ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) SUMMARY PROJECT REPORT FOR THE PROPOSED INSTALLATION OF COTTON MICRO GINNERY PROJECT AT LAKE KENYATTA FARMERS MARKETING COOPERATIVE SOCIETY LTD IN MPEKETONI DIVISION, BAHARI WARD, LAMU WEST SUB COUNTY OF LAMU COUNTY GPS COORDINATES LATITUDE $2^0$23'25.4'' S, AND LONGITUDE $40^0$41'42.5'' E

PROJECT PROPONENT

LAKE KENYATTA FARMERS' COOPERATIVE SOCIETY LIMITED (LKFCS)

P.O. BOX 34-80503 MPEKETONI, LAMU, KENYA

PROJECT SPONSOR

KENYA CLIMATE SMART AGRICULTURE PROJECT WITH SUPPORT FROM THE WORLD BANK

MAY, 2022

CERTIFICATION

This Environmental and social impact assessment summary project report was prepared by a registered EIA/EA expert in accordance with the Environmental (Impact Assessment and Audit) (Amendment) Regulation, 2019 for submission to National Environment Management Authority (NEMA).

We, the undersigned, certify all the information contained in the report is accurate and a truthful representation of all the findings as related to the proposed project.

Lead Expert: _____

Reg. No. 7395

Signature: ANTHONY P. MBUTHIA

Date: 24.05.2022

Proponent: Lake Kenyatta farmers' cooperative society

Presented by: Chairman

Name: JULIUS MACHARIA KUGWA

Designation: CHAIRMAN

Signature: _____

Date: 24th May 2022

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ABBREVIATIONS AND ACRONYMS

AIDS	**Acquired Immunodeficiency Syndrome**
CSA	Climate Smart Agriculture
CDE	County Director of Environment
COVID-19	Coronavirus Disease 2019
CPCU	County Project Coordination Unit
ESIA	Environmental and Social Impact Assessment
ESMMP	Environmental and Social Management and Monitoring Plan
EMCA	Environmental Management and Coordination Act, CAP 387
GBV	Gender Based Violence
GRC	Grievance Redress Committee
HIV	Human immune Virus
LKFCS	Lake Kenyatta Farmers Cooperatives Society
KCSAP	Kenya Climate Smart Agricultural Project
NPCU	National Project Coordination Unit
NEMA	National Environmental Management Authority
MCA	Member of County Assembly
MP	Member of Parliament
PMC	Project Management Committee
PDOs	Project Development Objectives
SEA	Sexual Exploitation and Abuse
SPR	Summary Project Report

EXECUTIVE SUMMARY

Lake Kenyatta Farmers' Cooperative Society Limited (LKFCS) has proposed to set up a cotton ginnery plot No. Lake/Lake Kenyatta 1/247 situated in Mpeketoni Division, Mpeketoni Location, Central Sub location, Lamu County. The project entails installation of eight cotton ginning machines in an existing building owned by LKFCS.

The proposed project has been necessitated by the need to bridge existential gaps which have incessantly undermined cotton production and subsequently economic development of farmers. These gaps include failure to add value to cotton produced by farmers that has resulted in raw cotton fetching low prices, limitation of job opportunities, compromised safeguards against fluctuating cotton price and perpetuated vulnerability of farmers to the whims of ginning companies located outside the county.

The specific objectives of this proposed project are; to provide a cotton ginning facility for the cotton farmers, hence increasing the value of cotton awaiting sale; ensure farmers benefit from better prices of their produce during sale, and; protect cotton farmers from exploitative middlemen.

The proposed project will be supported by essential infrastructure such as good road network, electricity, reliable water supply, security and a good telecommunication network from both public and private telecommunication companies.

Different approaches and methods were employed to establish the environmental and social impacts of the operations on the natural environment. Personal observations of the proposed site and its environs were employed to identify any potential environmental and health risks and relevant information regarding the proposed operations were analysed and anticipated impacts discussed. Community *baraza*, interviews with the stakeholders and the local communities were conducted to obtain information on anticipated or observed social and environmental issues.

An Environmental Social Management and Monitoring Plan (ESM&MP) was developed to guide the operations. This monitoring plan was developed after the observation, review of secondary and primary data and the assessment of proposed activities to ensure adherence to regulatory standards.

The requirement that projects which are likely to have negative impacts on the environment undergo environmental impact assessments is contained in the Constitution of Kenya, 2010 section 69(f) and the Environmental Management and Coordination Act (EMCA) Cap. 387. There are notable positive and negative impacts. The impacts range from the implementation phase, to the operations phase and to the decommissioning phase.

The negative social impacts anticipated include: sexual abuse of workers and minors either through physical, verbal or suggestive manner; spread of HIV/AIDS arising from skilled migrant workers or overindulgence of workers/farmers arising from enhanced income status;
The following should be done to mitigate the anticipated negative social impacts: sensitize workers and local communities on moral ethics; introduction of a suggestion box where workers can secretly report cases of sexual advances to them from their seniors; severe disciplinary action including dismissal should be taken by the contractor for workers found to be engaging in sexual abuse of their juniors; establishment of a Grievance Redress Committee (GRC) within the LKFCS to address any complaints of sexual abuse of workers; general public

to be alert and vigilant and report suspected cases promptly to the Children's Officer or to the Police; encourage counselling and testing of workers for HIV/AIDS in all phases of project cycle and promote safe sex and use of condoms.

The proposed development will have both positive and negative impacts on both the physical and socio-economic environment of the project area. Some of the negative environmental impacts anticipated include: sewage and wastewater pollution; solid waste pollution; noise and vibration pollution; and deaths and injuries from electric accidents and fire outbreaks, electric shocks, electrical fires and ordinary fire outbreaks; dust and cotton dust pollution. Mitigation measures to these adverse impacts will include: construction of modern toilets and septic tank & soak pits system; installation of 3 colour-coded waste bins for depositing various types of solid wastes as follows; engage the mandated Department of Public Health to regularly empty waste bins once they get filled up; inert construction waste to be sold, disposed properly or given out free to project proponents of other construction projects for reuse; recycling of plastic wastes in a certified recycling plant; drilling and ginning machines to be fitted with silencers; electrical wiring to be carried out by certified electricians; installation of fires extinguisher (dry powder and gas based), fire alarm, fire reel and hose, bucket of sand; ginning machine operators to be trained on the precautions for safe operation of the machines; workers to be trained on safety measures such as safe use of electricity & electrical appliances, firefighting and first aid; workers to wear personnel protective gear such as ear muffs and nose mask.

Guided by the findings of the ESIA and simultaneously considering the analysis of both positive and negative environmental and social impacts of the proposed project's development, it is the opinion of the lead expert that there are no significant negative impacts capable of imposing adverse effects to a point of stopping project development. The adverse impacts identified shall be mitigated as per recommended environmental and social mitigation measures.

The total cost of the project is Kshs 10,000,000 whereas the cost of implementing ESMMP is Kshs 384,000

In this regard, the considered opinion of the experts is that: the project being an environmentally low risk project poses no significant threat to the environment other than identified minor adverse impacts within the proposed project area. Additionally, the positive impacts of the project surpass the negative impacts which shall be effectively handled by mitigating measures outlined in the ESMMP. Therefore, the project should be licensed to continue, and activities be managed within the provided Environmental Management Plan alongside other laws and regulations.

CHAPTER ONE
INTRODUCTION

1.0 Background Information

The proposed project involves setting up a ginnery that will allow Lake Kenya Cooperative Society Limited members to begin ginning cotton and as such improve their collective bargaining and thus offer improved prices to farmers. The proposed project shall be developed on plot No. Lamu/Lake Kenyatta 1/247, Mpeketoni Division, Mpeketoni Location, Central Sub location, Lamu County. The proposed project area is served with good infrastructure; having a good road network, electricity, reliable water supply, security and a good telecommunication network from both public and private telecommunication companies. This SPR has been undertaken to fulfil the legal requirements as outlined in Legal No. 31 and 32 of the Environmental (Impact Assessment and Audit) (Amendment) Regulations, 2019.

1.1 Project Justification

Over the last decade cotton prices locally have responded to the prevailing international prices. The global prices have been unpredictable and fluctuate frequently depending on global market trends thus creating an atmosphere of unpredictability in the local cotton sector. The prices have been ranging from as low as Kshs. 42 to a high of Kshs. 65. This fluctuation in prices has effects on the choices farmers make on production of cotton. This is further exacerbated by lack of collective bargaining occasioned by the cooperative lack of funds to buy ginning machines for converting seen cotton into cotton lint for better prices to its members. The co-operative has remained an aggregator for cotton ginners and has little role in negotiating for improved prices and as such ginners easily bully farmers into accepting default regulated prices. This has poorly affected cotton production as witnessed in the production trends below

Year	2016	2017	2018	2019
Cotton (Mts)	2,400	2,700	514	400

If the Lake Kenyatta cooperative acquire requisite funding to play its role in value addition, it will acquire the power to collectively bargain for their farmers and thus fetch better value added prices for their cotton which should translate to more incentive to produce and better living conditions for farmers.

In addition to ginning, the proposed project will have other positive impacts such as; provision of a reliable product supply to the processors, creation of direct and indirect employment opportunities during the construction and operation phases, contract farming opportunities with processors in the market and increased revenue to the county government. Additionally, the project will trigger increased income to the cooperative members during operation, improved infrastructural development within the area and improved aesthetic value of the project site.

In view of improved cotton market which translates to enhanced income, farmers will be encouraged to increase cotton production which is in tandem with KCSAP Project Development Objective of increasing agricultural productivity and building resilience to climate change risks in the targeted smallholder farming communities.

The proposed project is envisaged to be a success as the proposal to the proposed project was initiated by Lake Kenyatta Farmers' Cooperative Society members who identified existential gaps which were impediment to farmers' economic development and subsequently to cotton production. The fact that the proposed project was authored and supported by the LKFCS members augments the feasibility and sustainability merits of the project.

1.2 Justification of conducting the SPR

The SPR was because of the recommendation of the County Director Environment (CDE) based on the screening report as per the World Bank funded project. The NEMA Public Notice on ESIA and Legal Notice No 31 of the Environmental (Impact Assessment and Audit) (Amendment) Regulations, 2019, which identifies the proposed project as low risk; and legal notice No 32 directs the writing of an SPR for such projects.

1.3 SPR Objectives

The objectives of compiling an SPR for a proposed project are:

a) To determine the nature of the project.
b) To analyse the project location
c) To predict and assess the potential environmental and social impacts of the project.
d) To propose appropriate mitigation measures for any negative impacts predicted.
e) To allow for public participation by the people likely to be affected by the proposed project and the relevant stakeholders
f) To present findings that can guide informed decision making by NEMA.

1.4 Specific Objectives

The specific objectives of this proposed project are;

a) To provide a cotton ginning facility for the cotton farmers, hence increasing the value of cotton awaiting sale,
b) To ensure farmers benefit from better prices of their produce during sale, and
c) To protect cotton farmers from exploitative middlemen.

1.5 SPR approach and methodology

This SPR was done through field assessments, desk studies and discussion with the proponent and project beneficiaries through interviews. The steps included:

a. Screening

This is the first step on evaluation; it involves establishing the environmental relevance of the project. In this case, the project was identified to fall in the second schedule of EMCA 1999.

b. Scoping

The exercise involves identification of the potential significant impacts. At this stage, discussions were held with the project proponent and the project beneficiaries.

c. Field data collection

Data collection was carried out through observations during site visit and consultation with beneficiaries by use of questionnaires. Visual inspections were carried out in the proposed project area to identify physical features, land use, vegetation, and existing infrastructure and land development.

d. Desk review

The data obtained was compiled and analysed, ESM & MP developed, outcome discussed with the proponent for submission to NEMA office.

e. Public participation:
One of the forms of data collection was through public participation and stakeholder's consultation. The expert conducted a meeting, focused discuss groups (FDGs) and key informants (KIs).

1.6 Report outline

This SPR will be organized into the following chapters: Introduction, Nature of the project, Location of the project, Public participation and stakeholders' consultation, Potential project impacts and mitigation measures to adverse impacts, ESM & MP, Conclusion and recommendations, Photo gallery, References and appendices.

CHAPTER TWO
NATURE OF THE PROJECT

2.0 Introduction

The chapter provide detailed description of the project with respect to project design, design of the plan, design criteria, project layout, project activities and project cost.

2.1 Description of the proposed project

The proposed project entails changing the use of the present store used for storage of seed cotton into a cotton ginnery for Mpeketoni cotton growers. The primary objective is to modify existing building to accommodate installation of 8 roller gins and a cotton lint baler to process seed cotton into cotton lint before sale to spinners for conversion to fabrics. The proposed works will involve undertaking minor repairs on the existing building (repair of the parched floor, enlargement of the existing windows, creating a door opening separating two halls, repair of the leaking roof, construction of the machine platform) and installation of the ginning equipment. The proposed project involves funding for procurement of ginning machines and office equipment while the Cooperative Society will undertake those civil works needed to prepare the building for installation of the equipment. Architectural drawings of the building and specification of the ginning equipment are attached in Annex 7 of the report

2.2 Project Activities

Execution of the project will encompass five stages namely; planning, building repairs, erection of machine platforms, installation and testing of machines, operations and decommissioning. Detailed description of activities in each phase is discussed below;

2.2.1 Planning Activities

This has already been done with desktop and paperwork activities where bill of quantities, machine specifications and architectural drawings have been developed, evaluated and approved. Other integral activities at this phase have included development of activities, itinerary, identification of the proposed project site, mapping of stakeholders and engagement, resource mobilization, gathering of relevant project documents like land ownership title deed and any other legal authorization documents in order to get NEMA approval after submission of this ESIA report.

2.2.2 Project Design and Site Layout

The cotton ginning machinery and equipment shall be installed in an existing building that shall be modified and whose layout is as shown in appendix xx03: plant layout

2.2.3 Construction Phase Activities

(a) Building repair activities

This will entail light construction works where minor repairs will be undertaken to enhance the condition of the existing building in order to ensure the two existing building have an interconnected access to allow for movement of seed cotton from the receiving section to the ginning section. This will be achieved through localized demolition works of a section of the interconnecting wall. There will also be construction of the platform on which the roller gins will be mounted and erection of the seed collection chutes. The works will also involve instillation of the cotton lint baler. There will also be minor demolition works to enlarge the existing windows to allow aeration and natural lighting.

Activities will involve procurement and transportation of materials, material handling and storage, masonry, electrical works and lighting, painting and plumbing works. The works should ensure that there is initialization and operation of the project.
The proposed project will only involve supply of machinery and equipment while the Cooperative Society will undertake any necessary civil works on the existing structure to make it ready for equipment installation.

(b) Installation of machines and equipment.
The proposed plan is to install a cotton cleaning machine, a seed cotton inclined belt conveyor, eight (8) double-roller cotton gins, manual cotton bale pressing machine with a capacity of 30 -250 kg per bale with a manual/automatic feeding system, and a screw/auger conveyor pipe with a diameter of 210mm, length 12m powered by a 15HP motor.
Other equipment will include: pallets for dunnage of 2m x 1.5m made using 100mm x 50mm sawn cypress; manual platform weighing scale with ability to weigh up to 250kg preferably Avery model; a dial weighing scale with ability to weigh up to 100kg preferably Avery or Salter model; two (2) 40-foot long freight cargo containers, and five (5) rolls of woven wrapper for bales. Nine hundred (900) by 90/100 capacity food grade jute bags hemmed at mouth overhead dry sewn will also be required alongside Personal Protective Equipment for workers namely overalls, gumboots and safety helmets will also be needed. Five (5) flame guard powder fire extinguishers and 10 smoke detector shall also be provided.

The project will also entail supply of a Hot and cold water dispenser (white in colour) alongside office ICT equipment namely: two (2) 15.6" desktop computers – 7^{Th} Gen Intel Core i7 -1TB HDD, 4GB RAM preloaded with Windows 10, two HP LaserJet Pro M277dw wireless printers (white in colour) and two (2) brand new laptops Core i7, 1TB 2.9GHz CPU with 8GB RAM.
The activities at this phase will entail procurement, delivery, installation and testing of the equipment. Specifications and details are attached in Annex 4 on Bill of Quantities.

2.2.3 Operations activities

2.2.3.1 Receiving, Weighing and Sorting the Seed Cotton

In Lamu County, Mpeketoni and specifically Bahari ward has been the hub of cotton production. Seed has been supplied by the State Department of Agriculture through the ginners to the farmers or through the extension officers. Once the cotton is ready it is harvested, packed in jute bags awaiting collection by the ginners. The ginners have previously no had enough capacity to collect the cotton produced and marketing was a haphazard and chaotic process due to limited number of collection trucks.
The development of this ginnery will now assure farmers on a ready and organized market for the seed cotton.
Once the farmers' produce is delivered from the collection centers in the production zones, it will be offloaded, weighed and fed into the cotton cleaning machine for removal of the yellow cotton, pieces of branches and soil and stones. The clean cotton is then sorted and graded before being fed into the conveyor.

2.2.3.2 Ginning and De-linting

The clean sorted seed cotton is fed into an inclined conveyor for delivery to the double-roller cotton gins for ginning. Ginning separates the seed from the lint. The seeds drop down into a chute which has a corkscrew that delivers the seed into a seed hopper for collection. The cotton lint is now ready for baling.

2.2.3.3 Baling and Storage

The cotton lint which has now been separated from the seed is collected and fed into the manual baler where it will be compressed into a bale weighing between 180 – 250 kg. The bales are wrapped in a woven wrapper and taken to the store to await sale and collection by the spinners.

2.2.3.4 Storage of Cotton Seed

The cooperative society will store the cotton. The cotton seed will be stored and later be distributed to farmers in case its certified its of good quality or be given to farmers to feed animals

2.2.3.5 Marketing

The Mpeketoni Farmers Cooperatives Society Limited executive committee shall be tasked with the responsibility of coordinating activities at cotton ginnery and also take charge of marketing, gathering and disseminating market information, negotiating for better cotton prices and procuring agricultural inputs (pesticides, fertilizers, spray pumps, protective equipment) at discounted prices on behalf of members.

2.2.3.6 Payment

The Cooperative's executive committee have explored a ready market and will enter into an agreement with Thika Cotton Mills to be given funds upfront during the cotton buying season in order to pay farmers on delivery of seed cotton. The cooperative members will later receive bonuses after sale of by-products namely cotton seed oil and cotton seed cake. The cotton seed oil is sold to processors involved in bio-fuels manufacture. While cotton seed cake is sold to livestock farmers for augmenting feeds or sold to animal feed manufacturers to process animal feeds. shall sell and release cotton lint from the stores to spinners upon receiving full payment for lint sold. Bylaws guiding the commission to be deducted and how payment shall be made to contributing members are in place, however, there is need to review them as the model of operating the ginnery is novel to members of the cooperative. In principle, there is unanimous understanding that a commission be deducted from the total proceeds after selling cotton and the remaining amount be paid to each farmer commensurate to the quantity and grade of cotton delivered to the cotton ginnery.

The farmers shall be paid promptly once they have delivered their cotton to the cooperative stores.

The farmers will later be paid bonuses that shall arise out of the premium price of lint, proceeds from seed oil and seed cake.

*2.2.3.*7 Administrative works

The facility shall be operated on daily basis during the peak cotton production season and the project management committee of the cooperative is mandated to oversee its operations through a lean management team consisting of a manager, clerks, casual laborers and technicians. Activities associated with the administrative work includes but not limited to duty allocation, record keeping, staff welfare, meetings, marketing, enquiries, loading and off-loading of cotton in the facility, cleaning of the facility and accounting.

2.2.4.8 Waste management activities

Three categories of wastes are envisaged to be generated by the facility. These wastes have been assessed based on the phases i.e. Machinery Installation and Operation phase.

Machinery Installation Phase:

During this phase, some minor construction works shall be undertaken to prepare the site to receive the equipment. These shall include: create an access across the adjoining stores by minor demolition works, repair of the concrete floor, enlargement of the existing windows and construction of the machine platforms.

The main waste shall be inert construction waste, while there will also be domestic wastes namely plastic bottles, waste papers, disused packaging materials and food wastes.

Operation Phase

During the operation phase the main wastes will be: solid and liquid wastes.

These wastes are:

Solid waste

Solid waste associated with the facility includes waste unprocessed seed cotton, waste cotton seed, torn jute bags, waste woven wrappers, plastic bottles, food packaging materials, office wastes and other general wastes.

Liquid waste

Liquid wastes related with facility includes;

- Water discharges from washing and cleaning,
- Sewage and waste water

Activities related with waste management includes

- Engaging the mandated County Department on waste collection and disposal of waste handled appropriately on site
- Provision of solid waste handling dustbin
- Wastes will be properly segregated and sorted to encourage recycling of some of them.
- Provision of dustbin receptacles at the entrance as the central collection point.

Routine maintenance

In order to ensure continued operation of equipment, proper and timely maintenance and repairs are necessary. This periodic maintenance will be scheduled so that sections needing repairs and serving can be identified before breakdown occurs to the plant.

2.2.4.7 Decommissioning Activities.

Decommissioning is as important as any other phase in project cycle in sustainable development. It is a winding up phase after operational phase and it entails uninstallation of the machines and associated materials at the end of project life. The activities to be undertaken during this phase will constitute:

- Undertaking a decommissioning EIA
- Preparing a decommissioning design
- Switching off power
- Demolition of the installed structures
- Disposal of waste materials in accordance with the NEMA Regulations
- Clean up and rehabilitation of the site
- Post decommissioning monitoring.

2.2.4.9 Materials and Equipment

The cotton cleaning machine, inclined belt conveyor, double roller gins and baler shall be sourced from licensed and authorized dealers as per the specifications developed by the bio-systems engineer. Machine specifications are attached in annex 7(machines speciation's). Since the project is highly specialized, it is advisable that the proponent or contractor be licensed by companies that supplies the ginning machines. Equally, for the ginning and connected machines that require serving should be serviced by qualified and licensed technicians.

2.2.4.9 Proposed project cost

The estimated budget for the development of the proposed project is Kshs. 10,031,593 as per the attached BOQ in Annex 4. The budget is not inclusive of the cost of implementing mitigation measures detailed in the EMMP. As such, the cost of implementing mitigation measures should be considered as the proponent's contribution toward implementation and development of the project.

CHAPTER THREE
THE LOCATION OF THE PROJECT

3.0 Introduction

This chapter provides critical detailed information on location and site description, status of land ownership of the proposed project. Additionally, the chapter captures information on availability of supportive environmental management infrastructure and explains whether the proposed project is in conformity to current land use or zonation plan.

3.1 Location description

The proposed Ginnery facility will be developed on land owned by Lake Kenyatta Cooperative society under lamu council. The proposed site administratively is in Bahari ward, Mpeketoni sub-location, Lamu West Sub County, Lamu County. The proposed site is at GPS coordinates latitude $2^0$23’25.4’’ S, and longitude $40^0$41’42.5’’ E and elevation of 50 M above sea level.
The site housing the Cooperative offices is sandwiched between Mpeketoni Boys Secondary School, Lake Kenyatta Primary school and the public grounds at Mpeketoni town as shown in Fig. 1 below.

Figure 1: Site for the proposed project

The site is accessed as you enter Mpeketoni town from Kibaoni centre just immediately after the junction on the route to Baharini centre at Lamu Filling Station being the first plot on the right at the Mpeketoni Cooperative offices. The Cooperative has due to financial constraints identified the current produce store to be converted into the ginnery by creating an

interconnecting door to create an access to allow installation of the micro-gins and baler alongside other equipment for connected purposes. The open shed on the outside will be improved to host the seed store while the store at the cooperative offices will be used for storage of baled lint awaiting collection to market. The two offices on the extreme ends will be use one as an administrative office and the other as a cloakroom. One administrative duties will be handled at the present Cooperative offices at the same site.

3.2 Site Ownership

The land on which the proposed project will be developed is owned by lake Kenyatta Cooperative Society Limited and measures approximately 0.036 Ha. The allotment letter is issued by the Department of Lands is attached to this report in annex 2.

3.3. Environmental sensitive area

The area is far away from any ecologically sensitive area such as forest and wetlands. The area is relatively flat with most areas averaging four percent (4%) slope. There is virtually for erosion and flooding is the main problem experienced but this is only during the rains.

3.4. Environmental Management infrastructure

3.4.1 Energy:

There is availability of Electricity in Mpeketoni and at the proposed site supplied by Kenya Power and Lighting Company through the national grid. The proposed site is already connected with the electricity, however, there is need of undertaking minor electrical repairs to the existing electrical infrastructure. This will be undertaken by the Cooperative Society.

3.4.2 Water:

The area source water from an onsite well and also is connected to the LAKWA Water Supply line. Water from the well is available throughout the year although it is slightly saline in nature whereas water from LAKWA is freshwater from Lake Kenyatta and is available to the residents throughout the year.

3.4.5 Transport and communication: The proposed site is within Mpeketoni town and easily accessed through the newly made tarmac road from both Kibaoni and Lamu. Additionally, the project site is covered by mobile connectivity from a number of private companies in Kenya, namely; Safaricom, Airtel and Telkom companies.

3.4.6 Security and safety: The proposed site is safe and favorable for the earmarked project as Mpeketoni is the headquarter of Lamu West Sub County hosting Deputy County Commissioner and Sub County Police Commander. Mpeketoni police station is approximately 0.5 KM from the proposed site.

3.5 Conformity to land use plan

The proposed project site is situated in an area categorized as settlement zone. The project is considered as a low risk project and therefore its implementation at the proposed site is conformity to the area's land use plan.

CHAPTER FOUR
PUBLIC PARTICIPATION & STAKEHOLDER CONSULTATIONS

4.0 Overview

This chapter gives details of the objective of the public consultation, Categorization of Community Participants and Stakeholders, Methodology of Public Participation and Consultation and Summary of Issues Raised by the Community and Stakeholders.

4.1 Objective of public participation

Any proposed project is likely to have some impacts on the surrounding community and the environment. The objective of public participation is to ensure that all people who are likely to be affected by a proposed project either positively or negatively are fully informed, and given an opportunity to raise their concerns. It is a requirement that all world bank funded project conduct an ESIA carry out public participation.

4.2 Consulted Community Participants and Stakeholders

The expert consulted different categories of community members. The members were consulted to give their views and concerns about the project. The consulted stakeholders included a group of the cooperative members (8people), some neighbours to the project site. (3 people), a group of 140 beneficiary farmers from different sub locations of the cotton producing area.

Other stakeholders that participated in giving views were ward administrator, the area chief, area Assistant county commissioner and the director agriculture.

About 71 male and 82 female community members participated in giving views and concern of the proposed project.

4.3 Methodology of Public Participation and Consultation

Public participation for this proposed project was accomplished through; a public meeting (baraza) that was held on the 26th May 2022. Mobilisation for the public participation of this meeting (baraza) was done by chief and other community local leaders. A total of 140 people participated of which 74 women and 66 men

The meeting was chaired by the area chief and was moderated by the Lead expert. The lead expert led the discussion by used of a guided questionnaire to get the concern and impacts of the project.

A focused group discuss was conducted with the cooperative members to get more information and incites about the project. The members also raised their concern in an elaborate way by exchanging views with the team of experts. The discussion with the cooperative members was conducted at the cooperative office.

key Informants were approached to give their technical advice and concern before commencement of the project. They were interviewed by the expert to give their technical inputs about the project.

4.4 Summary of Issues Raised by the Community/ Stakeholders and Response

The community members mentioned positive issues and also raised some concerns about the project; they were as follows.

4.4.1 The anticipated **positive impacts** of the proposed project:

- Increased employment opportunities.

- Increased earnings from the cotton crop.
- Increased community growth and development.
- Reducing exploitation of farmers by middlemen.

4.4.2 The anticipated negative environmental impacts of the proposed project:

4.4.2.1 Solid waste pollution

During the installation, operational and decommissioning phases, solid waste will be generated. In the implementation phase, solid waste such as used cement packets, inert construction waste, shall be generated. In the operational phase, solid wastes generated such as cotton lint waste, cotton seed waste and plastic waste is envisaged to be generated. Participants advised that adequate mitigating measures such as use of dust bins and proper disposal of solid waste be instituted.

4.4.2.2 Dust pollution

Minor construction works are expected to be undertaken in the existing building. As such, concrete dust is expected to be observed. Equally, cotton ginning is associated with fine cotton dust which may be inhaled resulting to respiratory inspection. Participants implored that workers should be provided with the requisite PPEs such as nose mask.

4.4.3 The anticipated negative social impacts of the proposed project:

4.4.3.1 Disputes

Family disputes are likely to arise when the male family heads receive high payments for cotton but instead of spending the money on agreed expenditures, they spend the money on expenses the rest of the family members disagree. Participants especially female members of communities requested measures be developed to safeguard family welfare.

Disputes may also arise between workers and PMC, and farmers and PMC due to late delayed of salaries and money due to farmers from delivered cotton. Participants recommended that payment procedures must be agreed on between all interested parties. To ensure, payments to farmers are not delayed, project management committee should ensure farmers' records on cotton being delivered to the cooperative for sale is kept properly to avoid conflicts among farmers when calculating agreed payments. Furthermore, conflicts among society members may be addressed through a grievance redress mechanism committee.

4.4.3.2 Spread of HIV/AIDS

Participants observed that spread of HIV/AIDS is expected to occur as a result of the inflow of migrant workers to Mpeketoni. Skilful workers are expected to be brought in by the contractor for installation of the ginning machines as the area lacks people with the skill set required. Equally, spread of HIV/AIDS may be triggered by the expected high incomes to cotton farmers from improved prices of cotton and the general improvement of the local economy spurred by this project. Improved economic status may encourage reckless immoral behaviour such as prostitution, especially among youths. This will increase the cases of HIV/AIDS in Mpeketoni. Participants requested that local communities as well as workers should be sensitised on abstinence and safe sex.

4.4.3.3 Sexual abuse to workers and minors

Sexual abuse occurs in different form which include subtle to explicit manifestation of the abuse. Sexual abuse has no barrier of gender, age or location. A such, participants suggested that stringent measure be instituted to safeguard the dignity and integrity of all workers and most importantly the minors.

CHAPTER FIVE
POTENTIAL IMPACTS AND MITIGATION MEASURES

5.1 Introduction

5.2 Potential Beneficial Impacts

5.2.1 Improvement of livelihoods of cotton farmers

In the operational phase, this project is expected to pay farmers a higher price for their seed cotton deliveries to the ginnery than the farmers are currently getting. The Lake Kenyatta Farmers' Cooperative Society will also be able to pay bonuses to cotton farmers depending on the quantities of seed cotton deliveries made. These two factors will combine to make the cotton farmers have better earnings for their crop and therefore improve their livelihoods.

5.2.2 Job creation

Jobs will be created during all project phases of this project. During the implementation phase, locals are expected to benefit from non-technical jobs in the repairs of the building and some technical jobs which can be done by locals such as electrical wiring. Those to be employed in this project phase will be employed by the contractor contracted to carry out the installations of the 8 ginning machines.

During the operational phase, jobs will be created by the Lake Kenyatta Farmers' Cooperative Society. The new jobs to be created which are currently not there are jobs such as weighing the seed cotton, grading and delivery to the ginning machines for processing, baling of the lint, aggregating the cotton seeds and transporting the lint bales and cotton seeds for storage before transportation out of the county for sale.

In the decommissioning phase, jobs will be created for the uninstallation of the installed machines and uninstallation of plumbing pipes. Jobs here will be under the control of the decommissioning contractor.

5.2.3 Support to local businesses

During the implementation phase, workers at the site will require regular supplies of ready food, food ingredients and other personal items. This is expected to improve the businesses of local food vendors, grocers and shops.

In the operational phase, the local businesses are expected to benefit from the expected increase in incomes of cotton farmers and incomes of employees of the Cooperative Society.

Finally, local businesses will still benefit during the decommissioning phase as in the implementation phase because the workers carrying out the decommissioning will also require food supplies at the site and food ingredients and other personal requirements which local businesses can sell to them.

5.3 POTENTIAL NEGATIVE IMPACTS DURING CONSTRUCTION

5.3.1 Potential Environmental Impacts

5.3.1.1 Sewage and wastewater pollution

Generation of sewage and wastewater will take place during all the project phases: the implementation phase, the operational phase and the decommissioning phase.

The Cooperative Society currently has 3 pour flash pit latrines and 1 VIP pit latrine. These are the facilities to be used for disposal of sewage and wastewater in all the project phases.

Proposed mitigations

Due to the fact that this type of sewage and wastewater disposal is highly polluting to the environment, it is recommended that the Cooperative Society improve it by constructing

modern toilets with a septic tank and soak pits for treatment of sewage and wastewater before disposal to the natural environment.

5.3.1.2 Solid waste pollution

During the implementation, operational and decommissioning phases, solid waste will be generated. In the implementation phase, solid waste generated will mainly be used cement packets, inert construction waste, waste plastic bottles, general waste generated by onsite workers and plastic insulations of electrical wires.
In the operational phase, solid wastes generated will mainly be paper waste, cotton lint waste, cotton seed waste and plastic waste.

Proposed mitigations

- Installation of 3 colour-coded waste bins for use by people to deposit various types of solid wastes as follows: green for biodegradables, blue for non-biodegradables and yellow for hard plastics. The use of the 3-colour coded dust bins for disposal of various types of solid wastes will ensure the solid waste is segregated and sorted at source. This can facilitate reuse and recycling of some of the solid waste
- However, there should be no generation of plastic carrier bags waste because use of carrier bags was banned and has remained banned in Kenya since August 2017.
- Ensuring regular emptying of the dust bins once they get filled up.
- Inert construction waste to be sold or given out free to project proponents of new construction sites for reuse.
- Cement packets waste to be taken for incineration.
- Hard plastics to be taken for incineration or be collected and stored for sale to the plastics recycling plant at Wiyoni in Lamu.

5.3.2 Potential Social Impacts

5.3.2.1 Sexual abuse of workers

Although sexual exploitation of workers is commonly done by males to their junior female workers, the reverse can also happen where a female does it to her junior males. Cases of sexual abuses of workers are common in all work places and it is difficult to stop them altogether.
The following mitigation measures proposed are therefore only aimed at minimising this vice:

- Enhancement of morality through religious teachings.
- Introduction of a suggestion box where workers can secretly report cases of sexual advances to them from their seniors.
- Workers who are facing threats of sexual abuse to report the potential perpetrator to the seniors of the potential seniors in order for disciplinary action to be taken against the potential perpetrator.
- Severe disciplinary action to be taken by the contractor for workers found to be engaging in sexual abuse of their juniors. Such disciplinary action could even include dismissal.
- Establishment of a Grievance Redress Committee by the Lake Kenyatta Farmers' Cooperative Society in order for the committee to address any complaints of sexual abuse of workers.

5.3.2.2 Sexual exploitation of minors

This is likely to happen to girls under the age of 18 years who may be lured into sex by migrant workers during the installations phase or when they are lured into early sex by workers at the facility when the facility is in operation.

Proposed mitigations

- The general public to be alert and vigilant and report suspected cases promptly to the Children's Officer or to the Police.
- Enhancement of morality through religious teachings.

5.3.2.3 Family disputes

These are likely to arise when farmers as the male family heads receive high payments for cotton but instead of spending the money on agreed expenditures, they spend the money on expenses the rest of the family members disagree. This causes serious family disputes because the other family members do not benefit from the collective effort of growing the cotton.

Proposed mitigations

The Cooperative Society to establish a Grievance Redress Committee to resolve such disputes.

5.3.3 Potential Health Impacts

5.3.3.1 Noise pollution

This is likely to be generated by use of drilling equipment for the minor repairs of the building's walls, floors and the making of an opening between the building's two halls in order to enable seed cotton that has been graded and weighed to be easily delivered to the ginning machine for processing.

Also, some noise can be generated by onsite workers during the implementation phase when the minor construction works and installations will be carried out.

Another likely source of noise is the use of a noisy standby generator when the mains electricity supply gets cut in a power blackout.

Proposed mitigations

- Noisy equipment such as drilling machines be fitted with silencers.
- Site workers to be required by the contractor to converse in low voices as they carry out their assigned tasks.
- Site workers and visitors to be provided with earmuffs.
- The standby generator to be fitted with silencers.

5.3.3.2 Dust pollution (concrete and cotton dust)

This is likely to be generated by use of drilling equipment for the minor repairs of the building's walls, floors and the making of an opening between the building's two halls in order to enable seed cotton that has been graded and weighed to be easily delivered to the ginning machine for processing. Fine cotton dust will be generated from ginning process of raw cotton.

Proposed mitigations

- Workers to wear PPEs (nose masks)
- Regular medical check-up for workers
- Vacuum clean with a type H cleaner suitable for industrial use
- Moistening the floor with a water spray.

5.3.3.3 Spread of HIV/AIDS

Spread of HIV/AIDS is expected to arise from two situations as follows:

1. The inflow of newcomers of migrant workers to Mpeketoni. The newcomers are expected to be brought in by the contractor engaged for the installation of the ginning machines.

2. The expected high incomes to cotton farmers from improved prices of cotton and the general improvement of the local economy contributed by this project may encourage reckless immoral behaviour such as prostitution, especially among youngsters. This will increase the cases of HIV/AIDS in Mpeketoni

Proposed mitigations

- Ensuring testing of migrant workers for HIV/AIDS is a mandatory requirement before recruitment to work for this project in the implementation phase.
- Promotion of use of condoms.
- Use of guidance and counselling services.
- Workers should be encouraged to undertake HIV/AIDS screening tests in order for them to know their HIV/AIDS statuses.

5.3.4 Potential safety impacts

5.3.4.1 Deaths and injuries from electrical accidents

The power supply category for the planned project is a 3-phase supply. This is a high voltage supply which the ginning machines require in order to operate. If the electrical wiring is not properly done, there is a possibility for electric shocks or electric fires. Such accidents can cause injuries or in extreme cases, deaths.

These accidents can happen during all the project phases: the implementation phase, the operational phase and the decommissioning phase.

Proposed mitigations

- Electrical wiring to be carried out by a highly qualified electrician so chances for electrical faults that can cause incidents of electric shocks to users or so that electric fires can be very minimal.
- Purchase and installation of an electric fires extinguisher.
- Installation of a fire alarm.
- The cotton ginnery machine operators to be trained on the precautions for the safe operation of the machines.
- All workers to be trained on safety measures while using electricity and electrical appliances.
- All workers to be trained on fire fighting.

5.3.4.2 Deaths and injuries from ordinary fire outbreaks

Ordinary fire outbreaks can happen at the facility either as an accident or by arson. This can happen during the implementation, operational and the decommissioning phases.

Proposed mitigations

- Installation of 2 fire extinguishers, one gas based and the other powder based.
- Workers to be trained on fire-fighting skills.

5.4 NEGATIVE IMPACTS DURING OPERATIONS AND MAINTENANCE

5.4.1 Potential Environmental Impacts

5.4.1.1 Sewage and wastewater pollution

Generation of sewage and wastewater will take place during the operational phase. The Cooperative Society currently has 3 pour flash pit latrines and 1 VIP pit latrine. These are the facilities to be used for disposal of sewage and wastewater in all the project phases.

Proposed mitigations

- Wastewater should be channelled through septic tank and soak pit system
- Sewerage waste to be disposed properly in the toilet

5.4.1.2 Solid waste pollution

During the operational phases, solid waste will be generated. In the operational phase, solid wastes generated will mainly be paper waste, cotton lint waste, cotton seed waste and plastic waste.

Proposed mitigations

- Installation of 3 colour-coded waste bins for use by people to deposit various types of solid wastes as follows: green for biodegradables, blue for non-biodegradables and yellow for hard plastics. The use of the 3-colour coded dust bins for disposal of various types of solid wastes will ensure the solid waste is segregated and sorted at source. This can facilitate reuse and recycling of some of the solid waste
- There should be no generation of plastic carrier bags waste because use of carrier bags was banned and has remained banned in Kenya since August 2017.
- Ensuring regular emptying of the dust bins once they get filled up.
- Hard plastics to be taken for incineration or be collected and stored for sale to the plastics recycling plant at Wiyoni in Lamu.

5.4.1.3 Waste seed cotton:

Waste seed cotton will arise from the cotton that falls away during processing and is not collected. This seed cotton is exposed to dust and the elements and may deteriorate rapidly in quality if left unattended. Seed that fall off the chute and remain the same fate.

Proposed mitigation measures

- Wear personal protective equipment PPEs
- These wastes will need to be collected and disposed-off safely at the recommended dump sites.

5.4.1.4 Solid waste:

Within the proposed project area, solid waste will be managed at source i.e. where wastes are segregated into recyclable and non-recyclable wastes.

- Recyclable wastes to be placed in dustbins
- Non-recyclable waste which are mainly general wastes such as used plastic water bottles to be collected and disposed appropriately by delivering the waste to Wiyoni Plastic Recycling Plant.
- Other non-recyclable wastes are placed in waste bins for subsequent collection and disposal by personnel from the Department of Public Health, Lamu County.
- The Project Management Committee shall provide normal dustbins to handle dry solid wastes and water proof waste bins with tight lid to handle wet solid wastes for subsequent proper management by mandated county department.

5.4.2 Potential Social Impacts

5.4.2.1 Sexual abuse of workers

Although sexual exploitation of workers is commonly done by males to their junior female workers, the reverse can also happen where a female does it to her junior males. Cases of sexual abuses of workers are common in all work places and it is difficult to stop them altogether.

The following mitigation measures proposed are therefore only aimed at minimising this vice:

- Enhancement of morality through sensitization meetings.
- Introduction of a suggestion box where workers can secretly report cases of sexual advances to them from their seniors.
- Workers who are facing threats of sexual abuse to report the potential perpetrator to the seniors of the potential seniors in order for disciplinary action to be taken against the potential perpetrator.
- Severe disciplinary action to be taken by the PMC for workers found to be engaging in sexual abuse of their juniors. Such disciplinary action could even include dismissal.
- Establishment of a Grievance Redress Committee by the Lake Kenyatta Farmers' Cooperative Society in order for the committee to address any complaints of sexual abuse of workers.

5.4.2.2 Sexual exploitation of minors

This is likely to happen to girls under the age of 18 years who may be lured into early sex by workers at the facility when the facility is in operation.

Proposed mitigations

- The general public to be alert and vigilant and report suspected cases promptly to the Children's Officer or to the Police.
- Enhancement of morality through religious teachings.

5.4.2.3 Family disputes

These are likely to arise when male family heads receive high payments for cotton but instead of spending the money on agreed expenditures, they spend the money on expenses the rest of the family members disagree. This causes serious family disputes because the other family members do not benefit from the collective effort of growing the cotton.

Proposed mitigations

The Cooperative Society to establish a Grievance Redress Committee to resolve such disputes.

5.4.3 Potential Health Impacts

5.4.3.1 Noise pollution

This is likely to be generated by ginning machine when processing raw cotton into lint. Equally, workers in the facility can be source of noise through load talking or shouting. Also, noise can be generated by onsite workers during when minor construction works and repairs will be carried out. Another likely source of noise is the use of a noisy standby generator when the mains electricity supply gets cut in a power blackout.

Proposed mitigations

- Noisy machines be fitted with silencers.
- Site workers to be required to converse in low voices as they carry out their assigned tasks.
- Site workers and visitors to be provided with earmuffs.
- The standby generator to be fitted with silencers.

5.4.3.2 Cotton dust pollution

This is likely to be generated from ginning process of raw cotton.

Proposed mitigations

- Workers to wear PPEs (nose masks)
- Regular medical check-up for workers
- Vacuum clean with a type H cleaner suitable for industrial use
- Moistening the floor with a water spray.

5.4.3.3 Spread of HIV/AIDS

Spread of HIV/AIDS is expected to arise from two situations as follows:

1. The inflow of newcomers of migrant workers to Mpeketoni. The newcomers are expected offer specialised skills inadequate among the local workers

2. The expected high incomes to cotton farmers from improved prices of cotton and the general improvement of the local economy contributed by this project may encourage reckless immoral behaviour such as prostitution, especially among youngsters. This will increase the cases of HIV/AIDS in Mpeketoni

Proposed mitigations

- Ensuring testing of migrant workers for HIV/AIDS is a mandatory requirement before recruitment to work for this project in the implementation phase.
- Promotion of use of condoms.
- Use of guidance and counselling services.
- Workers should be encouraged to undertake HIV/AIDS screening tests in order for them to know their HIV/AIDS statuses.

5.4.4 Potential safety impacts

5.4.4.1 Deaths and injuries from electrical accidents

The power supply category for the planned project is a 3-phase supply. This is a high voltage supply which the ginning machines require in order to operate. If the electrical wiring is not properly done, there is a possibility for electric shocks or electric fires. Such accidents can cause injuries or in extreme cases, deaths.

Proposed mitigations

- Electrical wiring to be carried out by a highly qualified electrician so chances for electrical faults that can cause incidents of electric shocks to users or so that electric fires can be very minimal.
- Purchase and installation of an electric fires extinguisher.
- Installation of a fire alarm.
- The flake ginning machine operators to be trained on the precautions for the safe operation of the machines.
- All workers to be trained on safety measures while using electricity and electrical appliances.
- All workers to be trained on fire fighting.

5.4.4.1 Deaths and injuries from ordinary fire outbreaks

Ordinary fire outbreaks can happen at the facility either as an accident or by arson.

Proposed mitigations

- Installation of 2 fire extinguishers, one gas based and the other powder based.
- Workers to be trained on fire-fighting skills.

5.5 NEGATIVE IMPACT DURING DECOMMISSIONING PHASE

5.5.1 Potential Environmental Impacts

5.5.1.1 Solid waste pollution

During the operational phases, solid waste will be generated. In the operational phase, solid wastes generated will mainly be inert waste such as stones, metal bars and rods, electrical wire etc.

Proposed mitigations

- Installation of 3 colour-coded waste bins for use by people to deposit various types of solid wastes as follows: green for biodegradables, blue for non-biodegradables and yellow for hard plastics. The use of the 3-colour coded dust bins for disposal of various types of solid wastes will ensure the solid waste is segregated and sorted at source. This can facilitate reuse and recycling of some of the solid waste
- Ensure regular emptying of the dust bins once they get filled up.
- Hard plastics to be taken for incineration or be collected and stored for sale to the plastics recycling plant at Wiyoni in Lamu.

5.5.2 Potential Health Impacts

5.5.2.1 Noise pollution

This is likely to be generated when uninstalling ginning machines. Equally, workers in the facility can be source of noise through talking load or shouting. Also, noise can be generated by onsite workers during when minor construction works and repairs will be carried out.

Proposed mitigations

- Noisy machines be fitted with silencers.
- Site workers to be required to converse in low voices as they carry out their assigned tasks.
- Site workers and visitors to be provided with earmuffs.
- The standby generator to be fitted with silencers.

5.5.2.2 Concrete dust pollution

This is likely to be generated from uninstalling ginning machines.

Proposed mitigations

- Workers to wear PPEs (nose masks)
- Vacuum clean with a type ‘H’ cleaner suitable for industrial use
- Moistening the floor with a water spray.

5.5.3 Potential safety impacts

5.5.3.1 Deaths and injuries from electrical accidents

The power supply category for the planned project is a 3-phase supply. This is a high voltage supply which the ginning machines require in order to operate. If the electrical wiring is not properly uninstalled, there is a possibility for electric shocks or electric fires. Such accidents can cause injuries or in extreme cases, deaths.

Proposed mitigations

- Uninstallation of electrical wiring to be carried out by a highly qualified electrician
- Installation of an electric fires extinguisher.
- All workers to be trained on safety measures when uninstalling electricity and electrical appliances.

- All workers to be trained on fire fighting.

5.5.3.2 Breakages of machines during uninstallation

Ginning machines are likely to break and damaged due to mishandling of machines during uninstallation.

Proposed mitigations

- Uninstallation workers to exercise great care during the uninstallation in order to avoid breakages
- Uninstallation to be carried out in strict compliance with instructions contained in the machine's manual

CHAPTER SIX
THE ENVIRONMENTAL, SOCIAL MANAGEMENT AND MONITORING PLAN

6.1 Introduction

The objective of this Environmental, Social Management and Monitoring Plan is to ensure that the implementation, operation and possible decommissioning of the LKFCS Ginning Machine Installation Project does not result in environmental degradation and that any adverse impacts predicted are adequately mitigated. It is also to ensure that monitoring indicators are correctly crafted and clearly stated in all the 3 phases of the project cycle in order to facilitate monitoring.

6.2 ESMMP Implementation

The necessary objectives, activities, mitigation measures, and allocation of costs and responsibilities pertaining to prevention, minimization and monitoring of significant negative impacts associated with the installation, operational and decommissioning phases of the cotton ginnery project are outlined in the ESMMP table below.

6.3 ESMMP Monitoring

In order to implement the environmental monitoring plan, it is recommended that the PMC identified as in the above ESMMP to oversee environment and monitoring aspects such as the pollution control, dust emissions control, occupational health and safety throughout the project area. The PMC is also expected to co-ordinate and monitor environmental management during installation and provide monitoring schedules during operations. Other recommended participants include the respective County Environmental Officers, Agriculture Offices and the County Department of Public Health. The responsibility relationship is as follows;

i. PMC will be responsible for coordination activities and liaisons, particularly in regard to the identification of project sites, installation, operationalization and social linkages.
ii. Department of Public Health will ensure that the contractor/PMC is observing all measures associated with occupational safety
iii. Agriculture Office will liaise with the Environment Offices on matters of environmental and social nature. Equally, they will advise on how resultant by-products can be reused to develop other products
iv. The beneficiary communities will be responsible for overseeing the implementation of the environmental monitoring plan established under this report.
v. The National Environmental Management Authority (NEMA) through the County Environment Office shall be responsible of surveillance of environmental and social aspects of the project implementation. It will be expected that the concerns will be communicated through the public relations person for prompt attention whenever they arise

6.3 Environmental, Social Management and Monitoring Action Plan

6.3.1 Environmental, Social Management and Monitoring during Construction

NO.	POTENTIAL IMPACTS	PROPOSED MITIGATION MEASURES	MONITORABLE INDICATORS	MEANS OF VERIFICATION	RESPONSIBLE	TIME FRAME	ESTIMATED COST (KSH)
1	**Sewage and wastewater pollution**	Construction of modern toilets	Number of toilets	○ Photos ○ Design report ○ Inspection reports	LKFCS	August 2022	500,000
		Construction of a septic tank and soak pits	Septic tank and soak pit system	○ Photos ○ Design report ○ Inspection reports	LKFCS	August 2022	100,000
2	**Solid waste pollution**	Installation of 3 colour-coded waste bins for depositing various types of solid wastes as follows: green for biodegradables, blue for non-biodegradables and yellow for hard plastics	Presence of 3 colour-coded waste bins at the site	○ Photos ○ Purchase receipts ○ Inspection reports	LKFCS	August 2022	20,000
		Engage the mandated Department of Public Health to regularly empty waste bins once they get filled up.	○ Evidence of regular collection of waste from the mandated department ○ Unfilled waste bins at all times	○ Photos ○ Inspection reports ○ Official letter requesting for waste disposal services	LKFCS	August 2022	Nil
		Inert construction waste to be sold, disposed properly or given out free to project proponents of	○ List of people the waste was given to	○ Photos ○ Inspection reports ○ List of inert waste recipients	LKFCS Contractor	August 2022	Nil

NO.	POTENTIAL IMPACTS	PROPOSED MITIGATION MEASURES	MONITORABLE INDICATORS	MEANS OF VERIFICATION	RESPONSIBLE	TIME FRAME	ESTIMATED COST (KSH)
		other construction projects for reuse	○ Absence of inert construction waste at the site				
		Hard plastics and cement packets waste to be taken for incineration or for the hard plastics, collected, stored and later sold to the plastics recycling plant at Wiyoni in Lamu	Receipts for deliveries of hard plastics to the plastics recycling plant at Wiyoni, Lamu	○ Photos ○ Inspection reports ○ Delivery receipts	Contractor LKFCS	August 2022	10,000
3	**Sexual abuse of workers**	Sensitize workers and local communities on moral ethics	Reduction in reported cases	Incidents report	○ Contractor ○ LKFCS ○ Police	August 2022	Nil
		Introduction of a suggestion box where workers can secretly report cases of sexual advances to them from their seniors	Presence of a suggestion box at the facility	○ A photo ○ Purchase receipt	Contractor	August 2022	2,000
		Severe disciplinary action to be taken by the contractor for workers found to be engaging in sexual abuse of their juniors. Such disciplinary action could even be dismissal	Record of disciplinary measures taken	Incidents report	○ Contractor	August 2022	Nil

NO.	POTENTIAL IMPACTS	PROPOSED MITIGATION MEASURES	MONITORABLE INDICATORS	MEANS OF VERIFICATION	RESPONSIBLE	TIME FRAME	ESTIMATED COST (KSH)
		Establishment of a Grievance Redress Committee (GRC) within the LKFCS to address any complaints of sexual abuse of workers	○ Presence of a GRC ○ Registered grievances	○ Minutes constituting the GRC ○ Incidents report	LKFCS	August 2022	Nil
4	**Sexual exploitation of minors**	General public to be alert and vigilant and report suspected cases promptly to the Children's Officer or to the Police	Reported cases	○ Incidents report	○ Contractor ○ LKFCS ○ Police ○ The general public	August 2022	Nil
		Enhancement of morality through sensitization	Records of sensitization meetings conducted	○ Sensitization report	○ Contractor ○ LKFCS ○ Police	August 2022	Nil
5	**Noise pollution**	Site workers be required to converse in low voices as they carry out their assigned tasks	Level of noise	○ Incidents report ○ Complaints register	Site foreman	August 2022	Nil
		Drilling machines to be fitted with silencers	Presence of noise silencing devices	Machine specification manual	Contractor	August 2022	20,000
6	**Concrete dust pollution**	Workers to wear PPEs (nose masks)	○ Workers wearing nose masks ○ Registered complaints	○ Complaints register ○ Photos ○ Inspection report	Contractor	August 2022	5,000

NO.	POTENTIAL IMPACTS	PROPOSED MITIGATION MEASURES	MONITORABLE INDICATORS	MEANS OF VERIFICATION	RESPONSIBLE	TIME FRAME	ESTIMATED COST (KSH)
		Moistening the floor with a water spray.	○ Absence of dust ○ Moisten surfaces ○ Registered complaints	○ Complaints register ○ Inspection report	Contractor	August 2022	5,000
7	**Spread of HIV/AIDS**	Encourage counselling and testing of workers for HIV/AIDS in all phases of project cycle	Record verifying counselling and testing	○ Visitors book recording the purpose of the visit ○ Photos	Contractor	August 2022	Nil
		Promote safe sex and use of condoms	Presence of a condom dispenser	○ A photo ○ Purchase receipt	Contractor	August 2022	5,000
8	**Deaths and injuries from electric accidents and fire outbreaks** ○ **Electric shocks** ○ **Electrical fires** ○ **Ordinary fire outbreaks**	Electrical wiring to be carried out by certified electricians	A record of the electrician's qualifications or CV for verification	○ Established expert file	○ Contractor ○ LKFCS	August 2022	Nil
		Purchase and installation of fires extinguisher (dry powder and gas based), fire alarm, fire reel and hose, bucket of sand	Presence of fighting appliances such as fire extinguishers, fire alarm etc	○ A photo ○ Inspection reports	LKFCS	August 2022	35,000
		The ginning machine operators to be trained on the precautions for safe operation of the machines	Certificates of participation in trainings	Copies of participation certificates Photos	○ Contractor ○ LKFCS	August 2022	50,000
		All workers to be trained on safety measures such as safe use of electricity	Certificates of participation in trainings	○ Copies of participation certificates ○ Photos	○ Contractor ○ LKFCS	August 2022	50,000

NO.	POTENTIAL IMPACTS	PROPOSED MITIGATION MEASURES	MONITORABLE INDICATORS	MEANS OF VERIFICATION	RESPONSIBLE	TIME FRAME	ESTIMATED COST (KSH)
		& electrical appliances, firefighting and first aid					

6.3.2 Environmental, Social Management and Monitoring during Operations and Maintenance

NO.	POTENTIAL IMPACTS	PROPOSED MITIGATION MEASURES	MONITORABLE INDICATORS	MEANS OF VERIFICATION	RESPONSIBLE	TIME FRAME	ESTIMATED COST (KSH)
1	**Sewage and wastewater pollution**	Disposal of sewerage and wastewater in the septic tank and soak pits system	○ Overflow of effluents on the surface ○ Functional toilets	○ A photo ○ Inspection reports	○ PMC ○ Contractor	From start of operations to decommissioning	50,000
		Apply for Annual Effluent Discharge Licenses (EDLs) from NEMA	○ Annual Environmental Audit Report ○ Annual EDLs from NEMA	Copy of EDL	○ PMC ○ CDE,NEMA, Lamu	From start of operations to decommissioning	35,000/- for EDL charges per year 60,000/- Annual EA report per year
		Compliance with NEMA's standards for effluent discharges to the natural environment.	Effluent tests reports	Test results	○ PMC ○ CDE,NEMA, Lamu	From start of operations to decommissioning	60,000/- per year for quarterly effluent tests

NO.	POTENTIAL IMPACTS	PROPOSED MITIGATION MEASURES	MONITORABLE INDICATORS	MEANS OF VERIFICATION	RESPONSIBLE	TIME FRAME	ESTIMATED COST (KSH)
2	**Solid waste pollution**	Retention & replacement of waste bins for depositing various types of solid wastes as follows: green for biodegradables, blue for non-biodegradables and yellow for hard plastics	Presence of 3 colour-coded waste bins at the site during implementation	○ Inspection reports ○ A photo	PMC	From start of operations to decommissioning	10,000/-year
		Engage the mandated Department of Public Health to regularly empty waste bins once they get filled up.	○ Evidence of regular collection of waste from the mandated department ○ Unfilled waste bins at all times	○ Waste disposal report ○ Inspection reports	○ Department of Public Health ○ PMC	From start of operations to decommissioning	Nil
		Hard plastics waste to be taken for incineration or collected, stored and later sold to the plastics	Receipts for deliveries of hard plastics to the recycling plastics plant at Wiyoni, Lamu	○ Waste disposal report ○ Delivery receipts ○ Inspection reports	○ PMC	From start of operations to decommissioning	20,000/- per load

NO.	POTENTIAL IMPACTS	PROPOSED MITIGATION MEASURES	MONITORABLE INDICATORS	MEANS OF VERIFICATION	RESPONSIBLE	TIME FRAME	ESTIMATED COST (KSH)
		recycling plant at Wiyoni in Lamu.					
3	**Sexual abuse of workers**	Retention of the suggestion box where workers can report in confidence cases of sexual advances to them from their seniors.	○ Presence of a suggestion box at the facility ○ Registered complaints	○ A photo	○ PMC	From start of operations to decommissioning	Nil
		Severe disciplinary action to be taken for workers found to be engaging in sexual abuse of their juniors. Such disciplinary action could include dismissal.	○ Signed contracts ○ Record of disciplinary measures taken	○ Contracts ○ Reports	○ PMC ○ Police	From start of operations to decommissioning	Nil
4	**Sexual abuse of minors**	Suspected cases to be promptly reported to the County Children's	Reported cases	○ Complaints report	PMC Police The general public	From start of operations to decommissioning	Nil

NO.	POTENTIAL IMPACTS	PROPOSED MITIGATION MEASURES	MONITORABLE INDICATORS	MEANS OF VERIFICATION	RESPONSIBLE	TIME FRAME	ESTIMATED COST (KSH)
		Officer or to the Police					
		Enhancement of morality through sensitization	Records of sensitization meetings conducted	○ Sensitization report	○ Contractor ○ LKFCS ○ Police	From start of operations to decommissioning	Nil
5	**Family disputes**	The Cooperative Society to establish a Grievance Redress Committee to resolve such disputes	Minutes of a meeting establishing the GRC	○ A photo ○ Minutes	○ LKFCS ○ GRC	From start of operations to decommissioning	10,000
6	**Noise pollution**	Site workers be required to wear ear muffs	Level of noise	○ Incidents report ○ Complaints register	PMC	From start of operations to decommissioning	Nil
		Ginning machines to be fitted with silencers	Presence of noise silencing devices	Machine specification manual	PMC	From start of operations to decommissioning	20,000/-
6	**Cotton dust pollution**	Workers to wear PPEs (nose masks)	Worker wearing nose masks	○ Photos ○ Incidents report ○ Complaints report	○ PMC ○ Workers	From start of operations to decommissioning	10,000/-
		Regular medical check-up for workers	Medical reports	○ Reports	○ PMC ○ Workers	From start of operations to decommissioning	5,000/-

NO.	POTENTIAL IMPACTS	PROPOSED MITIGATION MEASURES	MONITORABLE INDICATORS	MEANS OF VERIFICATION	RESPONSIBLE	TIME FRAME	ESTIMATED COST (KSH)
		vacuum clean with a type H cleaner suitable for industrial use	○ Presence of dampened surfaces ○ Absence of cotton dust	A photo Purchase receipt Inspection reports	○ PMC	From start of operations to decommissioning	5,000/-
		Moistening the floor with a water spray.	○ Presence of dampened surfaces ○ Absence of cotton dust ○ Registered complaints	○ Inspection report ○ Complaint report	○ PMC	From start of operations to decommissioning	5,000/-
7	**HIV/AIDS**	Encourage counselling and testing of workers for HIV/AIDS in all phases of project cycle	Record verifying counselling and testing	○ Visitors book recording the purpose of the visit ○ Photos	PHO PMC	From start of operations to decommissioning	Nil
		Promote safe sex and use of condoms	Presence of a condom dispenser	○ A photo ○ Purchase receipt	PHO PMC	From start of operations to decommissioning	Nil
8	**Death and injuries caused by electrical accidents and fire outbreaks**	Maintenance of the electrical wiring so that defects are detected early and promptly rectified	○ A maintenance schedule ○ Maintenance work reports	Incidents report	PMC	From start of operations to decommissioning	24,000/- per year

NO.	POTENTIAL IMPACTS	PROPOSED MITIGATION MEASURES	MONITORABLE INDICATORS	MEANS OF VERIFICATION	RESPONSIBLE	TIME FRAME	ESTIMATED COST (KSH)
	○ **Electric shocks** ○ **Electric fires** ○ **Ordinary fire**	Regular servicing of the fire extinguishers	○ A service schedule ○ Servicing report	○ Inspection & servicing reports ○ Photos	PMC	From start of operations to decommissioning	20,000/- per year
		Workers to be trained on fire-fighting skills	○ Certificates of participation ○ Training report	○ Copies of participation certificates ○ Photos	PMC	From start of operations to decommissioning	50,000/- per year

6.3.3 Environmental, Social Management and Monitoring during Decommissioning Phase

NO.	POTENTIAL IMPACTS	PROPOSED MITIGATION MEASURES	MONITORABLE INDICATORS	MEANS OF VERIFICATION	RESPONSIBLE	TIME FRAME	ESTIMATED COST (KSH)
1	Pollution by solid waste	○ Inert construction waste to be sold, disposed properly or given out free to proponents of other construction projects	○ Absence of inert construction waste ○ List of people the waste was given to	○ Photos ○ Inspection reports ○ List of inert waste recipients	○ Decommissioning contractor Department of Public Health	When decommissioning becomes necessary	Nil
		○ The 3 colour-coded bins depositing various types of waste. These should be left intact for use by the general	Presence of the 3 colour-coded bins	○ Photos ○ Purchase receipts Uninstallation reports	LKFCS	When decommissioning becomes necessary	Nil

NO.	POTENTIAL IMPACTS	PROPOSED MITIGATION MEASURES	MONITORABLE INDICATORS	MEANS OF VERIFICATION	RESPONSIBLE	TIME FRAME	ESTIMATED COST (KSH)
		public even after decommissioning					
		○ Metallic waste water pipes to be sold to scrap metal dealers	Absence of metallic waste pipes	○ Photos Delivery receipt to scrap metal	LKFCS	When decommissioning becomes necessary	Nil
2	Dust emissions	Watering of ground for dampening before demolition	Ground to be observed to be damp during the demolition	Inspection report	Decommissioning contractor	When decommissioning becomes necessary	50,000/-
		Workers to be provided with nose masks	Workers to be observed wearing nose masks	○ A photo Workers wearing nose mask	Decommissioning contractor	When decommissioning becomes necessary	10,000/-
3	Electric shocks to uninstallers	○ Uninstallation to be conducted by a certified technician	Academic and certification credentials of the technician	Established expert file	Decommissioning contractor	When decommissioning becomes necessary	Nil
4	Breakages of machines during uninstallation	Uninstallation workers to exercise great care during the uninstallation in order to avoid breakages	Uninstalled machines to be intact	Machine uninstallation report	Decommissioning contractor	When decommissioning becomes necessary	Nil

NO.	POTENTIAL IMPACTS	PROPOSED MITIGATION MEASURES	MONITORABLE INDICATORS	MEANS OF VERIFICATION	RESPONSIBLE	TIME FRAME	ESTIMATED COST (KSH)
		Uninstallation to be carried out in strict compliance with instructions contained in the machine's manual	○ Machines manual ○ Uninstalled machines to be intact	○ Machine uninstallation report ○ Machine manual	Decommissioning contractor	When decommissioning becomes necessary	Nil

CHAPTER SEVEN
CONCLUSIONS AND RECOMMENDATIONS

7.0 Overview

This chapter outlines the findings of the report. It also states the experts' recommendation in regard to the proposed project.

7.1 Conclusions

In view of the SPR findings, there are possible environmental and social impacts at different phases of project implementation and shall be handled adequately by proponent as per the EMP. Guided by the findings of the ESIA and simultaneously considering the analysis of both positive and negative environmental and social impacts of the proposed project's development, it is the opinion of the lead expert that there are no significant negative impacts capable of imposing adverse effects to a point of stopping project development. The adverse impacts identified shall be mitigated as per recommended environmental and social mitigation measures.

In this regard, the considered opinion of the experts is that: the project being an environmentally low risk project poses no significant threat to the environment other than identified minor adverse impacts within the proposed project area. Additionally, the positive impacts of the project surpass the negative impacts which shall be effectively handled by mitigating measures outlined in the EMP. Therefore, the project should be licensed to continue, and activities be managed within the provided Environmental Management Plan alongside other laws and regulations.

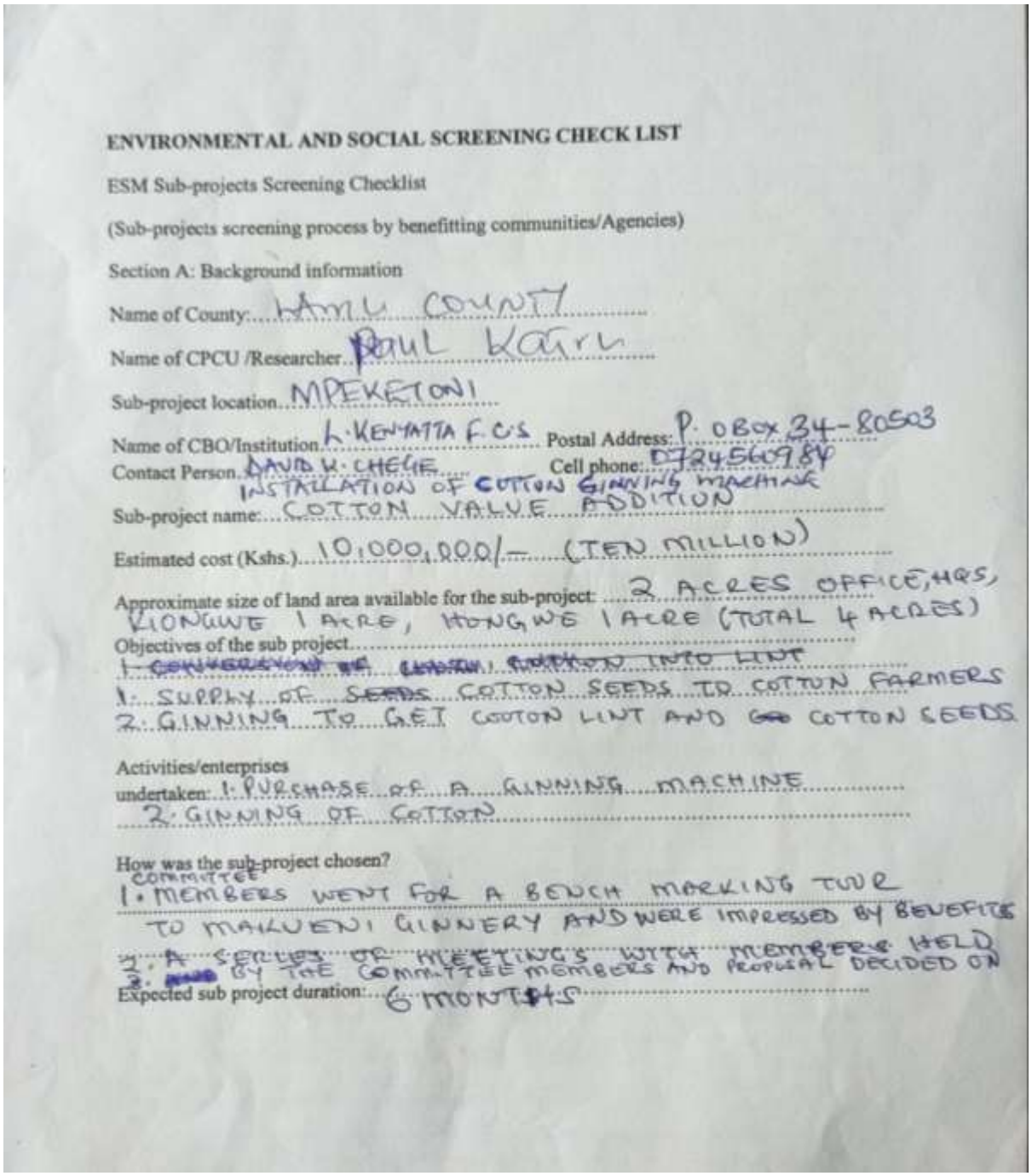
7.2 Recommendation

The report recommends that the project be allowed to go ahead, however, the proponent should abide by provided mitigation measures in environmental and so cial management & monitoring plan and relevant laws and regulations.

The facility should undertake environmental audits annually and ensure compliance as per recommendations issued by NEMA.

ANNEXES

Annex 1: Duly Filled ESS Checklist



ENVIRONMENTAL AND SOCIAL SCREENING CHECK LIST

ESM Sub-projects Screening Checklist

(Sub-projects screening process by benefitting communities/Agencies)

Section A: Background information

Name of County: HAMU COUNTY

Name of CPCU /Researcher: PAUL KAGIA

Sub-project location: MPEKETONI

Name of CBO/Institution: L. KENYATTA F.C.S Postal Address: P. O BOX 34-80503

Contact Person: DAVID K. CHEGE Cell phone: 0724560984

Sub-project name: INSTALLATION OF COTTON GINNING MACHINE COTTON VALUE ADDITION

Estimated cost (Kshs.): 10,000,000/= (TEN MILLION)

Approximate size of land area available for the sub-project: 2 ACRES OFFICE, HQS, KIONGWE 1 ACRE, HONGWE 1 ACRE (TOTAL 4 ACRES)

Objectives of the sub project:

1. ~~CONVERSION OF COTTON~~ COTTON INTO LINT
1. SUPPLY OF ~~SEEDS~~ COTTON SEEDS TO COTTON FARMERS
2. GINNING TO GET COTTON LINT AND ~~GO~~ COTTON SEEDS

Activities/enterprises undertaken: 1. PURCHASE OF A GINNING MACHINE
2. GINNING OF COTTON

How was the sub-project chosen?

1. COMMITTEE MEMBERS WENT FOR A BENCH MARKING TOUR TO MAILUENI GINNERY AND WERE IMPRESSED BY BENEFITS
2. A SERIES OF MEETINGS WITH MEMBERS HELD
3. ~~AND~~ BY THE COMMITTEE MEMBERS AND PEOPLE AL DECIDED ON

Expected sub project duration: 6 MONTHS

Section B: Environmental Issues

Will the sub-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.)?		✓
Use irrigation system in its implementation?		

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

Section E: Pesticides and Agricultural Chemicals.

This questionnaire will be used with the 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 and 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).....

(g) Do you use any kind of protective clothing while applying or handling pesticides? Yes No

Why?.....

h) If YES, what kind?

2. Knowledge of pesticide handling and storage (tick one in each row)

a) Do you read labels on the pesticide container before using?

Sometimes Always Never

b) How often do you wear protective clothing and other accessories like nasal mask, eye goggles, and boots when applying the pesticides?

Sometimes Always Never

c) Do you mix pesticides with your hands?

Sometimes Always Never

d) Do you observe the pre-harvest waiting periods after applying the pesticides?

Sometimes Always Never

e) After spraying, do you wait 12 hours before entering the field?

Sometimes Always Never

f) Do you store pesticides in a secure, sound and well-ventilated location?

Sometimes Always Never

g) Do you make a cocktail before applying the pesticides? (i.e., mix more than one chemical and apply them at once?)

Sometimes Always Never

h) Where do you store your pesticides?

Why do you store them there?

i) What do you do with your pesticide containers after they are empty?

j)Do you know of any beneficial insects(insects that eat harmful insects)? Yes.....No.....

k) If yes, name them:

i) .....

ii) .....

iii) .....

3. Pesticides and Health

Do you find that pesticide application is affecting the health of?

a) Persons regularly applying pesticides?

Sometimes Always Never

b) Persons working in fields sprayed with pesticides

Sometimes Always Never

c) Persons harvesting the produce

Sometimes Always Never

4. Options to Pesticides

a) From your experience, are you aware of other methods for controlling insects diseases and/or weeds besides pesticides? Yes..... No.....

b)If yes, describe the practices:

i)

ii)

iii)

iv

5. Information

a)What information do you think you need for improving your crop production and marketing?

.....

.....

.....

6. Training

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

Integrated Pest Management Yes..... No.....

No. of times/past yr. .....

b).Pesticide Usage Yes..... No.....

No. of times/past yr. .....

c).Pesticide Safety Yes..... No.....

No. of times/past yr. .....

d).Insect Identification Yes..... No.....

No. of times/past yr. .....

e).Disease Identification Yes..... No.....

No. of times/past yr. .....

f).Quality aspects of production Yes..... No.....

No. of times/past yr.....

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

---

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

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

Are there:	Yes	No.
People who meet requirements for OP 4.10 living within the boundaries of, or near the project?	✓	
Members of these VMGs in the area who could benefit from the project?	✓	

VMGs livelihoods to be affected by the sub project?		✓

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

Section G: Land Acquisition and Access to Resources

Will the sub-project:	Yes	No.
Require that land (public or private) be acquired (temporarily or permanently) for its development?		✓
Use land that is currently occupied or regularly used for productive purposes (e.g. gardening, farming, pasture, fishing locations, forests)		✓
Displace individuals, families or businesses?		✓
Result in temporary or permanent loss of crops, fruit trees and 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
All the above answers are 'No' There is at least one 'Yes'	• If all the above answers are 'No', there is no need for further action; • If there is at least one 'Yes', please describe your recommended course of action (see below).

(iii) Recommended Course of Action

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

Since the project is only for the installation of a ginning machine, it only requires an Environmental Impact Assessment Summary Project Report.

CPCU and County Director of Environment (CDE) will provide detailed guidance on mitigation measures as outlined in the ESMF; and Specific advice is required from CDE and CPCUs regarding sub-project specific EIA(s) and also in the following area(s)

All sub-project applications/proposals MUST include a completed ESMF checklist. The KCSAP CPCU and CDE will review the sub-project applications/proposals and the CDEs will sign off; The proposals will then be submitted to NPCU for clearance for implementation by communities in the proposed subprojects.

Expert Advice

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

Completed by:

Name: DAVID K. CHEGE

Position / Community: MANAGER

Date: 4/11/2021

Field Appraisal Officer (CDE): KAHINDI YERI

Signature:

Date: 8-2-2022

NEMA
COUNTY DIRECTOR OF
ENVIRONMENT
LAMU COUNTY

Annex 2: Letter of allotment for the land proposed for the project

COUNTY COUNCIL OF LAMU

TEL: 042-4633517
FAX: 042-4633517

P.O. Box 74, LAMU

Email:clerktocouncillamu@yahoo.com

Our Ref: CCL/MPEKETONI TRADING CENTR **Date:** 4.10.2012

Sir(s) Madam

LAKE KENYATTA COOPERATIVE SOCIETY

LETTER OF ALLOTMENT

PLOT NO. ***P.U*** *at* ***MPEKETONI*** *TRADING CENTRE.*

The County Council of Lamu has the honour to inform you that you have been offered grant of the above mentioned plot as shown in **the** approved plan acceptance of which will be signified by initially paying:-

1. Annual rent {revisable}	*Shs .750.00*
2. Survey fees	*Shs.2000.00*
3. Plot identification fees	*Shs 500.00*

CONDITIONS

4. This plot may be developed for **COMMERCIAL** use only.

5. The Council may repossess without compensation any plot that remains undeveloped 2{two} after allocation.

6. Sale, subdivision or change of plot may only be done with written consent of the Council.

7. All building plans in respect of the plot shall be approved by the Council before execution.

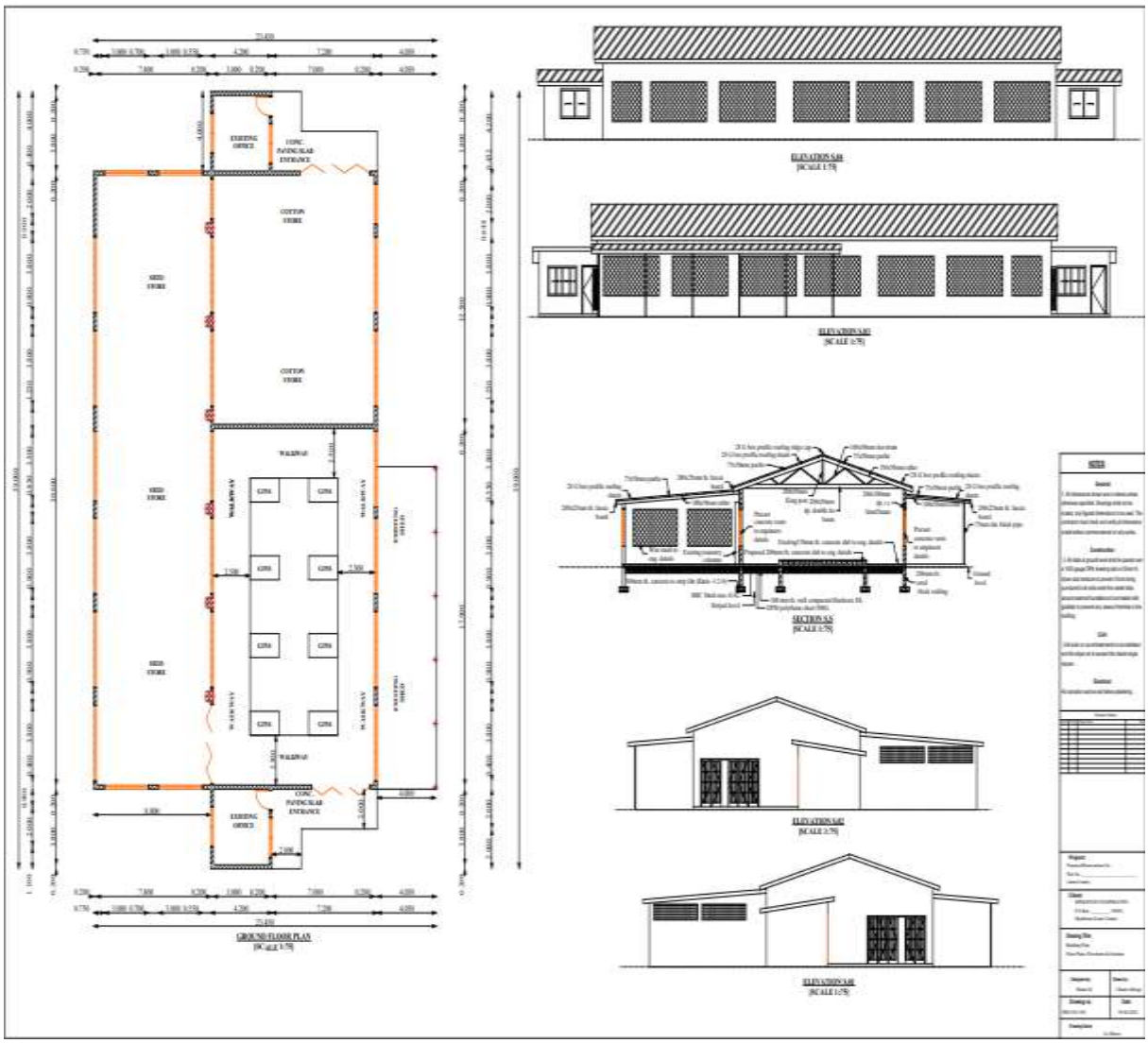
COUNTY COUNCIL OF LAMU
COUNTY CLERK
04 OCT 2012
P. O. BOX

M.O.SEMERA
For **CLERK TO COUNCIL**

NB: FORMALIZATION OF ALLOCATION AS RECOMMENDED BY WORK'S TOWN PLANNING & MARKETS COMMITTEE MEETING HELD ON 15TH.November, 2012 MIN. NO 69/2012

ISSUED WITHOUT ERASURES OR ALTERATIONS WHATSOEVER

Annex 3: Architectural plan and designs



Annex 4: Bill of Quantities

	COTTON GINNERY MACHINERY – Commodities & Technical Specifications				
	Input Capacity: 8000kgs per Day (8 hour working)				
	LAKE KENYATTA FARMERS COOPERATIVE SOCIETY				
	To be funded by: **KENYA CLIMATE SMART AGRICULTURE PROJECT**				
No.	**Equipment's Name/Specification**	**Quantity**	**Price (Ksh)**	**Total Price(Ksh)**	**Remarks**
	Cotton Cleaning Machines Capacity 3200Kgs/8hrs Feeding system Mechanical/Pneumatic/Manual Width 1200/1500/ 1800 mm Power 5Hp	1	650,000	650,000	The machine reduces maintenance of ginning machines by removal of yellow or pre-matured bolls, trash, stones and other impurities from raw cotton.
2	Seed Cotton Inclined Belt Conveyor Length 8m but Flexible In Length -Can be Accommodate Future Changes.	1	500,000	500,000	This conveyor is for feeding the cleaned cotton to ginning area.
3	Double Roller Cotton Ginning Machine Capacity 125Kgs/hr, floor space 2m by 1.7m, Power; 5-7.5Hp	8	750,000	6,000,000	DR gin found to be simple in operation, energy efficient, requires minimum operational cost, and consumes less spares. Saving in space requirement of the machine is observed to be 54 %
4	Hydraulic Manual-feed Cotton Bale Pressing Machine Capacity 50 Tonnes, Bales 30 – 250kgs per bale, Manual / automatic feeding system	1	525,000	525,000	This unit is for compressing the lint cotton
5	Screw / auger Conveyor Pipe Diameter 210mm, length 12m, Motor 15Hp	1	300,000	300,000	This unit is for conveying cotton seed out of the ginning area.
	OTHER EQUIPMENTS				
	Pallets for dunnage				
1	Pallets for dunnage of 2m x 1.5m made using 100mmx50mm sawn wood	20	5,000	100,000	These for supporting bales before transportation sourced from disused pallets
	Manual Platform Weighing Scale				
2	Supply a weighing platform scale with ability to weigh up to 250Kgs preferably Avery model	1	500,000	500,000	Weighing the bales

	Dial Weighing Scale				
3	Supply a dial weighing scale with ability to weigh up to 100Kgs preferably Avery or Salter models	4	7,500	30,000	Weighing raw cotton during buying process
	Sack trolley				
4	A two pneumatic wheeled heavy duty hand trolley metallic with ability to carry 350kgs.	10.00	15,000	150,000	Moving of bales and bagged cotton
	Freight cargo Containers: 40fts long	2.00	250,000	500,000	To be used for secure storage of cotton bales
	Rolls of Woven wrapper for bales 100m	5.00	5,000	25,000	For wrapping of bales
	Food grade Jute Bags				
5	90/100 kg Capacity Bags, Bag, hemmed at the mouth and overhead dry sewn,	900	200	180,000	Handling of raw seed cotton and cotton seed
6	Protective Clothing; Overall for workers	20	4000	80,000	Well-labelled and high quality
7	Protective Clothing; Gum boots	20	2000	40,000	For safety and health
8	Protective Clothing; Safety Helmets	20	500	10,000.00	For safety and health
9	Flame Guard Powder Fire extinguisher	5	6000	30,000.00	Suitable for trash wood paper, Electric equipment and combustible (Class A,C &D fires)
10	Smoke Detector	10	4000	40,000	To give early warning of a potentially deadly fire in the ginnery
				9,660,000	
	OFFICE EQUIPMENT				
	Item	Ksh	No.	Total	Features
1	Desktop computer - 15.6" - 7th Gen Intel Core i7 - 1TB HDD - 4GB RAM - Windows 10 – Black	70,000	2	140,000	Display: 15.6"Processor Speed: Intel Core i7 Ram: 4GB DDR4 Hard Drive: 1TB 5400 RPM Graphics: 2 GB AMD Radeon™ 530 DDR3 Camera: Yes
2	HP LaserJet Pro M277dw Wireless Color Printer – White	43,999	2	87,998	Functions: Print, copy, scan, fax, wireless Print speed letter: Up to 19 ppm (black and color)Scan to email; Auto duplex printing; 2 paper trays (standard)

3	RAMTONS RM/555- Hot & Cold Water Dispenser- White	13,595	1	13,595	Top-loading design High efficiency compressor cooling Power: 220-240V Rating cooling current: 0.7 A
4	Brand New Laptop Core i7 1TB 2.9 CPU RAM 8GB	65,000	2	130,000	Brand New Laptop Core i7 1TB 2.9 cpu RAM 8GB
				371,593	
	GRAND TOTAL			**10,031,593**	

Annex 5: Minutes of Public Participation and Stakeholder Consultation

PUBLIC PARTICIPATION MEETING MINUTES

Meeting Title	Stakeholders Consultations Meeting for Environmental Social Impact Assessment for cotton micro ginnery Installation
Meeting Date	26th May 2022
Meeting Time	09.03 am - 13.20PM
Venue	Mpeketoni Chiefs' office.

LIST OF PARTICIPANTS
See Attached Attendance List; annex 6

AGENDA OF THE MEETING
Public Consultations on the proposed installation of cotton micro ginnery at lake Kenyatta farmers' cooperative society.
The meeting started with a word of prayer from Pastor Daniel at 09:13 hours. The chairman of the meeting was the area chief Mr. Phillip Githinji. The chair welcomed all members for coming to the meeting. he introduced the EIA/EA panel of experts to the public. He allowed them to self-introduction themselves to the community members. The team introduced themselves and informed the public their purpose of visit.
The lead expert to the flow and started introducing the subject of the day. He started by informing the members that Lake Kenyatta cooperative society (proponent) intends to install eight (8) micro ginnery machines at the society's compound within mpeketoni town. The society has an existing superstructure where the machines needs to be installed. The explained the flow of activities that are entailed in the process. He informed them that cotton will be received, weighed, sorted and cleaned before being stored. The cotton will later to taken to the second room where it's going to be ginned and lastly baled into bundles on an average of 180 kg per bale. The lint bales will be stored separately from the seed cotton.
After the explanation, the expert asked the community to mention the positive, negative and any concern that may arise from the project.
The positive impacts mentioned were: -
Create employment opportunities to the local community.
Increased growth and development at the community.
Increased earnings to the cotton farmers.
During installation of machines, there will be some employment opportunities to local youth and women will be able to do small businesses especially sale of food and drinks to the construction workers.

There are several negative impacts that were mentioned. All the negative effects had some mitigation measures mentioned.
Some of the environmental negative impacts mention was: - noise, possible dust, waste produced during construction and operation. They further mentioned the suggestions on how they can be mitigated. One said for the noise control during construction, the works can be done over weekend so that school going children are not affected by the noise. There should be damp dusting while preparing and working at the site to reduce dust. The place has electricity, but if they use a backup generation during power failure, then the generator can be a source of noise. This will be short time and of low intensity.
On social issues the community mentioned of sexual abuse, discrimination of gender which can mainly happen during construction works. They suggested a committee of the community members be formed so that all those with any concern can report to the committee to address

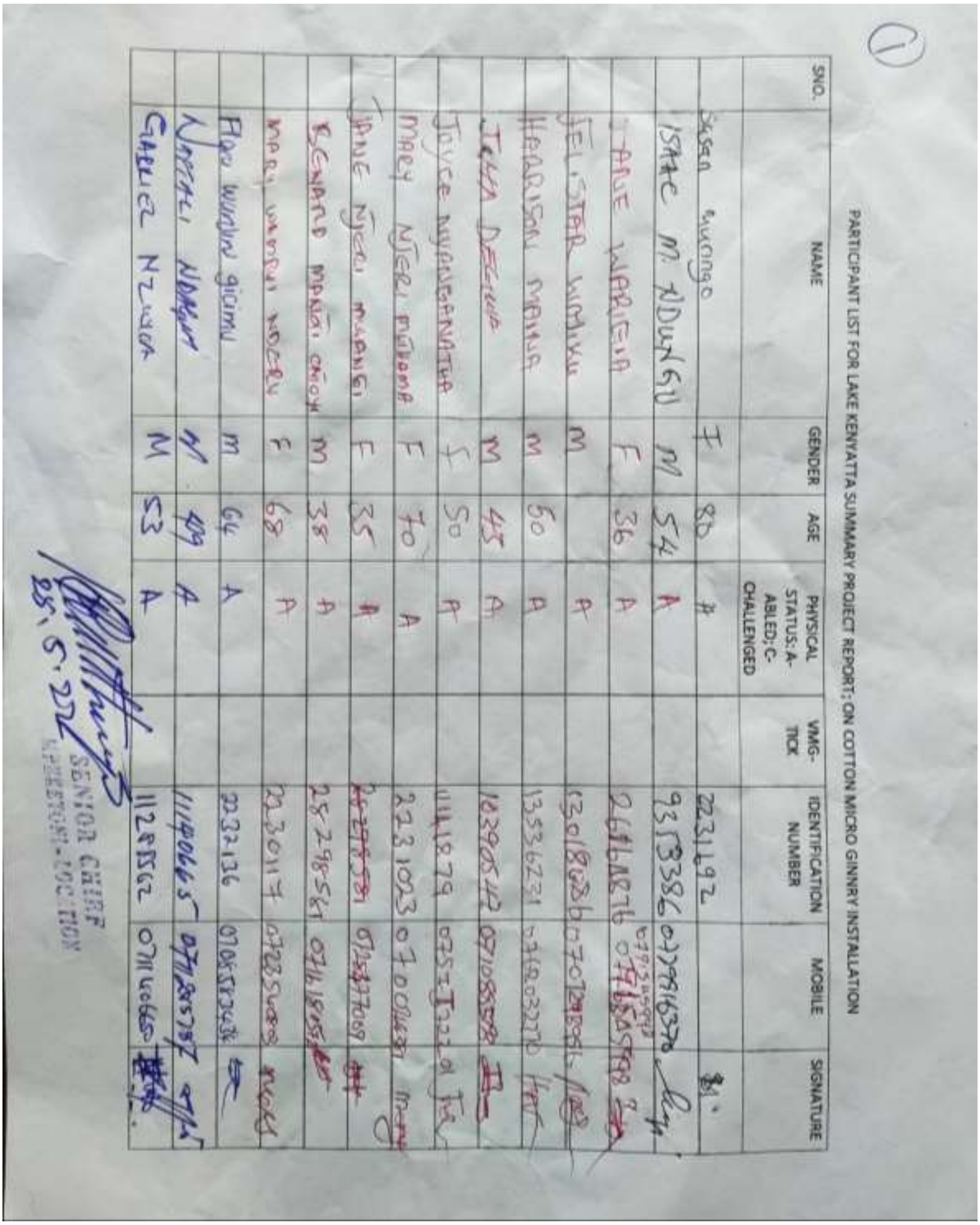
the plight. The community members said if they are involved and informed of all the activities by the cooperative construction and operation, then in case of any impact that arise on the way after commencement, the community will work hand in hand with cooperative management coming up with lasting mitigation measures.

The area chief wrapped up the meeting by informing the community members that it is their interest are taken care during construction and operation but should ask their rights without affecting development of the area.

After having discussed all that there was no any other business to discussion on the concern of the proposed project, the meeting ended with a word of prayer from one community member at 1355hours.

Chairman	**Signature**	**Secretary**	**Signature**

Annex 6: Attendance List During Public Participation and Stakeholder Consultation



PARTICIPANT LIST FOR LAKE KENYATTA SUMMARY PROJECT REPORT; ON COTTON MICRO GINNRY INSTALLATION

SNO.	NAME	GENDER	AGE	PHYSICAL STATUS: A-ABLED; C-CHALLENGED	VMG-TICK	IDENTIFICATION NUMBER	MOBILE	SIGNATURE
	Susan Murngo	F	80	A		2231692		
	ISAAC M. NDUNGU	M	54	A		9353386	0779916370	
	JANE WARIGIA	F	36	A		26161876	0791545998	
	FELISTAR WAMIKU	M		A		13018686	0707298956	
	HARRISON MAINA	M	50	A		13536231	0718032770	
	JESSA DEGIWA	M	45	A		10390547	0710855598	
	Joyce NYANGANATHA	F	50	A		1141879	0757172201	
	MARY NJERI MUKAMA	F	70	A		2231023	0700146391	
	JANE NJERI MWANGI	F	35	A		[illegible]	0725377009	
	BENARD MANGI CHOGE	M	38	A		25298561	0716180557	
	MARY WAMBUI NDERU	F	68	A		2230117	0728354089	
	Alex wanjiru gicimu	M	64	A		2232136	0708583436	
	NAFTALI NDAGU	M	49	A		11140665	0711285787	
	GABRIEL NZUGA	M	53	A		11285562	0711606650	

28.5.22

SENIOR CHIEF

MPEKETONI-LOCATION

(2)

PARTICIPANT LIST FOR LAKE KENYATTA SUMMARY PROJECT REPORT; ON COTTON MICRO GINNRY INSTALLATION

SNO.	NAME	GENDER	AGE	PHYSICAL STATUS: A-ABLED; C-CHALLENGED	VMG-TICK	IDENTIFICATION NUMBER	MOBILE	SIGNATURE
	Benard Njogu Mburu	M	70	A		0651630		
	Jacline Njoki Karuthi	F	30	A		29518349	0714865723	
	Martha Nyambura	F	60	A		3271455	0725717249	
	Beatrice Nyokabi Wacira	F	39	A		31363800	0790403977	
	Miriah Wanjiru Muthee	F	69	A		2233818	0712952234	
	Francis Munyori Muthee	M	41	A		22443699	0712952234	
	Catherine Muthoni Ndungu	F	22	A		37239167	0792002524	
	Peter Ngugi	M	20	A		41015000	0768485874	
	Daniel Ngangi	M	70	A		22315722	0713907046	
	John Gitau Kabiuki	M	47	A		13019274	0721941092	
	Paul Karuri	M	52	A		9011338	0725792608	
	Gabriel Gichuhi/Maina	M	60	A		2234080	0712825383	
	Deddah Wawera	M	76	A		2231407	0790168170	
	Hanna Muthoni	F	52	A		111400948	0792010759	

CHIEF

PARTICIPANT LIST FOR LAKE KENYATTA SUMMARY PROJECT REPORT; ON COTTON MICRO GINNRY INSTALLATION

SNO.	NAME	GENDER	AGE	PHYSICAL STATUS: A-ABLED; C-CHALLENGED	VMG-TICK	IDENTIFICATION NUMBER	MOBILE	SIGNATURE
1.	Wilson Mungai	M	58	A		2235849	07589906[illegible]	[signature]
2	William Mburia	M	82	A		0809942	070[illegible]	[signature]
3	James Mwangi	M	7 78	A		2231429	0717467571	[signature]
4.	Annah Wambui	F	60	A		2231070	07[illegible]	[signature]
5.	Joseph Murungu	M	50	A		1021639	0715957282	[signature]
6	David Njenga	M	70	A		2231875	071[illegible]	[signature]
7	Daniel N.K. Mwangi	M	76	A		22306182	0113570966	[signature]
8.	Lucy Nyambura	F	70	A		1219262	0716591249	[signature]
9.	Peter Ngugi	M	70	A		3694246	071042033 ~~07[illegible]~~	[signature]
10	Eunice Wangui	F	70	A		0845158	0712533685	[signature]
11	Mwangi muhki mwangi	M	69	A		2232546	070428179	[signature]
12	Samuel muthami mutte	M	43	A		14537582	0714675294	[signature]
13	Titus miano Gichomu	M	34	A		30130157	0792039514	[signature]
	~~Ros~~ Lucy W Kamau	F	59			2233216	0726048867	[signature]

[signature] 26-8-22

SENIOR CHIEF
[illegible]-LOCATION

Annex 7: A filled Questionnaire by a key informant

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT SUMMARY PROJECT REPORT

PUBLIC PARTICIPATION QUESTIONAIRE FOR LAKE KENYATTA FARMERS' COOPERATIVE SOCIETY ON INSTALLATION OF COTTON MICRO GINNERY

AT MPEKETONI, LAMU COUNTY.

INTRODUCTION

The proponent: Lake Kenyatta farmers' Cooperative society intends to seek NEMA approval for the proposed installation of cotton micro ginnery Mpeketoni Town, Baharl ward, Lamu West Sub-County, Lamu County as per the provisions of Environmental Management & Coordination Act, Cap 387 and Environmental (Impact Assessment & Audit) (Amendment) Regulations 2019. The has been assigned the responsibility of undertaking an Environmental Impact Assessment for the proposed facility. We would be highly appreciative if you could offer your honest opinion on issues raised in this questionnaire and any information you give will remain confidential.

Name: JOHN K. NGENGA

Profession: TEACHER

Department/Relation: EDUCATION DEPT. /SECONDARY

Tel: 0721375735

For how long have you been resident in this area? ..... yrs.

Are you aware of the proposed development project? Y..✓.. N..... (Tick as appropriate)

In your opinion in what ways will the proposed development benefit the locals/residents?

✓ Create employment

✓ Open the area

✓ Help in the improvement of infrastructure

✓ Raised standards of living through increased earning.

List the negative anticipated risks you foresee:

Impact	During Construction works	During Operation when the ice plant is under use
Likelihood of noise disturbance	Y ✓ N.....	Y ✓ N.....

Impact	During Construction works	During Operation when the ice plant is under use
Likelihood of generating lots of solid waste	Y..... N..✓...	Y..... N..✓...
Likelihood of obstruction of pathways	Y..... N..✓...	Y..... N..✓...
Likelihood of sewage contaminating waterways (sources)	Y..... N..✓...	Y..... N..✓...
Risk of spread of HIV/AIDS	Y..... N..✓...	Y..... N..✓...
Likelihood of discrimination against women:	Y..... N..✓...	Y..... N..✓...
Likelihood of discrimination against differently-abled persons	Y..... N..✓...	Y..... N..✓...
Likelihood of utilizing child labour	Y..... N..✓...	Y..... N..✓...
Likelihood of sexual abuse of workers	Y..... N.....	Y..... N..✓...
Likelihood of sexual exploitation of minors	Y..... N..✓...	Y..... N..✓...

Any other concern(s):

My only concern is whether the project will be sustainable due to inadequate rainfall we are experiencing nowadays.

What do you think can be done to mitigate against the negative impacts listed in (4) above?

✓ Use of sand dust barriers to minimize noise

✓

Do you approve of the proposed installation of ice making and cold storage machinery project?
Y..✓... N..... (Tick as appropriate).

If No in (6) above, give reasons

I approve the project as it will because it will benefit the community

Sign: .....

Name: NJENGA JOHN

Thanks for your time.

MPEKETONI BOYS' HIGH SCHOOL
DEPUTY PRINCIPAL
24 MAY 2022
P.O. BOX 37-80503, MPEKETONI

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT SUMMARY PROJECT REPORT

PUBLIC PARTICIPATION QUESTIONAIRE FOR LAKE KENYATTA FARMERS' COOPERATIVE SOCIETY ON INSTALLATION OF COTTON MICRO GINNERY

AT MPEKETONI, LAMU COUNTY.

INTRODUCTION

The proponent: Lake Kenyatta farmers' Cooperative society intends to seek NEMA approval for the proposed installation of cotton micro ginnery Mpeketoni Town, Bahari ward, Lamu West Sub-County, Lamu County as per the provisions of Environmental Management & Coordination Act, Cap 387 and Environmental (Impact Assessment & Audit) (Amendment) Regulations 2019. The has been assigned the responsibility of undertaking an Environmental Impact Assessment for the proposed facility. We would be highly appreciative if you could offer your honest opinion on issues raised in this questionnaire and any information you give will remain confidential.

Name: AGUTU JOSEPH OSO

Profession: TEACHING

Department/Relation: PRIMARY

Tel: 0722641154

For how long have you been resident in this area? 4 yrs.

Are you aware of the proposed development project? Y..✓..... N..... (Tick as appropriate)

In your opinion in what ways will the proposed development benefit the locals/residents?

- CREATION OF JOBS TO THE YOUTH.
- INCREASE COMMUNITY INCOME ESPECIALLY COTTON FARMERS.

List the negative anticipated risks you foresee:

Impact	During Construction works	During Operation when the ice plant is under use
Likelihood of noise disturbance	Y✓..... N.....	Y ..... N..✓...

Impact	During Construction works	During Operation when the ice plant is under use
Likelihood of generating lots of solid waste	Y ✓ N ✓	Y ..... N ✓
Likelihood of obstruction of pathways	Y ..... N ✓	Y ..... N ✓
Likelihood of sewage contaminating waterways (sources)	Y ..... N ✓	Y ..... N ✓
Risk of spread of HIV/AIDS	Y ..... N ✓	Y ..... N ✓
Likelihood of discrimination against women:	Y ..... N	Y ..... N .....
Likelihood of discrimination against differently-abled persons	Y ..... N ✓	Y ..... N ✓
Likelihood of utilizing child labour	Y ..... N ✓	Y ..... N ✓
Likelihood of sexual abuse of workers	Y ..... N ✓	Y ..... N ✓
Likelihood of sexual exploitation of minors	Y ..... N ✓	Y ..... N ✓

Any other concern(s):

.....

.....

.....

What do you think can be done to mitigate against the negative impacts listed in (4) above?

PUTTING UP LEGAL FRAMEWORK TO GOVERN THE CONSTRUCTION AND OPERATION.

.....

.....

.....

Do you approve of the proposed installation of ice making and cold storage machinery project?
Y. ✓ N ..... (Tick as appropriate).

If No in (6) above, give reasons

N/A

.....

Sign: .....

Name: AGUTU JOSEPH OSLO

Thanks for your time.

LAKE KENYATTA PRIMARY SCHOOL
25 MAY 2022

Annex 8: A questionnaire filled during Focused Group Discussion

FOCUSED GROUP DISCUSSION (COOPERATIVE MEMBERS)

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT SUMMARY PROJECT REPORT

PUBLIC PARTICIPATION QUESTIONAIRE FOR LAKE KENYATTA FARMERS' COOPERATIVE SOCIETY ON INSTALLATION OF COTTON MICRO GINNERY

AT MPEKETONI, LAMU COUNTY.

INTRODUCTION

The proponent: Lake Kenyatta farmers' Cooperative society intends to seek NEMA approval for the proposed installation of cotton micro ginnery Mpeketoni Town, Bahari ward, Lamu West Sub-County, Lamu County as per the provisions of Environmental Management & Coordination Act, Cap 387 and Environmental (Impact Assessment & Audit) (Amendment) Regulations 2019. The has been assigned the responsibility of undertaking an Environmental Impact Assessment for the proposed facility. We would be highly appreciative if you could offer your honest opinion on issues raised in this questionnaire and any information you give will remain confidential.

Name: MPEKETONI LAKE KENYATTA FARMERS' COOPERATIVE SOCIETY

Profession: MEMBERS

Department/Relation: MEMBERS

Tel: —

For how long have you been resident in this area? ..... yrs.

Are you aware of the proposed development project? Y..✓.. N..... (Tick as appropriate)

In your opinion in what ways will the proposed development benefit the locals/residents?

1. Job creation.
2. Increased income - due to bonus from sale
3. Sell seeds to companies to make animal feeds.
4. Process by-products that will be beneficial to members
5. Increase sells in the local market from purchase of materials that are needed during installation.
6. Increase of yields from the farmer produces

List the negative anticipated risks you foresee:

Impact	During Construction works	During Operation when the ice plant is under use
Likelihood of noise disturbance	Y..✓.. N.....	Y..✓.. N.....

Impact	During Construction works	During Operation when the ice plant is under use
Likelihood of generating lots of solid waste	Y ✓ N	Y ✓ N
Likelihood of obstruction of pathways	Y N ✓	Y N ✓
Likelihood of sewage contaminating waterways (sources)	Y N ✓	Y N ✓
Risk of spread of HIV/AIDS	Y ✓ N	Y ✓ N
Likelihood of discrimination against women:	Y ✓ N ✓	Y ✓ N ✓
Likelihood of discrimination against differently-abled persons	Y ✓ N ✓	Y ✓ N ✓
Likelihood of utilizing child labour	Y ✓ N ✓	Y ✓ N
Likelihood of sexual abuse of workers	Y ✓ N	Y ✓ N
Likelihood of sexual exploitation of minors	Y ✓ N	Y ✓ N

Any other concern(s):

.....

.....

.....

What do you think can be done to mitigate against the negative impacts listed in (4) above?

.....

.....

.....

.....

.....

Do you approve of the proposed installation of ice making and cold storage machinery project?
Y..... N..... (Tick as appropriate).

If No in (6) above, give reasons

.....

.....

Sign: .....

Name: .....

Thanks for your [illegible]

LAKE KENYATTA FARMERS CO-OP SOCIETY LTD
25 MAY 2022
P.O BOX 34-80503 MPEKETONI

25 MAY 2022
P.O BOX 34-80503 MPEKETONI

Annex 9: Copy of Certificate of Incorporation

REPUBLIC OF KENYA

MINISTRY OF CO-OPERATIVE DEVELOPMENT

CERTIFICATE OF REGISTRATION

THE CO-OPERATIVE SOCIETIES ACT
(Cap. 490, Section 7)

REGISTRATION No. 2318

I hereby certify that the society under the name of

LAKE KENYATTA FARMERS CO-OPERATIVE SOCIETY LIMITED

and its by-laws have this day been duly registered

by me in the Register of Co-operative Societies, in pursuance of the provisions of

the Act and the Rules made thereunder.

Given under my hand at Nairobi this 10TH *day of* MARCH *,19* 75

[illegible]

Commissioner for Co-operative Development

Annex 10: Photo Gallery

S.No.	Photo	Remarks
1		ESIA lead expert engaging members of public during public participation
2		A section of women listening and engaging during public participation exercise
3		The exercise was held at Mpeketoni location Chief's office

Annex 11: Copy of Expert Practising License

FORM 7 (r.15(2))

nema

NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY(NEMA)

THE ENVIRONMENTAL MANAGEMENT AND CO-ORDINATION ACT

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

License No : NEMA/EIA/EAPL/16663

Application Reference No: NEMA/EIA/EL/22344

M/S **Anthony P. Mbuthia**
(individual or firm) of address

P.O. Box 40-80500 LAMU

is licensed to practice in the

capacity of a (Lead Expert/Associate Expert/Firm of Experts) **Lead Expert**
registration number **7395**

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

Issued Date: **3/3/2022** Expiry Date: **12/31/2022**

Signature.....

(Seal)
Director General
The National Environment Management Authority

P.T.O.