONE: INTRODUCTION

1.1 Background Information

The Kenya Climate Smart Agriculture Project (KCSAP) is a five years Government of Kenya project jointly supported by the World Bank. The development objective of KCSAP is „To increase agriculture productivity and build resilience to climate change risks in the targeted smallholder farming and pastoral communities in Kenya, and in the event of an Eligible Crisis or Emergency, to provide immediate and effective response“.

This will be achieved through implementation of KCSAP five components namely; (1) Up scaling climate smart agricultural practices, (2) Strengthening Climate Smart Agriculture Research and Seed Systems, (3) Supporting Agro-weather, Market, Climate and Advisory Services, (4) Project Coordination and Management and (5) Contingency Emergence Response.

Public Private Partnership (PPP) is embraced to provide appropriate platform and environment for fast-tracking the generation of CSA TIMPs, which have market orientation and/or perspective with potential for agribusiness development. Under window III (Public Private Partnerships (PPPs) with Producer (“4P”) Organizations Grants) KCSAP provide financial support to qualified Public Private Partnership firms/Companies where the company/firm is required to finance 50% of its proposal costs/Enterprise Development Plan. It’s against this backdrop that Daa Limited applied for the support grant through its EDP which was approved by NTAC on 21st September, 2021.

Daa Limited is a company registered with the registrar of companies under the company’s ACT of 2015 on 18th September, 2017. The company is located in Mandera town and started its operations way back in 2017. The primary activities include marketing of bee products and supply of apiculture equipment to bee farmers. The minor activities revolve around environmental protection through tree planting, soil conservation and environmental advocacy. The company is also engaged in civic education on health and sanitation issues as well as support to the vulnerable groups.

The company is co-owned by two individuals each owing 50% stake in the company cumulatively amounting to seven million and fifty thousand shillings (7,050,000).

The business entails bulking of honey, processing, packaging and marketing honey in Mandera county. It targets to promote the production and marketing of honey from producers specifically located in Banisa Sub- County which is 260 kilometers from Mandera Town. The bee farmers have been producing honey as groups and especially as organized CIGs/VMGs through the support KCSAP and other actors in the area such as NGOs and Mandera County Government. The groups previously traded crude honey to middlemen from Mandera North, Banisa and Mandera towns. Through KCSAP support, about 1100 (**926 M & 174F**) bee farmers will have increased bee products mainly honey and the impact is an increased volume to satisfy the markets locally, exports and boost livelihoods particularly apiculture farmers.

However, marketing of honey had remained a major challenge as bee keepers had limited access to reliable markets and were left at the mercy of unscrupulous middle men. It is this gap that Daa Limited came in to fill and has continued to support with marketing of quality natural honey, provision of beekeeping equipment and modern technologies along with training on effective apiculture practices. Daa Limited is also encouraging group

membership to the CIGs/VMGs to remain open and mobilizing new members to join in order to ensure continued production and dependable volumes.

1.2 projective objective

To promote beekeeping, enhance uptake of technologies and improve honey marketing in order to increase income and improve livelihoods for small scale producers in Mandera County.

Specific Objectives

- To establish a modern processing plant for value addition of bee products
- To create a market through bulk purchasing from over 1,100 beekeepers in Mandera County.
- To improve livelihoods of at least 1,100 households with over 7,700 household members.
- To educate the suppliers particularly CIG/ VMG members on modern bee keeping and honey processing technologies.
- Enhance access to modern bee hives and other production equipment

1.3 Justification of the project

The demand for honey both as a medicinal product at the household level and for commercial purposes has been on the increase all over the country. Consequently, bee-keeping is an important enterprise, which can impact on the community in Mandera as an income generator and a source of livelihood. According to the 2014 Livestock population Census result, there are a total of 23,388 beehives in Mandera County-70% traditional logs (16372), from this total beehives, Banisa sub-county has the highest number of beehives at 22,527 beehives, which represent 96.3 percent of all the beehives in the County; followed by Mandera North sub – county which has 442 beehives representing 1.89 percent and Mandera East 419 bee hives (1.79%).

There is a large gap in honey business in Kenya such that it imports honey worth USD 228,600 from external markets mainly Egypt, Australia and Tanzania. There are ready and easily accessible markets in our immediate target markets (Mandera, wajir and Garissa counties) and Kenya as a whole for honey especially at household level, supermarkets and hotels where honey is used as sugar substitute to curb rising lifestyle diseases e.g., diabetes. Honey is also used as inputs in cosmetic and pharmaceutical industries.

Despite the huge demand there are no commercial production and processing of honey in the whole of Northern Kenya. Honey is only produced by smallholder traditional beekeepers thus beekeeping is still rudimentary.

Beekeeping offers a sustainable alternative livelihood for the communities which can reduce dependences on agriculture, livestock, charcoal burning, deforestation and other ventures that are seasonal and vulnerable to climate change patterns and some of which are damaging to the ecosystem.

Therefore, apiculture offers the bee farmers in Mandera County and those in other Arid and Semi- Arid Land (ASAL) a sustainable source of income and livelihoods to deal with prevalent hunger and poverty.

1.4 Justification of conducting the SPR.

The SPR was as a result of the recommendation of the County Director Environment (CDE) based on the screening report, (*see annex 2 for screening checklist*) and was prepared in accordance with the provisions and requirements of the Environmental Management and Coordination Act (EMCA) Cap 387 and subsidiary regulation - Environmental (Impact Assessment and Audit) Regulations, 2003 and Legal Notice 31 and 32 of 2019. The Bank also requires that all environmental and social risks and impacts of the project be addressed as part of the environmental and social assessment conducted in accordance with OP 4.01 (Environmental Assessment) that set out the obligations of the Borrower in identifying and addressing environmental and social risks and impacts that may require particular attention.

1.5 Objectives of the Project Report

The main objective of the Study was to identify environmental and social impacts associated with the proposed project and to recommend an appropriate environmental management strategy for the project. Thus, a core outcome of the Study is an Environmental and Social Management and Monitoring Plan (ESMMP) for the project.

1.6 SPR Approach and Methodology

1.6.1 Screening and scoping

The screening was conducted by a team comprising of NEMA, CPCU and the community during initial public participation. The scoping was carried out with regard to extent of the project and its anticipated benefits to the community. The scope of works consists of community sensitization and mobilization and assessment of socioeconomic activities within the project area.

1.6.2 Desk Review of Documents

The SPR team reviewed all the relevant available documents on project activities and components from the client. The team also reviewed all the available and relevant internal environmental guidelines put in place by the proposed project and recognized guidelines and standards on SPR.

1.6.3 Field Data Collection

The team conducted field visits to the proposed project site and consulted the stakeholders to obtain further information. The team established the nature of the surroundings including: existing infrastructure, economic and social set up of the local communities whose normal daily activities will be and/or likely to be affected by the implementation of the proposed project. The SPR team collected existing information and administered interviews with a view to predicting the potential environmental impacts on the day-to-day activities of the community.

1.6.4 Project Data Synthesis

The SPR team thereafter interpreted and used the data collected to prepare a comprehensive environmental and social management and monitoring plan (ESMMP) encompassing the potential negative environmental and social impacts, mitigation measures, monitoring indicators and means of verification. The ESMMP is incorporated in the SPR report.

1.6.5 Public Consultation

The public consultation meeting was attended by 60 participants, comprising of 44 males and 16 females (*refer to annex 7*). The meeting was undertaken on 8th and 9th January, 2022 at Banisa social hall. These are recorded as Minute of the Stakeholders' Meeting, (*refer to annex 6*).

1.7 Organization of report chapters

The SPR report is presented in seven chapters. Chapter one is an introduction with the SPR Terms of Reference (ToR), relevant background information about the proponent, project location, objectives and project justification. The second chapter describes the proposed project location, project description and activities and decommissioning process. The third chapter describes the location of the project, land ownership. Chapter four entails the public consultation and participation process. Chapter five discusses the associated and potential environmental and social impacts and the proposed mitigation measures. Chapter six recommends an ESMMP for the proposed project and chapter seven provides conclusion and recommendations on project implementation. The last section of the report is comprised of references and annexes as are appropriate for inclusion in the report.

CHAPTER TWO: NATURE OF THE PROJECT

2.1 Introduction

The company wishes to establish processing plant for value addition of bee products which entails bulking of honey, processing, packaging and marketing honey in Mandera County. It targets to promote the production and marketing of honey from producers countywide. The company will be receiving raw honey from producers who are mainly CIGs/VMG groups which were supported by local NGOs and KCSAP. The company will establish honey processing plant in Mandera town thus providing a ready market for the farmers.

2.2 Project equipment and materials

The key equipment to be used during operation phase include: Refractometer, Honey extractor, Settling tank, Honey warmer, Honey press, Solar wax Melter, Honey foil sealing machine, Computer and printers and water supply system

2.3 Production Process

The following describes the process from when the honey is received at the processing plant to the time when it is released for distribution.

- i) **Honey Collection.** Before collection of honey from the frames, the bees in the hive are commonly pacified with smoke. The smoke lessens the aggressiveness of the bees and obscures their communication via pheromones. It triggers a feeding instinct in the bees to save resources from the hive in the event of fire.
- ii) **Uncapping.** The first step in collecting the honey is uncapping. This involves removal of the wax caps from the honeycomb cells. Small processors do this manually. Large processors use uncapping machines that continuously scrape the wax caps off the honeycomb cells one frame at a time in a fully automated process.
- iii) **Extraction and Storage.** Next the honey must be removed from the cells using an extractor. The frames are commonly placed into a centrifuge that spins the frames, forcing the honey out of the comb. The honey is spun to the sides of the extractor and then drains out the bottom into a collection vessel. The remaining wax can be pressed in a screw press to remove the remainder of the honey.
- iv) **Heating.** Because raw honey is viscous and sticky, filtering can be difficult. Honey is often heated to 66°–77°C to decrease its viscosity prior to filtration. Some honey is pasteurized, which requires temperatures of 72°C or higher. The heating process also reduces the moisture content, delays crystallization, and destroys yeast cells, enhancing shelf life. In addition, heating increases the brown color of the honey. Heating can be done in tanks or by means of an infrared heater or heat lamp above the product.
- v) **Filtration.** The primary purposes of filtration are to retard crystallization and produce clear product. Various types of filtrations are used to produce different types of honey. Membrane filters are most commonly used. The membrane permits some compounds to pass through and others to remain behind depending on its pore size and pore distribution. Macro-filtration is used for gross filtration (10–1,000 µm) to remove bubbles, dust, insect parts, and crystals using cheesecloth or metallic or nylon screens. If this process is used and no heat applied, the honey is classified as raw honey. Microfiltration (0.1–10 µm) also removes yeast cells, coal dust, and some bacteria. Honey is typically heated prior to microfiltration and is classified as filtered honey. Ultrafiltration (0.001–0.1 µm) is a process that is sometimes used to

produce a final product that in the United States is no longer classified as honey. Ultrafiltration involves adding water and filtering under high pressure at the molecular level, then removing the water. Diatomaceous earth functions similarly to membrane filters and is used in honey processing to remove wax, pollen, bee parts, and some bacteria.

- vi) **Ultra-sonication.** Ultrasound can be used to non-thermally treat honey. It destroys most yeast cells and inhibits crystallization by eliminating existing crystals. Ultrasound treatment typically involves temperatures around 35°C and times less than 30 seconds. Due to the lower temperature, there is greater retention of aroma and flavor in sonicated honey, as well as less browning.
- vii) **Creaming.** Honey can be processed through controlled crystallization. Creamed honey contains a large number of small crystals, which prevent the formation of large crystals; it has a smooth, spreadable consistency.
- viii) **Processing and bottling:** The honey is poured into tanks and heated to 120°F (48.9°C) to melt out the crystals. Then it is held at that temperature for 24 hours. Any extraneous bee parts or pollen rise to the top and are skimmed off.

The majority of the honey is then flash-heated to 165°F (73.8°C), filtered through paper, and then flash cooled back down to 120°F (48.9°C). This procedure is done very quickly, in approximately seven seconds.

Although these heating procedures remove some of the honey's healthful properties, consumers prefer the lighter, bright-colored honey that results.

A small percentage, perhaps 5%, is left unfiltered. It is merely strained. The honey is darker and cloudier, but there is some market for this unprocessed honey.

The honey is then pumped into jars or cans for shipment to retail and industrial customers

2.4 Proposed Project Phases and Activities.

The proposed project activities are construction, operations and decommissioning phases.

2.4.1 Construction phase

Excavations

Will involve excavating for the honey processing plant layout works, offices, stores pit latrines and landscaping. The bulk of the excavated material will be carried away from site by the contractor to approved dumpsite(s) in accordance with the EMCA (waste management) regulations, 2006.

Construction

Construction activities associated with the proposed project will include but not limited to the following:

Electrical wiring

Excavation

-Laying of the foundation

-Construction of walls and partitions

-Casting the floor slabs

-Roofing

-Plumbing

-Fire safety system installation

-Connection to a septic tank

-Painting

-Post construction clean-up, landscaping

2.4.2 Operations phase

The operations of this project shall involve the following

- i. Purchase and installation of the required honey processing and packaging machines and equipment.
- ii. Training of workers on honey hygiene and required quality of the honey
- iii. awareness creation of honey procedures to the public through local FMs
- iv. honey collection from the frame, uncapping to remove wax from honey comb cell
- v. extraction and storage
- vi. heating to reduce viscosity
- vii. filtration to produce clear product
- viii. Ultra-sonication, creaming, processing and bottling
- ix. Marketing and supplying of packed honey bottles to consumers
- x. Records keeping and payments to suppliers
- xi. Daily maintenance activities-cleaning, waste disposal among others
- xii. Suppliers and management review meetings

2.4.3 Decommissioning stage

In case there shall be need to honey processing due to either technology, market or climatic changes, the facility will be decommissioned and site used for other purposes

CHAPTER 3: THE LOCATION OF THE PROJECT

3.1 Introduction

Mandera County is one of the 47 counties in Kenya, located in the north eastern part of the country and borders Ethiopia to the North, Somalia to the East and Wajir County to the South. It is 1,100km from Nairobi. The county has a population of 867,457 (2019 census) and covers an area of 25, 991.5km². The County is sub divided into Eight sub counties: Mandera West, Mandera South, Banisa, Mandera North, Mandera East, Lafey, Kutulo and Arabia (new). The County is characterized by low lying rocky hills located on the plains that rise gradually from 400 meters above sea level in the south at Elwak to 970 metres above sea level on the border with Ethiopia. The rest of topography is low lying, characterized by scattered vegetation with thorny shrubs of savannah type. This is especially found along foots of isolated hills, and the area are covered by bushes, shrubs, boulders and invasive *Prosopis juliflora* „mathenge“ coverage. The flat plains marked rain age very poor, causing floods during heavy rain down pours.

3.2 Project Location

The project will be located at Green County in Shafshafey location, Neboi ward which is in Mandera East Sub County. Currently Green County is designed as a commercial and administrative center where county offices including Governor’s office are located. The proposed site is situated on GPS Coordinates N 3°55’48.18076, E 41°48’10.88622 in Green County in Shafshafey location, Mandera East, Mandera County.



Figure 1: Google Map showing the proposed project site

3.4 Environmental Sensitive area to be affected

The area is arid and semi-arid environment, the project area in general has relatively low diversity of flora and fauna. The flora species include scattered shrubs, *Prosopis Juliflora* and other wood land trees. However, the proposed project is not in any environmentally sensitive area.

3.5 Environmental Management Infrastructure

The project is being implemented in a commercial area where the economic activity is multiple. There existing environmental management infrastructures in place are sewage systems (under construction) and solid waste management.

3.6 Conformity of land use plan/Zonation

The land use practice of the area where the proposed project is being implemented is mainly commercial termed as Central Business District (CBD). The proposed project is in conformity with the existing land use in the area and will contribute greatly to the productivity of apiculture through enhanced availability of market, livestock and subsistence farming activities are also practiced in the project area.

3.7 Land use

Currently the major land use in the project site is an administrative centre under construction with no settlements. The proposed project site is within the new proposed CBD neighbouring the new county headquarters to the East.

3.8 Water Resources

The main water supply for the project is piped water which is managed by Mandera Water & Sewerage Company. Alternatively, water bowsers are used to supply water in case of water shortages due to system breakdown.

3.9 Energy Supply

The proposed project will mainly depend on Kenya Power (KPLC) for electricity supply however in case of power shortage or power blackout, the project will rely on solar energy for its operations.

3.10 Agricultural Activities

The major agricultural activity is livestock rearing which is free range grazing practiced as nomadic pastoralism. Crop farming is practiced along the River Daua which is about 2 km from the proposed project site.

3.10.1 Livestock farming

The main economic activity around the project site is goat rearing which are grazed in a free range due the communal land tenure system.

3.11 Infrastructure and Access

The County government of Mandera is investing a lot of resources in infrastructure development. The main infrastructure in Mandera County include:

3.11.1 Roads

The proposed project site is located within the new CBD where the roads are mainly tarmacked thus the project site is easily accessible.

3.12 Climate

Mandera County is a semi-arid area with temperatures relatively high with a minimum of 24°C in July and a maximum of 42°C in February. Variation in altitude brings differences in temperatures across the county where places like Banisa experiencing low temperatures due to neighbouring highlands in Ethiopia.

Rainfall is scanty and unpredictable averaging 255mm a year, the long rains fall in the months of April and May while the short rains fall in October and November.

3.12.1 Biodiversity around project area

3.12.1.1 Flora

The main flora types in the county and project area are: Cordia species, Acacia tortilies, senegal and ruficiens, Commiphora species, Terminalia, Neem tree. There are patches of the invasive *Prosopis juliphlora* species around the project site.

3.12.1.2 Fauna

The main fauna in the county are: Dik diks, Monkeys, Antelopes, Hyenas

CHAPTER FOUR: PUBLIC PARTICIPATION AND STAKEHOLDER CONSULTATIONS

4.1 Introduction

Public participation is basically concerned with involving, informing and consulting the public in planning, management and other decision-making activities. Public participation tries to ensure that due consideration is given to public values, concerns and preferences when decisions are made. It encompasses the public actively sharing in the decisions that government and other agencies make in their search for solutions to issues of public interest.

4.2 Objectives of the community and public participation

Public consultation in this project was done with the following aims:

1. To inform the neighbors and other stakeholders about the proposed project and its objectives
2. To seek views, concerns and opinions of people in the area concerning the project
3. To establish if the local people foresee any positive or negative environmental effects from the project and if so, how they would wish the perceived impacts to be addressed.

4.3 Categorization of community participant and stakeholders

The core stakeholders comprise of people to be directly affected by proposed project. The stakeholders consulted in this study were the company officials, local community members, CIG/VMG members and local leaders.

Other relevant stakeholders consulted during the SPR preparation include government officials in charge of various sectors such as department of social service, livestock, Agriculture and NEMA officers. The various stakeholders consulted gave their respective views and opinions with regards to the impacts of the proposed project. The views of the stakeholders are described in the following section.

4.4 Consultation and public participation (CPP) Methodology

4.4.1 Public participation baraza

The public Baraza meeting was attended by 60 participants, comprising of 44 males and 16 females (*refer to annex 8*). The meeting was undertaken on 8th and 9th January, 2022 at Banisa social hall. These are recorded as Minute of the Stakeholders' Meeting, (*refer to annex 7*).

The participants comprised of the various social groups/members with the society including elders, sheikhs/imams, local leaders, and women. During the session each group was given an ample time to express their views and opinions in mother tongue with regards to the proposed project. The participants mainly expressed their strong support for the project giving several anticipated positive impacts of the proposed project.

The community members were given opportunities to air their views and bring out the issues that were of concern to them. Below is the agenda of the meeting;

- Preliminary
- SPR team introduction and familiarization

- Public awareness and sensitization on the project
- Project positive impacts identification
- Project's negative Impact identification
- Identification of mitigation measures
- Arising issues
- AOB

4.4.2 Structured questionnaires

The SPR team developed structured questionnaires with a view to getting more information from the locals (*refer to annex 5*). The questionnaires were administered to 8 participants randomly selected from within the participants. The SPR team took the respondents through the questions in order for them to understand and respond accordingly. At the end of the exercise five duly completed questionnaires were returned.

4.5 Positive impacts

There are a number of positive social and environmental benefits associated with the proposed development. The following are some of the positive benefits social and environmental identified:

1. Increase in revenue to the county government through payment of relevant taxes, rates and fees to the government and the local authority
2. Beekeeping products like honey, wax and other bi-products are also sources of food, medicine, and income
3. Economic investment hence increases in wealth the proponent will receive returns on his investments.
4. Beekeeping can be a source of employment for the local communities considering the Impact Assessment of Modern Beekeeping Practice (chain of activities involved along the value line, e.g. cleaning hives, watering bees, harvesting honey etc.)
5. Improved Security. Security will be ensured around the proposed honey processing plant through distribution of suitable security lights and presence of 24-hour security guards. This will lead to improvement in the general security in the surrounding area.

4.6 Highlights of issues that arose during the public meeting.

a. Increased dust from construction activities

The neighboring residents were concerned that there will be increased dust generation during construction which would be a nuisance and sought clarification on what was to be done about it. They were informed that dust screens will be used all round the construction site and building to abate dust dispersion.

b. Interruption of water supply, electricity

The residents informed the team that if interruption of any of the above was to be done, they be informed prior if it has an effect on them and the interruption period to be reasonable and an alternative provided if the interruption is long term.

c. Gaseous Emissions

During construction phase of the project, undesirable emissions are being emitted from vehicles that bring materials for the construction. The management agreed to control vehicle speed into the center, make use of unleaded petrol and ensure putting engines off during filling.

d. Accidents during operation

There is likelihood that during the construction phase of the project, people operating within the site may be involved in accidents. The records detailing such occurrences will be kept and action taken. A first AID kit has already been put in place.

CHAPTER FIVE: POTENTIAL IMPACTS AND MITIGATION MEASURES

5.1 Introduction

This chapter outlines the potential negative and positive impacts and mitigation measures of the negative impacts that will be associated with the project. The impacts will be related to activities to be carried out during construction of the project and the operation stage of the project. The operational phase impacts of the project will be associated with the activities carried out within the premises. In addition, closure and decommissioning phase impacts of the project are also highlighted. The impacts of the project during each of its life cycle stages (construction, operation and decommissioning) can be categorized into: impacts on the biophysical environment; health and safety impacts and socio-economic impacts.

5.2 Positive social and environmental benefits

There are a number of positive social and environmental benefits associated with the proposed development. The following are some of the positive benefits social and environmental anticipated:

6. Increase in revenue to the county government through payment of relevant taxes, rates and fees to the government and the local authority
7. Beekeeping products like honey, wax and other bi-products are also sources of food, medicine, and income
8. Economic investment hence increases in wealth the proponent will receive returns on his investments.
9. Beekeeping can be a source of employment for the local communities considering the Impact Assessment of Modern Beekeeping Practice (chain of activities involved along the value line, e.g. cleaning hives, watering bees, harvesting honey etc.)
10. Improved Security. Security will be ensured around the proposed honey processing plant through distribution of suitable security lights and presence of 24-hour security guards. This will lead to improvement in the general security in the surrounding area.

5.3 Negative Social Impact During Planning

5.3.1 Spread of COVID-19 amongst Community Members during Consultations

During implementation of the SPR and ESMMP, various consultative activities will be undertaken. For efficient and meaningful engagement, a wide range of individual participants, groups in the local community and other stakeholders will be involved. The types of consultations to be used to pass information shall be through public Baraza's, electronic means shall be used where possible and one-on-one basis meetings while observing the COVID-19 mitigation measures to ensure safety of stakeholders involved, the community at large and the client.

The mitigation measures will be supervised by a social safeguards' expert in the project proponent's team.

Mitigation measures

- (i) 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;
- (ii) 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;

(iii) 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

5.4 Negative environmental impacts of construction activities

5.4.1 Extraction and use of construction materials.

Construction materials such as rough stones and sand required for construction of the project will be obtained from quarries. Since substantial quantities of these materials will be required for construction of the block, the availability and sustainability of such resources at the extraction sites will be negatively affected, as they are not renewable in the short term. In addition, the sites from which the materials will be extracted may be significantly affected in several ways including landscape changes, displacement of animals and vegetation, poor visual quality and opening of depressions on the surface leading to several human and animal health impacts.

Mitigation Measure

The contractor will source construction materials such as sand, ballast and hard core from registered quarry and sand mining firms, whose projects have undergone satisfactory environmental impact assessment/audit and received NEMA approval. Since such firms are expected to apply acceptable environmental performance standards, the negative impacts of their activities at the extraction sites are considerably well mitigated. To reduce the negative impacts on availability and sustainability of the materials, the contractor will only order for what will be required through accurate budgeting and estimation of actual construction requirements. This will ensure that materials are not extracted or purchased in excessive quantities. Moreover, the proponent will ensure that wastage, damage or loss (through run-off, wind, etc.) of materials at the construction site is kept minimal, as these would lead to additional demand for and extraction or purchase materials. In addition to the above measures, the contractor shall consider reuse of construction materials and use of recycled materials. This will lead to reduction in the amount of raw materials extracted from natural resources as well as reducing impacts at the extraction sites.

5.4.2 Dust emissions

During construction, the project will generate substantial quantities of dust at the construction site and its surrounding. The sources of dust emissions will include excavation and levelling works, and to a small extent, transport vehicles delivering building materials. Emission of large quantities of dust may lead to significant impacts on construction workers and the local residents, which will be accentuated during dry weather conditions.

Mitigation Measure

Dust emission during construction will be minimized through strict enforcement of on-site speed controls as well as limiting unnecessary traffic within the project site. Traffic routes on site have to be sprinkled with water regularly to reduce amount of dust generated by the construction trucks.

5.4.3 Exhaust emissions

The trucks used to transport various building materials from their sources to the project site will contribute to increases in emissions of CO₂, NO₂ and fine particulate along the way as a result of diesel combustion. Such emissions can lead to several environmental impacts including global warming and health impacts. Because large quantities of building materials are required, some of which are sourced outside the project area, such emissions can be

enormous and may affect a wider geographical area. The impacts of such emissions can be greater in areas where the materials are sourced and at the construction site as a result of frequent running of vehicle engines, frequent vehicle turning and slow vehicle movement in the loading and offloading areas.

Mitigation measure

This will be achieved through proper planning of transportation of materials to ensure that vehicle fills are increased in order to reduce the number of trips done or the number of vehicles on the road.

In addition, truck drivers will be sensitized to avoid unnecessary racing of vehicle engines at loading/offloading areas, and to switch off vehicle engines at these points.

5.4.4 Noise and vibration

The construction works, delivery of construction materials by heavy trucks and the use of machinery/equipment including bulldozers, generators, tippers and concrete mixers will contribute high levels of noise and vibration within the construction site and the surrounding area. Elevated noise levels within the site can affect project workers and the residents, passers-by and other persons within the vicinity of the project site.

Mitigation Measure

Noise and vibration will be minimized in the project site and surrounding areas with strict adherence to NEMA designated working hours; and through sensitization of construction truck drivers to switch off vehicle engines while offloading materials. In addition, they will be instructed to avoid running of vehicle engines or hooting especially when passing through sensitive areas such as residential areas and schools. In addition, construction machinery shall be kept in good condition to reduce noise generation. It is recommended that all generators and heavy-duty equipment be insulated or placed in enclosures to minimize ambient noise levels.

5.4.5 Risks of accidents and injuries to workers

Because of the intensive engineering and construction activities including excavations, concrete work, among others, construction workers will be exposed to risks of accidents and injuries. Such injuries can result from the hand tools and construction equipment and risk of vehicular accidents.

Mitigation Measure

The contractor will have to be committed to adherence to the occupational health and safety rules and regulations stipulated in Occupational Health and Safety Act, OSHA 2007. In this regard, the contractor is committed to provision of appropriate personal protective equipment, as well as ensuring a safe and healthy environment for construction workers as outlined in the EMMP.

5.4.6 Increased soil erosion

Excavation works associated with this project may lead to increased soil erosion at the project site and release of sediments into the drainage systems. Uncontrolled soil erosion can have adverse effects on any local water bodies.

Mitigation Measure

The project design has incorporated construction drainage to avoid instances of standing water and manage run-off. The contractor will put in place some measures aimed at minimizing soil erosion and associated sediment release from the project site during construction. These measures will include silt traps, barriers, vegetation planting, terracing and levelling the project site to reduce run off velocity and increase infiltration of rainwater into the soil. In addition, construction vehicles will be restricted to designated areas to avoid soil compaction within the project site, while any compacted areas will be ripped to reduce run-off.

5.4.7 Solid waste generation

Large quantities of solid waste will be generated as a result of clearances, excavations and the final construction of the block. Such waste will consist of surplus materials, surplus soil and excavated materials among others. Such solid waste materials can be injurious to the environment through blockage of drainage systems, choking of water bodies and negative impacts on human and animal health.

Mitigation Measure

It is recommended that demolition and construction waste is properly collected, stored, recycled or reused to ensure that materials that would otherwise be disposed off as waste are diverted for productive uses. In this regard, the proponent is committed to ensuring that construction materials left over at the end of construction will be used in other projects rather than being disposed off. The proponent shall put in place measures to ensure that construction materials requirements are carefully budgeted and to ensure that the amount of construction materials left on site after construction is kept minimal.

5.4.8 Energy consumption

The project will consume fossil fuels (mainly diesel) to run transport vehicles and construction machinery. Fossil energy is non-renewable and its excessive use may have serious environmental implications on its availability, price and sustainability. The project may also use electricity supplied by Kenya Power & Lighting Company (KPLC) Ltd. Electricity in Kenya is generated mainly through natural resources, namely, water and geothermal resources. In this regard, there will be need to use electricity sparingly since high consumption of electricity negatively impacts on these natural resources and their sustainability.

Mitigation Measure.

Use of alternative green source of energy especially installation of solar panels.

5.4.9 Water use

The construction activities will require large quantities of water that will be supplied from the town council. Water will mainly be used for concrete mixing, dust suppression and sanitary and washing purposes. Excessive water use may negatively impact on the water source and its sustainability.

Mitigation Measure

Use of conservation measures such as Water reuse and rain water harvesting.

5.5 Positive environmental impacts of construction activities

5.5.1 Creation of temporary employment opportunities

Several employment opportunities will be created for construction workers during the construction phase of the project. This will be a significant impact since unemployment is currently generally high in Kenya and in most urban and surrounding areas.

5.5.2 Provision of market for supply of construction materials

The project will require supply of large quantities of construction materials most of which will be sourced locally in the larger Mandera and the surrounding areas. This provides ready market for construction material suppliers such as quarrying companies, hardware shops and individuals with such materials.

5.5.3 Increased business opportunities

The large number of project staff required will provide ready market for various goods and services, leading to several business opportunities for small-scale traders such as food vendors around the construction site.

5.6 Negative Social Impacts During Construction

5.6.1 Labor Influx Effects

The Project attracts various categories of workers from local and regional markets. This therefore leads to concentration of people in one area drawn from diverse social and cultural backgrounds often resulting to a number of issues as listed below;

- (i) Strain on various resources especially water resources
- (ii) Grievances from local community members over job opportunities
- (iii) Sexual Exploitation and Abuse
- (iv) Unwanted Pregnancies

Mitigation measures

- (i) The proponent to work with the local community leaders and area chief to make sure those coming in are screened and scrutinized so as to curb criminal activities
- (ii) Use of nyumba kumi arrangement to ensure new comers are identified and necessary actions taken in case of suspicious activities
- (iii) Ensure first priority is given to the residents of the area over immigrants from outside so that locals can maximally benefit from the project.

5.6.2 Spread of COVID 19 Among the Workers

During construction phase, large numbers of workers will be required to assemble together in meetings and even at work sites; varied number of workforce including suppliers of material and services are also expected to come in from various places in the county which may be COVID-19 hot spots; and interaction of workers with the project host community will happen as workers find accommodation close to work sites, and/or return to their homes after works. The potential for the spread of any infectious disease like COVID-19 by projects is high. Recognizing the potent risk this may present, it is difficult to clearly outline exhaustive mitigation measures under the mitigation impacts.

Proposed Mitigation Measures

1. The PO will develop a SOPs for managing the spread of Covid-19 and submit them for the approval of the public health officer and the CPCU 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;

2. Mandatory provision and use of appropriate Personal Protective Equipment (PPE) shall be required for all project personnel
3. Avoid concentrating of more than 15 workers at one location. Where there are two or more people 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;
4. The PO shall put in place means to support rapid testing of suspected workers for covid-19;
5. Install hand washing facilities with adequate running water and soap, or sanitizing facilities at entrance to work sites including consultation venues and meetings and ensure they are used;

Ensure routine sanitization of shared social facilities and other communal places routinely including wiping of workstations, door knobs, hand rails etc

5.7 Negative environmental impacts of operational activities

5.7.1 Increased storm water flow

The modern processing plant block will lead to increased volume and velocity of storm water or run-off flowing across the area covered by the block. This will lead to increased amounts of storm water entering the drainage systems, resulting in overflow and damage to such systems in addition to increased erosion or water logging in the neighbouring areas if not adequately mitigated.

Mitigation measures

The contractor will ensure that proper drainage is provided and regularly maintained for storm water runoff management.

5.7.2 Worksite health and safety

The health and safety of surrounding community may be affected from dust, a matter that was raised during the CPP.

Mitigation Measure.

The contractor will have to be committed to adherence to the occupational health and safety rules and regulations stipulated in Occupational Health and Safety Act, OSHA 2007. In this regard, the contractor is committed to provision of appropriate personal protective equipment, as well as ensuring a safe and healthy environment for construction workers as outlined in the ESMMP.

5.7.3 Operation of quarries and borrow pits.

The contractor will mainly source this from private quarries but all in all this degrades the environment.

Proposed Mitigation Measures

The contractor will source construction materials such as sand, ballast and hard core from Registered quarry and sand mining firms, whose projects have undergone satisfactory environmental impact assessment/audit and received NEMA approval. Since such firms are expected to apply acceptable environmental performance standards, the negative impacts of

their activities at the extraction sites are considerably well mitigated. To reduce the negative impacts on availability and sustainability of the materials, the contractor will only order for what will be required through accurate budgeting and estimation of actual construction requirements. This will ensure that materials are not extracted or purchased in excessive quantities. Moreover, the proponent will ensure that wastage, damage or loss (through run-off, wind, etc.) of materials at the construction site is kept minimal, as these would lead to additional demand for and extraction or purchase materials. In addition to the above measures, the contractor shall consider reuse of construction materials and use of recycled materials. This will lead to reduction in the amount of raw materials extracted from natural resources as well as reducing impacts at the extraction sites.

5.7.4 Traffic management

Flow of traffic near the proposed project will be affected due to heavy trucks transporting materials hence the traffic needs to be managed.

Proposed Mitigation measure

Management of traffic by putting sign boards such as STOP! Or SLOW DOWN! To guide the drivers.

A worker should be responsible to manage

5.7.5 HIV/AIDs

The project may raise and expose workers and other persons to sexual immorality leading to infections of sexually transmitted diseases including HIV-AIDS.

Proposed Mitigation measure.

Creation of awareness to the general public on HIV-AIDS

5.8 Positive environmental impacts of operational activities

5.8.1 Revenue to national and local governments

Through payment of relevant taxes, rates and fees to the government and the local authority, the project will contribute towards the national and local revenue earnings from those using the improved facilities.

5.8.2 Positive social impacts of operational activities

The operational activities after this project is commissioned will have several positive long-term social impacts that include the following;

- a) Improved lighting around the project sites that will increase trading hours for the businesses
- (b) Cleaner and orderly environment
- (c) Improved safety and security for all

In a nutshell, areas around the modern processing plant will be installed with streetlights. This will lead to improved security in the area as well as increased time for doing business and hence increased income to inhabitants of the area.

5.9 Negative social impacts during operation phase

5.9.1 Influx of labour

The Project attracts various categories of workers from local and regional markets. This therefore leads to concentration of people in one area drawn from diverse social and cultural backgrounds often resulting to a number of issues as listed below;

- (i) Strain on various resources especially water resources
- (ii) Grievances from local community members over job opportunities
- (iii) Sexual Exploitation and Abuse
- (iv) Unwanted Pregnancies

Proposed Mitigation measures

1. Develop a labor Management Plan (LMP) in consultation with local leaders.
2. Ensure effective community engagement and strong grievance mechanisms on matters related to labor, including sexual exploitation and abuse
3. Effective contractual obligations for the contractor to adhere to the mitigation of risks against labor influx, the contractor should engage a local community liaison person.
4. Ensure proper records of labor force on site while avoiding child and forced labor

5.9.2 Spread of COVID 19 Among the Workers

The World Health Organization declared COVID-19 a global pandemic after assessing both its alarming levels of spread and severity, and the alarming levels of inaction. Kenyan government has since then issued several guidance and directives after the first case was registered on March 13th 2020. These included complete cessation of movement to and from areas considered hot spots and night curfew, social distancing guidelines, closure on non – critical and essential enterprises, closure of places of worship and public gatherings, mandatory use of masks in public places, among others.

Proposed Mitigation measures

1. The PO will develop a SOPs for managing the spread of Covid-19 and submit them for the approval of the public health officer and the CPCU 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;
2. Mandatory provision and use of appropriate Personal Protective Equipment (PPE) shall be required for all project personnel
3. Avoid concentrating of more than 15 workers at one location. Where there are two or more people 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;
4. The PO shall put in place means to support rapid testing of suspected workers for covid-19;
5. Install hand washing facilities with adequate running water and soap, or sanitizing facilities at entrance to work sites including consultation venues and meetings and ensure they are used;
6. Ensure routine sanitization of shared social facilities and other communal places routinely including wiping of workstations, door knobs, hand rails etc.

5.9.3 Gender-based violence at the community level

This impact is triggered when the following provisions are not adhered to;

- (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 Labor Rights.

Proposed Mitigation measures

1. The PO will implement provisions that ensure that gender-based violence at the community level is not triggered by the PO activities, including:
2. Effective and on-going community engagement and consultation, particularly with women and girls;
3. Review of specific PO activities that are known to heighten GBV risk at the community level, e.g. employments schemes for women, etc.;
4. Specific plan for mitigating these known risks, e.g. sensitization around gender-equitable approaches to compensation and employment

The PO will ensure adequate referrals mechanisms are in place if a case of GBV at the community level is reported related to project implementation

5.10 Negative environmental impacts of decommissioning activities

5.10.1 Solid waste

In case of any necessary demolition, it will result in large quantities of solid waste. The waste will contain the materials used in construction including concrete, stones and ballast. Although demolition waste is generally considered as less harmful to the environment since they are composed of inert materials, there is growing evidence that large quantities of such waste may lead to release of certain hazardous chemicals into the environment.

Proposed Mitigation Measure

Waste segregation and reuse is a good measure since some of the construction materials such as stones can be used as building materials for other new buildings.

10.6.2 Dust

Large quantities of dust will be generated during demolition works. This will affect demolition staff as well as the neighbouring residents.

Proposed Mitigation Measure

Dust emission during decommissioning will be minimized through strict enforcement of on-site speed controls as well as limiting unnecessary traffic within the project site. Traffic routes on site have to be sprinkled with water regularly to reduce amount of dust generated by the trucks.

10.6.3 Noise and vibration

The demolition works will lead to significant deterioration of the acoustic environment within the project site and the surrounding areas.

Mitigation Measures.

The contractor will ensure that noise, illumination and excessive vibration from demolition activities are within permissible levels as per the provision of the Environmental Management and Coordination (Noise and Excessive Vibration Pollution) (Control) Regulations, 2009. This includes among others adhering to permissible noise and vibration level.

5.11 Positive environmental impacts of decommissioning activities

5.11.1 Rehabilitation

Upon decommissioning the project, rehabilitation of the project site will be carried out to restore the site to its original status. This will include replacement of topsoil that will lead to improved visual quality of the area.

5.11.2 Employment Opportunities

Several employment opportunities will be created for demolition staff. There therefore will be citizen and community engagement that requires a communication and community engagement plan.

5.12 Anticipated Negative Social Impacts during Project Decommissioning Phase.

5.12.1 Livelihoods and Economic Loss.

The establishment and operation of the project will bring about a lot of positive changes to the lives of the people around it and also to the surrounding economy. Decommissioning of the project will thus mean a reverse of these gains whereby many people will lose their source of livelihood from jobs to business ventures hence directly leading to a decline of the area economic stature, food insecurity and a drawback to the economy at large.

Proposed mitigation measures

1. The CIGs/VMGs associated with the producer organization should be notified of intention of decommissioning in good time to allow relevant adjustment.
2. Redeployment of the affected workers where feasible.

Encourage workers and CIG members to enlist with social support systems like NSSF, NHIF, insurance and savings schemes.

CHAPTER SIX: ENVIRONMENTAL AND SOCIAL MANAGEMENT & MONITORING PLAN (ESMMP)

6.1 Significance of ESMMP

The aim of the Environmental Social Monitoring and Management plan (ESMMP) is to provide a road map to the proponent on how to address identified significant impacts (environmental and social), requirements for labor specialization (responsibility), frequency of monitoring activities, means of verification, means of verification and estimated cost implications.

Table 1: The proposed ESMMP for the proposed project

Impact	Proposed Mitigation	Responsibility	Monitoring Indicators	Means of Verification	Monitoring Frequency	Costs
PLANING PHASE						
Spread of Covid 19	<ul style="list-style-type: none"> Adhering to Covid19 protocol i.e social distancing at least 2 meters, hand washing, use facemask among others 	PO management committee, public health, safeguard person	No of PPES provided	<ul style="list-style-type: none"> ESMMP implementation report Sensitization reports Community feedback 	Throughout the planning period	20,000
CONSTRUCTION PHASE						
Noise and excessive vibration.	<ul style="list-style-type: none"> Ensure that machinery, vehicles and equipment to be used in site operations are well maintained regularly Comply with provisions of the noise and excessive vibrations pollution control regulations for noise levels for permissible noise and vibration levels. Provision of adequate and appropriate PPEs to the workers 	Contractor	Routine Inspection Noise survey Sensitization programs on noise reduction	<ul style="list-style-type: none"> Feedback from workers Incidence register Assessment report 	Throughout the Construction period	140,000

	<ul style="list-style-type: none"> • Sensitize construction truck drivers to switch off vehicle engines while offloading materials and avoid hooting especially when passing through silent zones areas such as schools, mosques, residential areas, offices and hospitals • All generators and heavy-duty equipment be insulated or placed in enclosures to minimize ambient noise levels • Enclose noisy machines or processes with acoustic screens 					
Air pollution	<ul style="list-style-type: none"> • Dust emissions will be controlled by sprinkling exposed soil and site areas with water • Ensure that dust screens will be used to cover the area under construction to trap dust • Ensure that staff working in dust generating activities e.g. Site preparation, should be provided with appropriate and adequate PPEs such as dust masks 	Contractor	Routine monitoring Air quality tests/ reports	<ul style="list-style-type: none"> • Feedback from workers • Incidence register • Assessment report 	Throughout the Construction period	125,000

Solid waste generation	<ul style="list-style-type: none"> • Limit quantity by developing appropriate budgets for purchase of raw materials to reduce wastage through exposure to weather elements • Solid wastes to be put in a designated area for appropriate disposal • Segregation of waste to be done at source so as to determine the recyclables. • Contract a licensed handler to collect waste at regular intervals • Provision of skips for wet and dry waste to hold before it is collected • All wastes to be transported by licensed waste handlers by NEMA and to be disposed in licensed disposal site 	Contractor	<ul style="list-style-type: none"> • Amount of waste recycled • disposed waste tonnage/volume 	<ul style="list-style-type: none"> • Environmental Audit • ESMMP implementation report 	Throughout the Construction period and decommissioning	180,000
Occupational health and safety	<ul style="list-style-type: none"> • Compliance to all international, national or local health and safety standards that may exist • Issuance of Personal Protective Equipment (PPE) enforcing their use • Clear marking of work site hazards and training in recognition of hazard symbols • Regular inspection, testing and maintenance of equipment and 	Contractor, public health officer	<ul style="list-style-type: none"> • Safety kits provided • no of trainings conducted • no of toilets constructed 	<ul style="list-style-type: none"> • Environmental audit report • ESMMP implementation report • Incidence register • GRM register 	Throughout the Construction period	125,000

	<p>machinery</p> <ul style="list-style-type: none"> • Develop and implement site emergency response plans • Training workers on health and safety precautions • Provide fully stocked first aid kits • Use of water sprays to arrest dust • Containments of hazardous materials • Fencing of the construction site to restrict entry and curb accidents • Installation of firefighting appliance in common amenities • Ensure proper solid waste collection and disposal 					
Operation phase						
Increased energy demand	<ul style="list-style-type: none"> • Consider the possibility of using alternative sources of energy especially renewable ones such as solar energy • Service and maintain Powered machinery regularly to ensure efficiency. • Use energy saving bulbs and appliances where possible 	PO management	<ul style="list-style-type: none"> • Energy audit report. • Number of solar panels • Number of standby generators on site • Number of trainings conducted on efficient use of energy 	<ul style="list-style-type: none"> • Feedback from PO management 	Operational phase	150,000
Increased	<ul style="list-style-type: none"> • Installation of water saving fittings 	Po	<ul style="list-style-type: none"> • Keeping 	<ul style="list-style-type: none"> • Feedback from 	Throughout	80,000

water demand	<p>to limit use of water e.g. installation of toilet flushes with low volume high pressure cisterns, aerated or spray flows in taps, automatic shut-off taps</p> <ul style="list-style-type: none"> • Rain water harvesting • Incorporation of roof rain water harvesting from the roof of the offices and storage containers • Put in place measure for quick detection and repair of pipes & tanks leaks. • Use of water tanks to store water. 	management	records of water consumption	PO management	the Construction period	
Influx of labor	<ul style="list-style-type: none"> • Provide adequate social and other infrastructure to meet needs of the visitors and customers 	PO management	<ul style="list-style-type: none"> • Availability of grievance redress mechanism, • Number community engagement meetings held • No. of grievance cases recorded and resolved 	<ul style="list-style-type: none"> • LMP implementation report • Community feedback • GRM register Records of all the workers engaged with all the necessary information for easy access and trucking of workers 	Throughout the Construction period	
Spread of COVID 19	<ul style="list-style-type: none"> • The PO will develop a SOPs for managing the spread of Covid-19 	PO officials, public health officer	<ul style="list-style-type: none"> • Proportion of worker wearing 	<ul style="list-style-type: none"> • ESMMP implementation 	Throughout the Construction period	100,000

<p>Among the Workers</p>	<p>and submit them for the approval of the public health officer and the CPCU 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;</p> <ul style="list-style-type: none"> • Mandatory provision and use of appropriate Personal Protective Equipment (PPE) shall be required for all project personnel • Avoid concentrating of more than 15 workers at one location. Where there are two or more people 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; • The PO shall put in place means to support rapid testing of suspected workers for covid-19; • Install hand washing facilities with adequate running water and soap, or sanitizing facilities at entrance to work sites including consultation venues and meetings 		<p>face mask</p> <ul style="list-style-type: none"> • No of hand washing sites • Number of thermo-grans and face masks procured. 	<p>n report</p> <ul style="list-style-type: none"> • Sensitization reports • COVID-19 case register 		
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	<ul style="list-style-type: none"> and ensure they are used; • Ensure routine sanitization of shared social facilities and other communal places routinely including wiping of workstations, door knobs, hand rails etc. 					
Gender-based violence at the community level	<ul style="list-style-type: none"> • The PO will implement provisions that ensure that gender-based violence at the community level is not triggered by the PO activities, including: • Effective and on-going community engagement and consultation, particularly with women and girls; • Review of specific PO activities that are known to heighten GBV risk at the community level, e.g. employments schemes for women, etc.; • Specific plan for mitigating these known risks, e.g. sensitization around gender-equitable approaches to compensation and employment • The PO will ensure adequate referrals mechanisms are in place if a case of GBV at the community level is reported related to project implementation 	GBV expert	<ul style="list-style-type: none"> • Number of GBV cases happening at the community level that receive survivor-centered referral and care • Mitigation plan for GBV occurring at the community level as a result of project implementation 	<ul style="list-style-type: none"> • GBV report • ESSMP implementation report 	Throughout the Construction period	60,000
Sexual	<ul style="list-style-type: none"> • Develop and implement a SEA 	Public health	<ul style="list-style-type: none"> • SEA Action 	<ul style="list-style-type: none"> • GRM register 	Throughout	73,400

<p>Exploitation and Abuse by PO workers against CIG/VMG members</p>	<p>action plan with an Accountability and Response Framework. 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).</p> <ul style="list-style-type: none"> • The SEA action plan will include how the project will ensure necessary steps are in place for: <ul style="list-style-type: none"> ✓ Prevention of SEA: including COCs and ongoing sensitization of staff on responsibilities related to the COC and consequences of non-compliance; project-level IEC materials; ✓ 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; ✓ Engagement with the community: 	<p>officer/ local chief/ management officials</p>	<p>Plan</p> <ul style="list-style-type: none"> • 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 • Relevant policies, e.g. investigations and discipline and whistleblower protection • Monthly minutes from SEA coordination meet 	<ul style="list-style-type: none"> • ESMMP implementation report 	<p>the Construction period</p>	
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	<ul style="list-style-type: none"> ✓ mainstreaming of PSEA awareness-raising in all community engagement activities; ✓ community-level IEC materials; regular community outreach to women and girls about social risks and their PSEA-related rights; ✓ Management and Coordination: including integration of SEA in job descriptions, employments contracts, performance appraisal systems, etc.; ✓ development of contract policies related to SEA, including whistle blower protection and investigation and disciplinary procedures; ✓ training for all project management; management of coordination mechanism for case oversight, investigations and disciplinary procedures; supervision of dedicated PSEA focal points in the project and trained community liaison officers. 					
DECOMMISSIONING PHASE						
Livelihood and economic loss	<ul style="list-style-type: none"> • Community members associated with the producer organization should be notified of Intention of decommissioning in good time • Redeployment of the affected workers where feasible. 	PO management/ members	<ul style="list-style-type: none"> • No of staff trained • No of employees paid benefits 	• Community feedback	decommissioning	No cost

	<ul style="list-style-type: none"> Encourage workers and CIGs/VMGs to enlist with social support systems like NHIF, NSSF, Savings and insurance schemes 					
Noise and excessive vibration.	<ul style="list-style-type: none"> Sensitization of construction truck drivers to switch off vehicle engines while offloading materials Avoid hooting especially when passing through silent zones areas such as schools, mosques, residential areas and hospitals Construction machinery shall be kept in good condition e.g. greasing to reduce noise generation from friction of movable parts It is recommended that all generators and heavy-duty equipment be insulated or placed in enclosures to minimize ambient noise levels 	Contractor	<ul style="list-style-type: none"> No of PPEs provided. Noise levels recording 	<ul style="list-style-type: none"> Feedback from workers Incidence register Assessment report 	During construction and decommissioning phase	100,000/once
Dust and exhaust emission	<ul style="list-style-type: none"> Strict enforcement of onsite speed controls as well as limiting unnecessary traffic within the project site Fence demolition site with dust screens 	Contractor	<ul style="list-style-type: none"> No of ear muffs provided 	<ul style="list-style-type: none"> Feedback from workers Incidence register Assessment report 	During construction and decommissioning phase	100,000/0nce
Occupational safety and health hazards	<ul style="list-style-type: none"> Issue workers with appropriate PPEs Restrict onlookers/scavengers from site 	PO management/contractor / public health	<ul style="list-style-type: none"> Safety kits provided no of trainings conducted 	<ul style="list-style-type: none"> Environmental audit report ESMMP implementatio 	During construction and decommissioni	80,000

		officer	<ul style="list-style-type: none">• no of toilets constructed	n report <ul style="list-style-type: none">• Incidence register• GRM register	ng phase	
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CHAPTER SEVEN: CONCLUSION AND RECOMMENDATIONS

During the preparation of this report for the development of the proposed project, it is observed and established that most of the negative impacts on the environment can be mitigated and have potentially short term low significant effects. The positive impacts are highly rated and will benefit all stakeholders and the Mandera County residents at large. The project proponents have proposed to adhere to prudent implementation of the environmental management and monitoring plan. The contractor should be committed to obtain all necessary permits and licenses from the relevant authorities and have qualified and adequate personnel to do the project as proposed. The proponent has proposed adequate safety and health mitigation measures as part of the relevant statutory requirements.

It is the duty of NEMA to consider approving the project subject to annual environmental audits once it has been commissioned. This will be in compliance with the Environmental Management and Coordination Act, EMCA of 1999 and the Environmental Impact Assessment and Audit Regulations, Legal Notice No. 101 of 2003.



The proposed project will be beneficial to the proponent and the community in general. A comprehensive Environmental Management and Monitoring Plan (EMMP) has been formulated and sufficient mitigation measures for the predicted negative environmental impacts have been proposed therein. It is in this regard that the Lead expert recommends that the project proponent fully implement the EMMP and that NEMA considers issuing the proponent with an approval.

REFERENCES

1. Environmental Management and Coordination Act No 8 of 1999 and the Relative Amendment Act No 5, 2015; Legal Notice No 31 and 32
2. Environmental Impact Assessment and Audit Regulations 2003: Legal Notice No.101.
3. Water Resources Assessment for Decision Making in Mandera County Report, 2016.
4. Kenya Climate Smart Agriculture Project (KCSAP), 2017
5. Precipitation CHIRPS (1981-2015) Roads Digital Chart of the World.
6. Environmental Management and Co-ordination (Waste Management) Regulations, 2006 Legal Notice No.121
7. Enterprise Development Plan (EDP)

ANNEXES

Annex 1: Land ownership



MANDERA COUNTY GOVERNMENT
P.O. Box 13-70300, Mandera, Kenya
MANDERA TOWNSHIP

LETTER OF ALLOTMENT

DAUA LIMITED _____ Date: 24/11/2021
P.O BOX 13-70300 MANDERA _____
No. MCG/ 2285

User COMMERCIAL Plot No. 85

I am pleased to inform you that the County Government of Mandera hereby offers you allocation of the above plot in CENTRAL BUSINESS DISTRICT area of Mandera Township subject to your formal acceptance of the following conditions and the payment of the charges as prescribed hereunder:

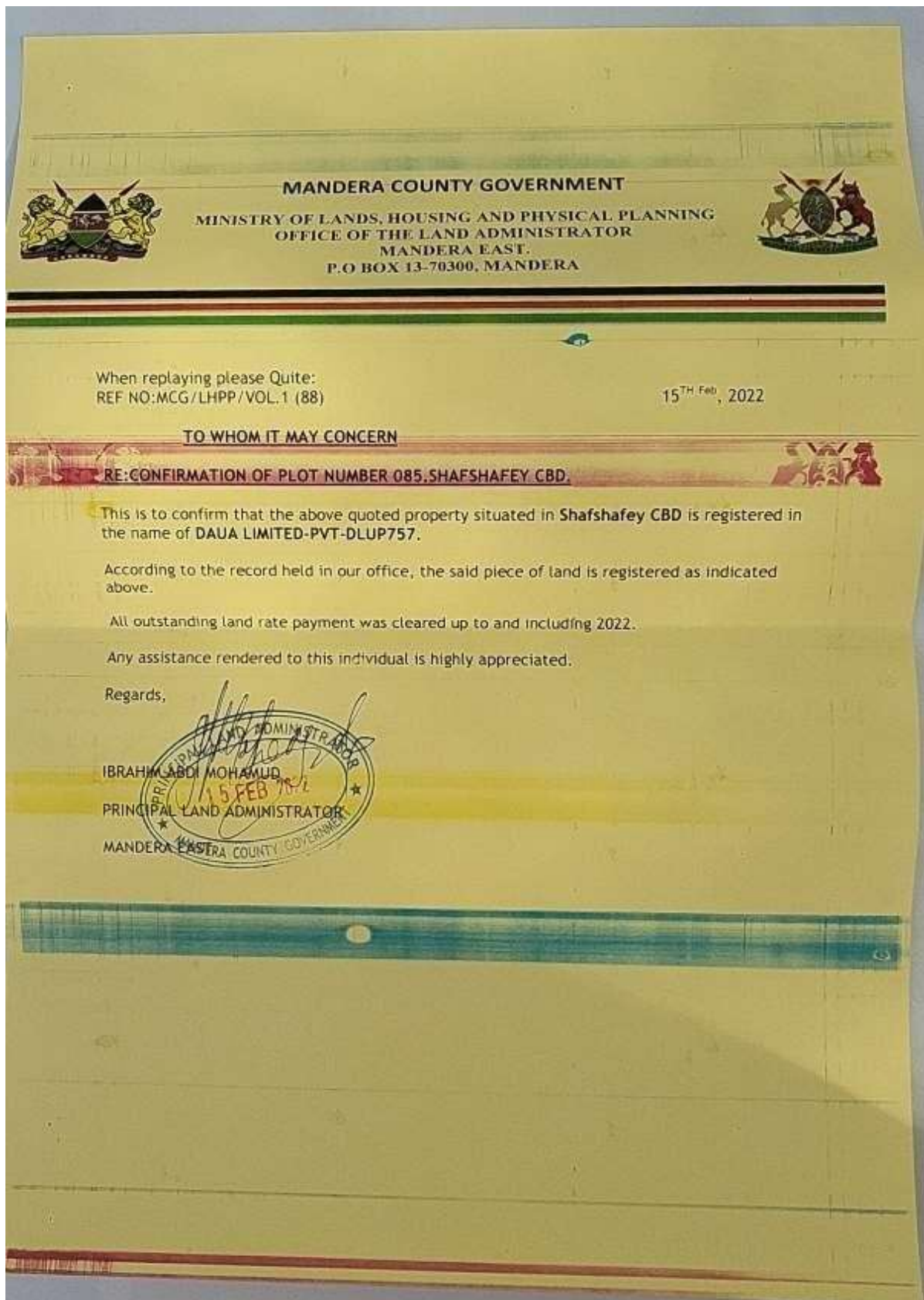
AREA 0.045 Ha (approximately) - Subject to adjustment on survey.

Your acceptance in writing, together with payment of the amount set out below within thirty (30) days from the date of this offer will secure you allocation of the plot.

a) Annual Rent (revisable) Kshs.1000.....
b) Registration Fees Kshs.500.....
c) County Government Service Charge Kshs.500.....

If acceptance of the offer and payment of above fees are not received within the said thirty (30) days from the date hereof, the offer will be considered to have lapsed.

Annex 2: Confirmation of Land ownership



Annex 3: Screening Checklist

**Annex 12A: Environmental and Social Screening Check list
ESM Sub-projects/POs Projects Screening Checklist (Prototype)
(projects screening process by benefitting communities/Agencies)**

Section A: Background information

Name of County MANDERA
 Name of CPCU /Researcher MANDERCA
 project location... MANDERA
 Name of CBO/Institution/PO/PPP... DATA LIMITED BEE KEEPING BUSINESS PLAN
 Postal Address: P.O... BOX 560-70300
 Contact Person... ANNA HASSAN Cell phone: 0720013171
 Project name... ~~MANDERA~~ Mandera Honey Processing Packaging & Marketing
 Estimated cost (Kshs.)... 14,000,000
 Approximate size of land area available for the project.....
 Objectives of the project... Buying of raw honey from SSCIG and individual farmers, processing, packaging, branding
 Activities/enterprises undertaken... Apiculture, provision of Modern Bee Keeping equipment
 How was the project chosen?..... Marketing

Section B: Environmental Issues

Will the project:	Yes	No
Create a risk of increased soil erosion?	✓	
Create a risk of increased deforestation?	✓	
Create a risk of increasing any other soil degradation 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 sub-project application.

Section C: Socio-economic Issues

Will the sub-project:	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 drop-outs, 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 sub-project:	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 sub-project:		
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.)?	<input checked="" type="checkbox"/>
Use irrigation system in its implementation?	<input checked="" type="checkbox"/>

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 farmers 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)

(iv)

(v)

Result in temporary or permanent loss of crops, fruit trees and pasture land?		
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
<input type="checkbox"/> All the above answers are 'No' <input type="checkbox"/> There is at least one 'Yes'	<ul style="list-style-type: none"> • 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 ESIA's, 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: Amr Hassan
 Name: Amr Hassan
 Position / Community: AMB

Date: 01/11/2021
 Field Appraisal Officer (CDE): FATUMA MALIM
 Signature: [Signature] SPR-RECOMMENDED
 Date: _____



Annex 4: Registration Certificate



THE REPUBLIC OF KENYA

BUSINESS REGISTRATION SERVICE
 P. O. BOX 30031
 NAIROBI
 9 JUN 2020

To
 DAUA LIMITED
 P.O. Box 59
 00100 - G.P.O NAIROBI

THE COMPANIES ACT, 2015


According to the records reading to the below company held by the Companies Registry as at 9 Jun 2020

COMPANY	DAUA LIMITED
COMPANY NUMBER	PVT-DLUP757
NOMINAL SHARE CAPITAL	100,000.00
NUMBER AND TYPE OF SHARES (VALUE PER SHARE)	ORDINARY: 1000 (KES 100.00 EACH)
DATE OF REGISTRATION	2017-09-18
REGISTERED OFFICE	P.O BOX 59, G.P.O NAIROBI TELEPHONE: +254725209745, EMAIL: DAUALIMITED@GMAIL.COM COUNTY: NAIROBI, DISTRICT: STAREHE DISTRICT, LOCALITY: CBD STREET: KIGALI ROAD, BUILDING: JAMIA MALL PLOT LR NO: 209/9070 KIGALI ROAD NAIROBI
POSTAL ADDRESS	P.O BOX 59 G.P.O NAIROBI
ENCUMBRANCES	

Name of Directors and Shareholders of the above company with their particulars are as follows

NAME	DESCRIPTION	ADDRESS	COUNTRY	SHARES
MOHAMUD ALIO HAJI	DIRECTOR/SHAREHOLDER	P.O BOX 560 MANDERA	KENYA	ORDINARY: 500
HABIBA HASSAN HAJI	DIRECTOR/SHAREHOLDER	P.O BOX 560 MANDERA	KENYA	ORDINARY: 500

Yours Faithfully,
 REGISTRAR OF COMPANIES



REF NO: OS-QQFGP3M

DISCLAIMER: THIS IS A SYSTEM GENERATED CERTIFICATE AND DOES NOT REQUIRE A SIGNATURE

Annex 5: Proposed Project site at coordinate N 3°55'48.18076, E 41°48'10.88622



Annex 6: Structured Questionnaires

CONSULTATION AND PUBLIC PARTICIPATION

ENVIRONMENTAL IMPACT ASSESSMENT PROJECT FOR THE PROPOSED MANDERA HONEY PROCESSING, PACKAGING AND MARKETING

Danu Limited is proposing to develop honey processing plant in Mandera Town at Green County in Shufshafey Location in Mandera East. Through KCSAI Mandera we have been engaged to carry out an Environmental and Social Impact Assessment (SPI) on the activities of the proposed project.

The Environmental Impact assessment (EIA) regulation of 2003 require that all new projects listed in the second schedule of the Environmental Management and Coordination Act (EMCA) 1999 must undertake an Environmental Impact Assessment (EIA) and submit the project report to the National Environmental Management Authority (NEMA). Consultation and Public participation is a key process in the undertaking of the EIA. The consultation and participation is done with the community members who may be affected or interested in the project in order to obtain their views.

As a valuable neighbor and stakeholder, we now seek your comments on the proposed project. We therefore kindly request that you go through below questions and provide us with your comments

Thank you!

Personal /organizations details

Name ABDIJAWAD ABDIYADIR ADAM
National ID 24162516
Mobile Number 0794943676
P.O BOX
Relationship to the site/ Proximity to the proposed project site..... Neighbor.

I. Environmental issues

Do you think the project will have any effect on?

a) Surrounding plants and animals? YES/NO ✓

If yes, please explain

.....
.....

b) Air? YES/NO ✓

If yes, please explain

.....
.....

c) Water? YES/NO ✓

If yes, please explain

.....
.....

d) Soil? YES/NO ✓

If yes, please explain

.....
.....

7

CONSULTATION AND PUBLIC PARTICIPATION

2. Social Issues

A. Positive social impacts

1. Do you think the proposed project will have any positive social impacts? YES, NO
If YES, State some of them

- Yes
- ① source of employment both during construction & operational.
 - ② Improve security of the neighbourhood through security light & extra security guard.

B. Negative Social Impacts

1. Do you think the proposed project will have any Negative social impacts? YES, NO
If YES, State some of them

- a) HIV/AIDS
- b) COVID-19

General issues

- a) What other issues of concern or consideration do you have with regards to the project? Please also propose specific mitigation measures
- HIV/AIDS awareness
 - wear mask
- b) Please provide us with your comments or suggestion on enhancing environment and social as well as health and safety and well-being of the people around the project area.

Final remarks

Do you approve this project?

YES

NO ()

Signature.....

[Handwritten Signature]

CONSULTATION AND PUBLIC PARTICIPATION

ENVIRONMENTAL IMPACT ASSESSMENT PROJECT FOR THE PROPOSED MANDERA HONEY PROCESSING, PACKAGING AND MARKETING

Daua Limited is proposing to develop honey processing plant in Mandera Town at Green County in Shalshafey Location in Mandera East. Through KCSAP Mandera we have been engaged to carry out an Environmental and Social Impact Assessment (SPR) on the activities of the proposed project.

The Environmental Impact assessment (EIA) regulation of 2003 require that all new projects listed in the second schedule of the Environmental Management and Coordination Act (EMCA) 1999 must undertake an Environmental Impact Assessment (EIA) and submit the project report to the National Environmental Management Authority (NEMA). Consultation and Public participation is a key process in the undertaking of the EIA. The consultation and participation is done with the community members who may be affected or interested in the project in order to obtain their views.

As a valuable neighbor and stakeholder, we now seek your comments on the proposed project. We therefore kindly request that you go through below questions and provide us with your comments

Thank you!

Personal /organizations details

Name ANIS HASSAN.
National ID..... 23803834
Mobile Number 0720013171

P.O BOX

Relationship to the site/ Proximity to the proposed project site... Management Committee.

1. Environmental issues

Do you think the project will have any effect on?

a) Surrounding plants and animals? YES/ NO

If yes, please explain

Yes
during site clearing of the proposed site

b) Air? YES/NO

If yes, please explain

Yes
Dust from vehicle & from construction sites

c) Water? YES/NO

If yes, please explain

No

d) Soil? YES/NO

If yes, please explain

No

CONSULTATION AND PUBLIC PARTICIPATION

2. Social Issues

A. Positive social impacts

1. Do you think the proposed project will have any positive social impacts? YES, NO
If YES, State some of them

- ✓ Job Creation
- ✓ Improve living standard.
- ✓ Source Revenue to the government.

B. Negative Social Impacts

1. Do you think the proposed project will have any Negative social impacts? YES, NO
If YES, State some of them

- Solid waste generation which is Mosques breeding site.
- Covid-19.

General issues

- a) What other issues of concern or consideration do you have with regards to the project? Please also propose specific mitigation measures

- Segregate waste and disposed them
- Follow MOH guideline on Covid-19.

- b) Please provide us with your comments or suggestion on enhancing environment and social as well as health and safety and well-being of the people around the project area.

Final remarks

Do you approve this project?

YES

NO ()

Signature.....

[Handwritten Signature]

CONSULTATION AND PUBLIC PARTICIPATION

ENVIRONMENTAL IMPACT ASSESSMENT PROJECT FOR THE PROPOSED MANDERA HONEY PROCESSING, PACKAGING AND MARKETING

Daua Limited is proposing to develop honey processing plant in Mandera Town at Green County in Shafshafey Location in Mandera East. Through KCSAP Mandera we have been engaged to carry out an Environmental and Social Impact Assessment (SPIR) on the activities of the proposed project.

The Environmental Impact assessment (EIA) regulation of 2003 require that all new projects listed in the second schedule of the Environmental Management and Coordination Act (EMCA) 1999 must undertake an Environmental Impact Assessment (EIA) and submit the project report to the National Environmental Management Authority (NEMA). Consultation and Public participation is a key process in the undertaking of the EIA. The consultation and participation is done with the community members who may be affected or interested in the project in order to obtain their views.

As a valuable neighbor and stakeholder, we now seek your comments on the proposed project. We therefore kindly request that you go through below questions and provide us with your comments

Thank you!

Personal /organizations details

Name ABDI KUNDU YUSUF

National ID 9572225

Mobile Number 0722001067

P.O BOX

Relationship to the site/ Proximity to the proposed project site Neighbor / CIG chair

I. Environmental issues

Do you think the project will have any effect on?

a) Surrounding plants and animals? YES/NO

If yes, please explain

b) Air? YES/NO

If yes, please explain

YES.
truck (vehicle bring construction materials) emit
Gases into the air

c) Water? YES/NO

If yes, please explain

d) Soil? YES/NO

If yes, please explain

YES.
Excavation work associated with the project
May lead to increased li sal erosion

CONSULTATION AND PUBLIC PARTICIPATION

2. Social issues

A. Positive social impacts

1. Do you think the proposed project will have any positive social impacts? YES, NO
If YES, State some of them

- Creation of temporary employment
- Provision of market for supply of
Construction Material
- Increase business opportunities

B. Negative Social Impacts

1. Do you think the proposed project will have any Negative social impacts? YES, NO
If YES, State some of them

Risk of accident & injuries to workers

General issues

- a) What other issues of concern or consideration do you have with regards to the project? Please also propose specific mitigation measures

Fire Aid kit should be available at the site

- b) Please provide us with your comments or suggestion on enhancing environment and social as well as health and safety and well-being of the people around the project area.

N/A

Final remarks

Do you approve this project?

YES

NO

Signature.....

Annex 7: Public Participation Minute

PARTICIPATION SESSION FOR THE PREPARATION OF SUMMARY PROJECT REPORT (SPR) FOR PROPOSED MANDERA HONEY PROCESSING, PACKAGING AND MARKETING FROM 8TH – 9TH JANUARY, 2022 AT BANISA TOWN.

Participant's list

1. Community Participants ----- see the attached list

Agenda

1. Preliminary
2. SPR team introduction and familiarization
3. Public awareness and sensitization on the project
4. Project positive impacts identification
5. Project's negative Impact identification
6. Identification of mitigation measures
7. Arising issues
8. AOB

Min 1/1/2022: Preliminary

The Meeting started with a word of prayer from one of the clan elders. The company manager Mr. Anis Hassan welcomed the SPR team and confirmed that he received the information about public participation meeting from the PO Lead Person Mr. Yussuf Abdille. He introduced the study team to members of the public and welcomed the team to carry on with the meeting.

Min 2/1/2022: SPR team introduction and project familiarization

The SPR team leader introduced the SPR team members to the public and informed the participants on the team's mission and objectives. He further highlighted the project components that compose of a modern processing plant for value addition of bee products, hence comprising of Refractometer, Honey extractor, Settling tank, Honey warmer, Honey press, Solar wax Melter, Honey tool washing machine among others.

Min 3/1/2022: Public awareness of the project

During the meeting the participants expressed and confirmed that they are well aware of the project. The public further confirmed that they have previously received other teams during the initial public participation. The general public and members of CIGs have equally expressed their views and eagerness for the timely progression of the project activities while requesting for speedy implementation of the project so that they can realize its benefits soonest possible.

Min 4/1/2022: Project positive impacts

The SPR team requested the public to exhaustively list all the positive impacts/benefits they expect to achieve or gain from the implementation of the proposed project. The locals managed to enumerate the following anticipated benefits of the project.

- Economic investment hence increases in wealth the proponent will receive returns on his investments.
- Provision of employment opportunities of skilled, semi-skilled and unskilled laborers.
- New businesses will lease space such as honey distributors and retailers.
- Improved Security as security will be ensured around the proposed modern processing plant through distribution of suitable security lights and presence of 24-hour security guards.
- Improved health of the locals especially women and children since honey is very nutritious and medicinal.
- The locals also acknowledge that with successful implementation of the project the women will be empowered since they are members of CIG groups that supply raw honey to the company.

Min 5/1/2022: Identification of project's negative impacts

The participants were requested to brainstorm and identify anticipated environmental and social negative impacts of the project from implementation, operation and decommissioning phases of the project. The following are some of the main negative impacts identified.

1. Dust generated during the construction phase.
2. Site clearing and cutting of the existing trees from the project site
3. Soil and air pollution and disturbance of the soil microorganism

4. Spread of immoral behaviors and HIV/AIDS

Min 6/1/2022: Identification of mitigation measures

The participants further brainstormed and proposed the following mitigation measures for the aforementioned impacts:

1. Dust generation:

To reduce the generation of dust during the construction phase, the participants propose as follows;

- a. That excavation be done by the jobless locals as the use of tractor is likely to generate excess level of dust so that they can earn some money to support their families.
- b. They also proposed use of water to settle the dust during excavation.

2. Noise and excessive vibration

The participants proposed as follows;

- a. All generators and heavy-duty equipment be insulated or placed in enclosures to minimize ambient noise levels
- b. Sensitize construction truck drivers to avoid hooting especially when passing through silent zones areas such as schools, mosques, residential areas and hospitals

3. Pollution of soil and disturbance of the soil microorganism

To minimize disturbance of soil microorganisms, the participants suggested that the contractor to minimize oil spills on the site through the use of standard machines and vehicles.

4. Spread of immoral behaviors and HIV/AIDS

- a. The participants suggested that the casual workers during the construction phase should be drawn from among the local beneficiary communities living in the project area.
- b. The participants further suggested on the need for awareness creation on the existence and spread as well as negative impacts of HIV/AIDS.

5. Solid waste generation

- a. Solid wastes to be put in a designated area for appropriate disposal.

b. Segregation of waste to be done at source so as to determine the recyclables.

6. Gender based violence

a. sensitization around gender-equitable approaches to compensation and employment.

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

c. Review of specific CIG activities that are known to heighten GBV risk at the community level, e.g. employments schemes for women.

Min 7/1/2022: Arising Issues

The community raised the following issues of concerns,

1. Workers and CIGs/VMGs to be assisted to enlist with social support systems like NHIF, NSSF, Savings and insurance schemes
2. The locals should be considered for the unskilled works during the construction phase of the project.

Response to issues raised by the locals

1st Issue: The company manager informed the participants his company will liase with both NHIF and NSSF offices to facilitate registration of the CIG members into their schemes.

2nd Issue: The locals were informed that once the project is approved for implementation and awarded to the contractor, the locals will be given priority when engaging the casual laborers for provision of semi-skilled and unskilled services.

Min 8/1/2022:

The SPR team assured the members of the public that all their views and opinions will be captured in the report and will be addressed accordingly.

There being no any other business the meeting was adjourned at 12:45PM.

Prepared by:

Name: Abdulkarim M. Hussein

Designation: Aggregate expert

Signature: [Signature]

Date: 10/01/2022

Confirmed by:

Name: ANIS HASSAN YUSSUF

Designation: Production Manager

Signature: [Signature]

Date: 11/01/2022



Annex 8: Attendance list



MANDERA COUNTY GOVERNMENT
MINISTRY OF AGRICULTURE, IRRIGATION, LIVESTOCK AND FISHERIES
Kenya Climate Smart Agriculture Project (Mandera County)

Public Participation Attendance List for the Proposed Mandera Honey Processing
Planting and Marketing

VENUE: BANISA Date: 8-01-2022

S/NO.	NAME	ID/NO.	ORGANIZATION	SIGNATURE
1	Abi Abdullahi Hassan	7474964	Wako Dadacha	[Signature]
2	NADIA Ibrahim Hassan	22708580	Wako Dadacha	[Signature]
3	ADAM Ibrahim ABDI	20861066	Hara Box Bee Kenya	[Signature]
4	DARURO Ibrahim ABDI	36640386	Hara Box Bee Kenya	[Signature]
5	ADAM Hassan Eymol	21682963	Hara Box Bee Kenya	[Signature]
6	MUKHTAR STEVEN MUKHTAR	11224323	Hara Box Bee Kenya	[Signature]
7	Shamsi Abenim Looch	20923841	Wako Dadacha	[Signature]
8	Amun Abenim Looch	26011096	Wako Dadacha	[Signature]
9	Enow ADAM GICAMA	1129528	Wako Dadacha	[Signature]
10	Abi Hassan KAMBE	24816074	Wako Dadacha	[Signature]

ASSISTANT CHIEF
BANISA SUB-LOCATION



MANDERA COUNTY GOVERNMENT
MINISTRY OF AGRICULTURE, IRRIGATION, LIVESTOCK AND FISHERIES
Kenya Climate Smart Agriculture Project (Mandera County)

Public Participation Attendance List for the Proposed Mandera Honey Processing
Planting and Marketing

VENUE: BANISA Date: 8-01-2022

S/NO.	NAME	ID/NO.	ORGANIZATION	SIGNATURE
1	SADAM ADAM MUKHTAR	2375058	Wako Dadacha	[Signature]
2	Fatima Abi Kanyo	24821117	Wako Dadacha	[Signature]
3	ABDIMANU ADAM BASHA	34115376	Wako Dadacha	[Signature]
4	Daud Sheikh Mukhtar	33952625	Wako Dadacha	[Signature]
5	Abdi Aden Ibrahim	23820355	Hara Box	[Signature]
6	Issa Hassan Chuma	30990984	Hara Box	[Signature]
7	Hawa Ibrahim Abdi	24857775	Hara Box	[Signature]
8	Jucia ADAM BISHAR	30986352	Wako Dadacha	[Signature]
9	Taufik Ibrahim Abdi	30472085	Lara Dima	[Signature]
10	Abdi Hassan Eden	21679914	Lara Dima	[Signature]

ASSISTANT CHIEF
USA SUB-LOCATION



MANDERA COUNTY GOVERNMENT
MINISTRY OF AGRICULTURE, IRRIGATION, LIVESTOCK AND FISHERIES
 Kenya Climate Smart Agriculture Project (Mandera County)

Public Participation Attendance List for the Proposed Mandera Honey Processing
 ...BANISA... AND ...BANISA...

VENUE: BANISA Date: 8-01-2022

S/NO.	NAME	ID/NO.	ORGANIZATION	SIGNATURE
1	Hussain Mursalif Ali	26131606	Dawa Limited	[Signature]
2	Issak Hassan Abdi	10029695	Dawa Limited	[Signature]
3	Anto Hassan Yusuf	23803834	Dawa Limited	[Signature]
4	Mohammed Ali Hussien	33208386	Associate Export	[Signature]
5	Muhamad Aba Haji	30310360	INTERIOR	[Signature]
6	Yussuf A. Abalilla	5759192	KCCAP-Md	[Signature]
7	Issack A. Ali	26091446	KCCAP	[Signature]
8	ALI ISMAIL	29718524	NGMA	[Signature]
9	Yahya Cheng	13718692	LEAD EXPORT	[Signature]
10	Yussuf A. Abalilla	5759192	KCCAP	[Signature]

ASSISTANT CHIEF
 BANISA SUB-LOCATION
 DATE: _____



MANDERA COUNTY GOVERNMENT
MINISTRY OF AGRICULTURE, IRRIGATION, LIVESTOCK AND FISHERIES
 Kenya Climate Smart Agriculture Project (Mandera County)

Public Participation Attendance List for the Proposed Mandera Honey Processing
 ...BANISA... AND ...BANISA...

VENUE: BANISA Date: 9-01-2022

S/NO.	NAME	ID/NO.	ORGANIZATION	SIGNATURE
1	Issack A. Ali	26091446	KCCAP	[Signature]
2	Yussuf A. Abalilla	5759192	KCCAP	[Signature]
3	ALI ISMAIL	29718524	NGMA	[Signature]
4	Hussain Mursalif Ali	26131606	Dawa Limited	[Signature]
5	Anto Hassan Yusuf	23803834	Dawa Limited	[Signature]
6	Issak Hassan Abdi	10029695	Dawa Limited	[Signature]
7	Mohammed Aba Haji	30310360	INTERIOR	[Signature]
8	Mohammed Aba Kelow	20836663	INTERIOR	[Signature]
9	Mohammed M. Hussien	33208386	Associate EXPORT	[Signature]
10	Yahya Cheng	13718692	LEAD EXPORT	[Signature]

ASSISTANT CHIEF
 BANISA SUB-LOCATION
 DATE: _____



MANDERA COUNTY GOVERNMENT
 MINISTRY OF AGRICULTURE, IRRIGATION, LIVESTOCK AND FISHERIES
 Kenya Climate Smart Agriculture Project (Mandera County)

Public Participation Attendance List for the Proposed MANDERA HONEY PROCESSING
PLANTING AND MARKETING

VENUE: BANISA Date: 9-01-2022

S/NO.	NAME	ID/NO.	ORGANIZATION	SIGNATURE
1	Amuf Ibrahim ABOI	30432055	Lager Dima	[Signature]
2	Haru Ibrahim ABOI	24257778	Horse Box	[Signature]
3	Issacow Hassan Chani	30990984	har bar	[Signature]
4	Abdi Aden Ibrahim	23720355	har bar	[Signature]
5	Fatima Abi Kanyo	26829719	Waco Dadacho	[Signature]
6	Saidi Aden Mohammed	2375058	Waco dadacho	[Signature]
7	Dimi Shach Mohamed	33952625	Waco dadacho	[Signature]
8	Abdi Hussein Ede	21679914	Lag dime	[Signature]
9	Amra Adan Bisho	30980353	Waco dadacho	[Signature]
10	Abdirahim Adan Bisho	34115375	Waco DADACHO	[Signature]

ASSISTANT CHIEF
 BANISA SUB-LOCATION
 DATE: _____



MANDERA COUNTY GOVERNMENT
 MINISTRY OF AGRICULTURE, IRRIGATION, LIVESTOCK AND FISHERIES
 Kenya Climate Smart Agriculture Project (Mandera County)

Public Participation Attendance List for the Proposed MANDERA HONEY PROCESSING
PLANTING AND MARKETING

VENUE: BANISA Date: 9-01-2022

S/NO.	NAME	ID/NO.	ORGANIZATION	SIGNATURE
1	Issac Ede Koro	8761620	Lag Dime	[Signature]
2	Abi SAJAT WAZZE	12427216	Community member	[Signature]
3	Abi Ede Kala	2659410	Lag Dime	[Signature]
4	Amra Ibrahim Abdi	34178889	Har bar Dadacho	[Signature]
5	Shade Hussein Amif	24463195	Community member	[Signature]
6	Shamir Aden Mohamed	36475347	Community member	[Signature]
7	Fara Aden Bisho	34669560	Waco dadacho	[Signature]
8	Abi Abouls Koro	34142124	Community member	[Signature]
9	Mohamed A. Haji	2683905	Community member	[Signature]
10	Abdirahim Adan Haji	22650578	Community member	[Signature]

ASSISTANT CHIEF
 BANISA SUB-LOCATION
 DATE: _____

Annex 9: photos of public participation



Annex 10: MoU between Daula Limited and one of the CIG groups

DAUA LIMITED

Email :: daualimited@gmail.com

MEMORANDUM OF UNDERSTANDING BETWEEN DAUA LTD

AND ~~SUKELA TOWAS BEE~~ CIG GROUP (M O U) KEEPING

DAUA Limited in this MOU with an office based in Mandera Kenya has entered into agreement with the 55 CIG Groups in Mandera East, Mandera North, Banissa and both have agreed on the following points:

Roles and Responsibilities.

a) Roles of C I G Groups

- That the Groups agree to sale Pure honey to DAUA Ltd
- That the price of the 1kg of Raw Honey is sold to DAUA Ltd at the price of Kshs. 400/=
- That the Honey sold to DAUA Ltd is pure and no adulteration is done.
- That The honey is of Organic type
- That the process of harvesting is well done with the right harvesting equipment and not burnt honey
- The Cash is Given immediately at the field after inspection of the Honey at the farm gate
- C I G members to market the DAUA limited Honey product processed in Mandera

b) Roles of DAUA Ltd

- That DAUA Ltd buys the Honey at an agreed price from the identified CIG groups
- That the money is paid right after buying the honey.
- To create market through Bulk purchase for 55 C I G s of 1,100 members in Mandera East, Mand North and Banissa Sub counties of Mandera County.

This MoU sets forth the general terms and conditions of the cooperation between the two parties regarding to the objectives of the program. The parties agree to join efforts and to maintain close working relationship in order to achieve the objectives of the programs.

Duration of the Agreement

The agreement between DAUA Limited and C I G Groups is a year (12 Months) from the date of this agreement and is renewable after successful working relationship

DAUA Limited

Name: Amis Hassan
Mussuf Signature



Signature: Operation
Manager

Place: Mandera Date: 10/10/2021

Community Interest Group (C I G)

C I G NO: 36 C I G NAME: SUKELA TAWFIQ BEE KEEPING

WARD: Derkale SUB-COUNTY: Banisa

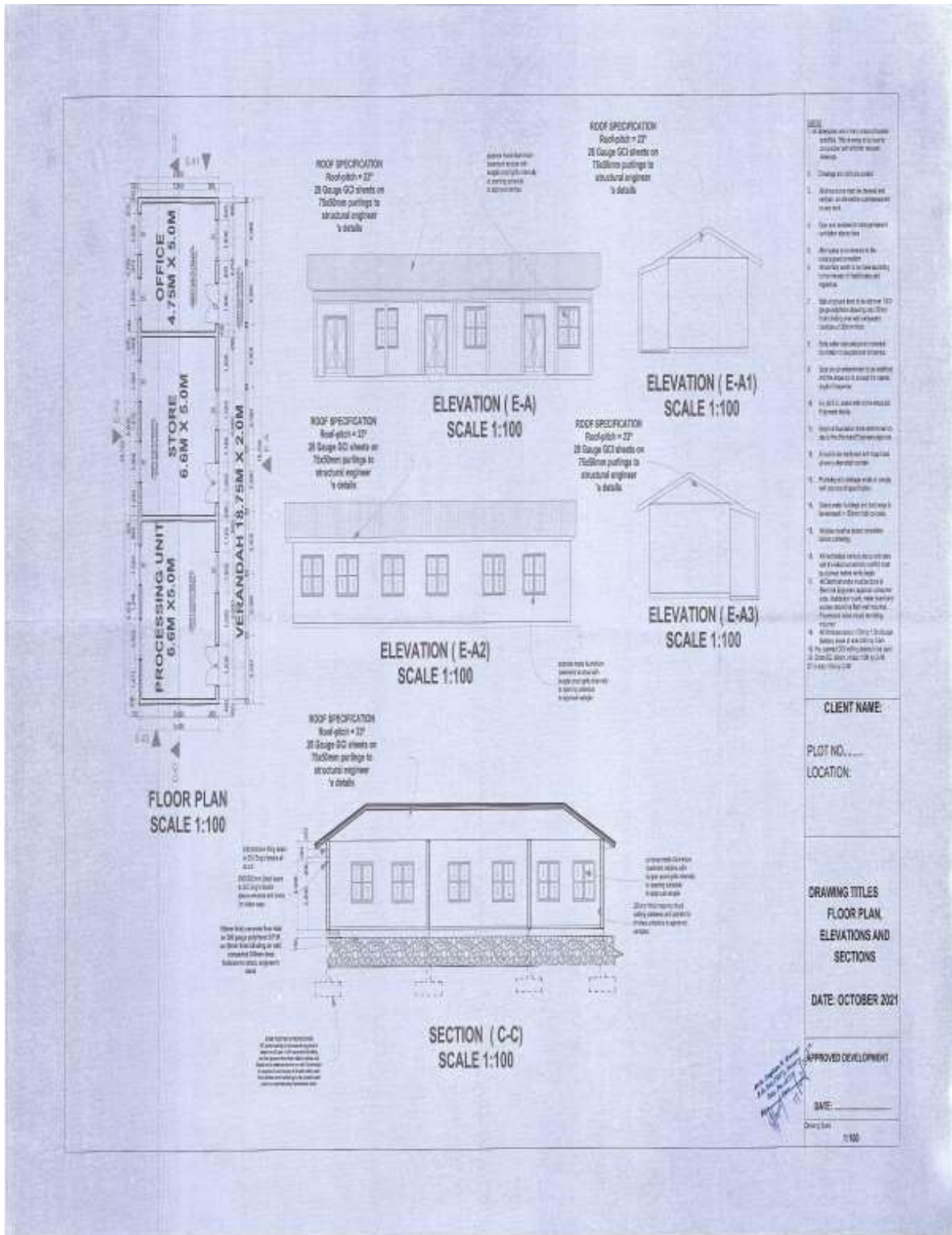
CHAIRMAN/CHAIRLADY: Abdulkhi
Erion SIGN: [Signature] DATE: 10/10/2021

SECRETARY: Abdi Hapicha
Ibran SIGN: [Signature] DATE: 10/10/2021

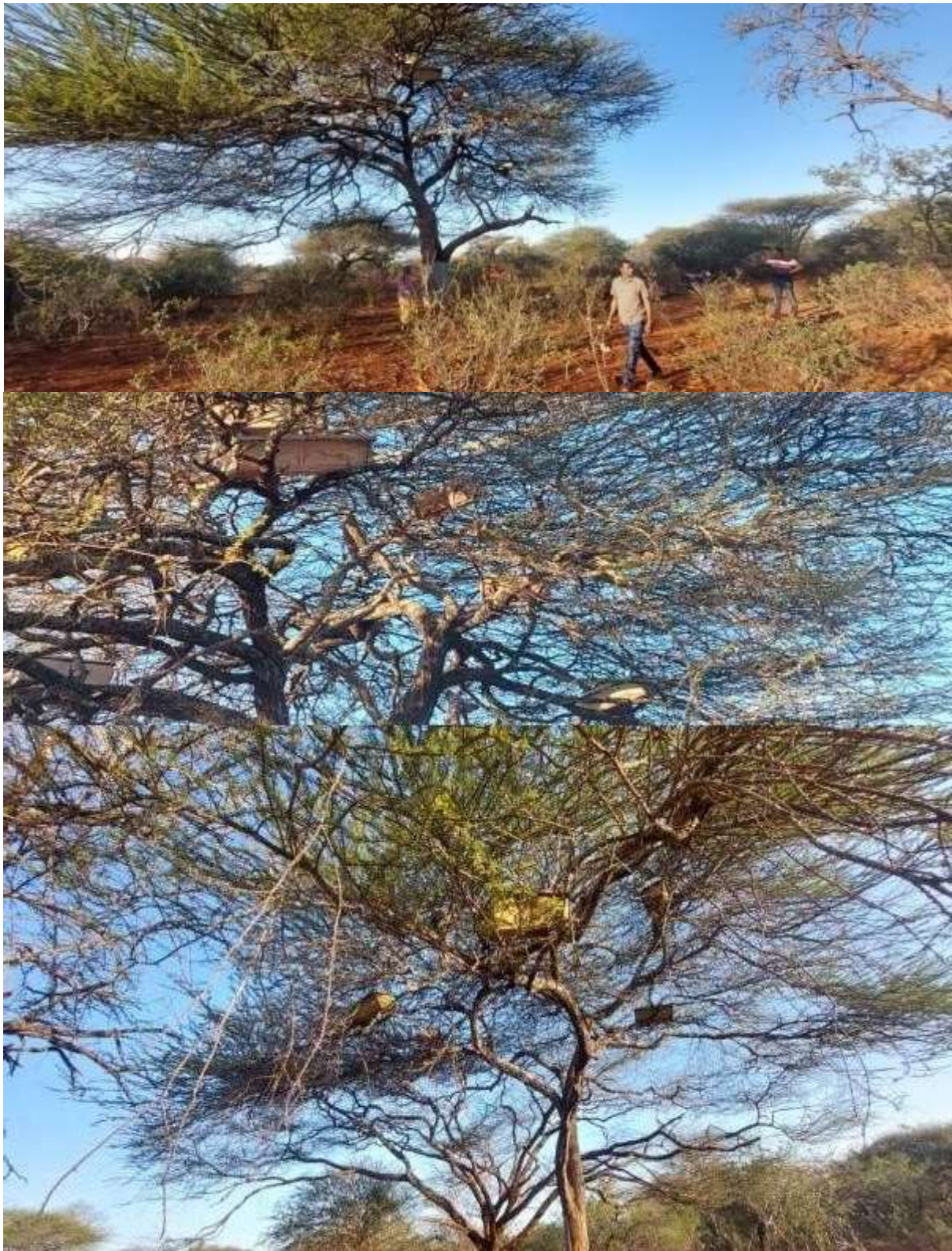
TREASURERE: Fade Aslan SIGN: [Signature] DATE: 10/10/2021



Annex 11: Approved proposed plan



Annex 12 : photos beehives



Annex 13: Expert License

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/ERPL/16853

Application Reference No: NEMA/EIA/EL/22074

M/S Eng. Yahya Chenge Kunguru
(individual or firm) of address

P.O. Box 3461-20100 NAKURU

is licensed to practice in the

capacity of a (Lead Expert/Associate Expert/Firm of Experts) **Lead Expert**
registration number **8679**

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

Issued Date: 3/16/2022

Expiry Date: 12/31/2022

Signature.....

(Seal)

Director General
The National Environment Management
Authority

