County Government of Kajiado

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Kenya Climate Smart Agriculture Project

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KAJIADO

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR THE PROPOSED RANGELAND REHABILITATION AND PASTURE DEVELOPMENT PROJECT FOR NARETO WOMEN SELF HELP GROUP IN MILE 46 VILLAGE, ILOODOKILANI WARD, KAJIADO COUNTY

Kenya Climate Smart Agriculture Project

Summary Project Report **April 2021**

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FACT SHEET

Project Name	Proposed Rangeland Rehabilitation and Pasture Development Project for Nareto Women Self Help Group in Mile 46 Village, Iloodokilani Ward, Kajiado County.
Assignment Name	Summary Project Report; Environmental and Social Impact Assessment (ESIA).
Location	Mile 46 Village, Iloodokilani Ward, Kajiado West Sub-County, Kajiado County
GPS Coordinates	Latitude **$1^0$53'44.72571"** S and Longitude **$36^0$34'21.41034"** E **1237m** above sea level
Project Description	Rangeland rehabilitation and pasture development project set up on 25 acres of community land. The group will carry out the following activities: a) Carry out site clearance on the parcel of land to pave way for the establishment of pasture b) Construction of a Hay, Seed Store and fencing c) Operational activities will entail: a. Seedbed Preparation b. Sowing of pasture fields c. Weed Control d. Manuring e. Soil conservation structures (terracing, strips/gabions)-Range pits, land ripping f. Silvopastoralism g. Seed harvesting h. Pasture harvesting i. Pasture feed milling
Proponent and Address	Nareto Women Self Help Group Mile 46 Township Kajiado.

CERTIFICATION

For and on behalf of:
Nareto Women Self Help Group:

This Environmental Impact Assessment (EIA) Summary Project Report was prepared in accordance with the Environmental Management and Coordination Act (EMCA) 1999, the Environmental Impact Assessment and Audit Regulations 2003 (revised 2019) and Public Notice on Processing of EIA Reports 12th March 2020 in order to meet the statutory requirements for the implementation of projects under schedule II.

I, the undersigned, confirm that the contents of this report are a true representation of the ESIA process for the Proposed Rangeland Rehabilitation and Pasture Development Project for Nareto Women Self Help Group in Mile 46 Village, Iloodokilani Ward, Kajiado County**.**

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Community Group Chairman

ACKNOWLEDGMENT

We, the ESIA study team Mr. Josphat Omari (Lead) and Mr. Erick Orwa (Associate) wish to acknowledge and express our profound gratitude to the Kajiado County Project Coordinating Unit (especially Mr. Athanus Chesire) of Kenya Climate Smart Agriculture Project (KCSAP) for commissioning this ESIA SPR.

We appreciate the co-operation and contributions of all the stakeholders who we interacted with during this EIA study, without their support this study would not have been successful.

We would also like to affirm our appreciation to Dr. Gilbert Muthee from the National Project Coordinating Unit, World Bank ESIA Experts especially Robert and Kimberly, not forgetting Marrian from NEMA Head Office for their guidance in the preparation of this SPR.

Finally, we wish to appreciate the contributions made by the entire community for providing us with useful information and filling out questionnaires during the field visits and public participation forum.

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ABBREVIATIONS AND ACRONYMS

CBO	Community Based Organisation
CESSCO	County Environment and Social Safeguards Officer
CIDP	County Integrated Development Plan
CMS	Convention on Migratory Species
CPCU	County Project Coordination Unit
CSR	Corporate Social Responsibility
EAs	Environmental Assessments
EMCA	Environmental Management and Coordination Act, 1999 Revised, 2015
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
FGD	Focused Group Discussion
GDP	Gross Domestic Product
GHG	Greenhouse Gases
IFC	International Finance Corporation
KCSAP	Kenya Climate Smart Agriculture Project
Km	Kilometers
Km^2	Square Kilometers
MoALF&C	Ministry of Agriculture, Livestock, Fisheries and Cooperatives
NEAP	National Environmental Action Plan
NEMA	National Environment Management Authority
PCPB	Pest Control Products Board
PPE	Personal Protective Equipment
SESA	Strategic Environmental and Social Assessment
SHG	Self-Help Group
SPR	Summary Project Report
WRA	Water Resources Authority

EXECUTIVE SUMMARY

Introduction

The County Government of Kajiado, through the Kenya Climate Smart Agricultural project (KCSAP), a World Bank funded project, intends to increase agricultural productivity and build resilience to climate change risks for smallholder farmers and pastoral communities. The sub project intends to support **NARETO WOMEN SELF HELP GROUP, a Community Based Organisation (CBO)** formally registered with County Government of Kajiado, Department of Gender and Social Services. The group currently has 220 members all of whom are women drawn from Iloodokilani wards in Kajiado West Sub-County, Kajiado County. The CBO was formed to bring together women engaged in milk bulking and selling, bead works and bee keeping.

The proposed sub-project will be located approximately 25km off Nairobi-Namanga highway and will sit on **25** acres of land in Mile 46 village, Elangata Waus location, Iloodikilani ward. The sub proposed is located on **Latitude $1^0$53'44.72571"S and Longitude $36^0$34'21.41034"E 1237m above sea level above** mean sea level.

Sub-Project Objective

The objective of the sub-project is to establish and operationalize farmer field schools in Kajiado County with support from Kenya Climate Smart Agriculture Project (KCSAP). The sub-project will increase pasture production, rehabilitate rangelands, improve community drought preparedness and resilience and improve livestock productivity thus enhanced food security. The key components are: operationalization of farmer field schools, demo site preparation, purchase of pasture seed, pasture establishment and management, harvesting and equipment and construction of storage structures.

Rationale for ESIA

The Kenya Government policy on all new projects, programmes or activities requires that an environmental impact assessment be carried out at the planning stages of the proposed undertaking to ensure that significant environmental and social impacts are taken into consideration during the planning/design, construction, operation and decommissioning of the facility. The project underwent screening process which identified the proposed rangeland rehabilitation and pasture development project as a ***Low-Risk Project*** as per the 2nd schedule of Environmental Management and Coordination Act (EMCA Cap 387) – amendment via legal notice no. 31 – April 2019. Additionally, the project also falls under category B of the World Bank Environmental and Social Safeguards Policies as defined in the Bank's Operational Procedures (OPs). The project does not lead to displacement of Project Affected Persons (PAPs)

and only site-specific environmental impacts are envisaged. Therefore, the proponent – Nareto Women SHG– undertook Environmental and Social Impact Assessment and developed a **Summary Project Report (SPR)** pursuant to Regulation 7 (1) of the Environmental (Impact Assessment and Audit) (Amendment) Regulations, 2019.

SPR Approach and Methodology

The assessment approach and methodology for this exercise was structured such as to cover the requirements under the EMCA, 1999 and its subsequent regulations and World Bank environmental safeguard policies. The scope of the assessment covered impacts directly or indirectly associated with the construction, operation and the decommissioning phase of the project. The consultant used both conventional and participatory approaches in identifying the potential environmental impact and mitigating measures for the proposed project.

It involved largely an understanding of the project background, the preliminary designs and the implementation plan as well as commissioning. In addition, baseline information was obtained through physical investigation of the site and the surrounding areas, public consultation (which included discussions with local administration and the community), photography, as well as discussions with the Proponent. Over 25 people participated in a two-day public participation exercise that took place at the chief's camp, Olooserian (Mile 46) village in Elangata Waus sub-location where a total of 7 questionnaires were administered and completed. Some of the key stakeholders included representatives of Ministry of Agriculture at both County and sub-county level, the local administration, the religious leaders and political leaders. The process culminated in the preparation of an ESIA summary project report encompassing the details specified in the Environmental Impact Assessment/Audit Regulations (2003) and subsequent amendments (2015 &2019).

Main Issues of Concerns and Proposed Mitigation Measures

A public participation (majority being members of the Nareto Women Self Help Group) consisting of 25 people (6 Male and 20 Female) was held, whom 16 were above 36 years and 9 were youth to discuss the main issues of concerns and proposed mitigation measures for the proposed sub project. Although there are a number of justifications of why the project should be developed in the area, there are various negative impacts raised that affect the environment and social wellbeing and therefore the proposed mitigation measures will reduce the adverse impacts. The project will come with numerous positive impacts that include increasing livestock productivity, building resilience to climate risks, reduced losses of livestock due to drought, improved soil conservation, improved nutrition during droughts, and employment creation among others. Some of the major negative impacts anticipated include occupational health and safety risks throughout the project, disturbance of virgin land/natural vegetation, possible wildlife-human conflict, possible spread of COVID-19, HIV/AIDS and STDs and minimal soil

disturbance. The mitigation measures for the negative impacts have been detailed in this report. They include but not limited to provision of appropriate fencing to reduce human wildlife conflict, use of natural methods such as bee hives to scare wildlife, strict adherence to Ministry of Health guidelines on COVID-19 prevention among others.

Environmental Social Management and Monitoring Plan

An environmental and social management plan has been developed in this report to assist the proponent in mitigating and managing environmental and social impacts associated with the life cycle of the project. It is noteworthy that key factors and processes may change through the life of the project and considerable provisions have been made for dynamism and flexibility of the ESMP. As such, the ESMP should be subjected to periodic review for improvement purposes

It worth noting that the key responsibilities regarding compliance to the proposed ESM&MP during the construction period rest on the Contractor whereas those in operation stage will be the responsibility of the proponent. It is important that the project proponent ensures adequate monitoring and evaluation for the Contractor for non-conformances and adequate resources are allocated for operational stage. The total cost of implementing the ESMMP is **Ksh. 545,000.**

This summary project report estimates that **Ksh. 30,000** should be allocated during *preparatory phase*, **Ksh. 200,000** be allocated during *construction phase* and at least **Ksh. 185,000 per year** during operation phase. Additionally, **Ksh. 130,000** should be allocated during decommissioning phase of the project. The ESMMP should be shared with the selected contractor(C-ESMMP) for implementation

Conclusion and Recommendation

The rangeland rehabilitation and pasture development project has raised a number issues of importance to the environment, social, health and also economic wellbeing through and an in-depth assessment and evaluation of the environmental and social impacts. In addition, the project has number of negative impacts that has an adverse effect to the environment, social and economic being of the project site during the various phases of project. To enable the project to be realized then, specific mitigation measures has been proposed. The following recommendations have been proposed for the avoidance and mitigation of the adverse environmental and social impacts from the Nareto SHG project.

- A tree planting programme for the farmers to be implemented in line with KCSAP objectives of reducing greenhouse gas emissions. This can be promoted by giving tree seedlings to farmers at the start of planting season.
- The improved grass variety from KALRO should be selected that can withstand the climatic conditions, grow very fast and be available throughout the season
- The community to be trained on contour farming and strip farming to mitigate the issues of soil erosion

- Employ local techniques for prevention of human wildlife conflict by putting up beehives within the farm area and planting pepper alongside grass.
- The project through KCSAP should train the group members on proper farming methods, improved varieties and proper record/ book keeping.
- Education and awareness creation on COVID-19, HIV aids control and prevention measures including adherence to MOH guidelines
- Installation works in the proposed Project is carried out in accordance with approved designs, regulations, policies and laws;
- The proponent, supervising engineer and the contractor should work together to ensure full implementation of the ESMP for proper enhancement and mitigation of impacts emanating from the project

It therefore concluded that the positive impact outweighs the negative impacts raised and the proposed project is economically viable. Mitigation measures for the negative impacts have been given in this report and given the positive impacts anticipated from the project, the project should be allowed to proceed.

1 INTRODUCTION

1.1 KCSAP Background Information

The County Government of Kajiado, through the Kenya Climate Smart Agricultural project (KCSAP), a World Bank funded project, intends to increase agricultural productivity and build resilience to climate change risks for smallholder farmers and pastoral communities. The overall objective of KCSAP is to avail to farmers' agricultural technologies, innovations and management practices to enable them cope with the changing climate. The specific objectives are:

1. Sustainably increasing agricultural productivity and incomes
2. Adapting and building resilience to climate change; and reducing and/or
3. Removing greenhouse gas emissions, where possible

These objectives form part of Kenya's obligation as a signatory to the United Nations Framework Convention on Climate Change (UNFCCC). Climate smart agriculture is the pathway that leads to attainment of the national interests of food security, productivity and incomes, while at the same time reducing or sequestering greenhouse gas emissions.

The Kenya Climate Smart Agriculture Programme has developed a strategy to guide investments and implementation of activities in the context of the current agriculture sector governance structure.

In line with this, Kajiado County has proposed Rangeland Rehabilitation and Pasture Development Sub Project which are to be implemented in four sites (Engaboli- Maili Tisa, OloiborAjijik, Meshenani and **Mile 46**). In complying with the Kenyan development regulations, the proponent commissioned the Experts to prepare this Environmental and Social Impact Assessment (ESIA) Summary Project Report (SPR) for the Proposed Rangeland Rehabilitation and Pasture Development Project in Mile 46 Village, Iloodokilani Ward in Kajiado West Sub-County in Kajiado County. The report provides the project background as well as an assessment of the associated beneficial and adverse environmental and social impacts of the development.

1.2 Background Information of the Sub Project

The sub-project aims at up scaling livestock productivity through rangeland rehabilitation and pasture development. **NARETO WOMEN SELF HELP GROUP, a Community Based Organisation (CBO)** is one of the targeted beneficiaries under this sub project. The group is registered with County Government of Kajiado, Department of Gender and Social Services. The group currently has 220 members all of whom are women drawn from Iloodokilani ward in Kajiado West Sub-County, Kajiado County. The CBO was formed to bring together women engaged in milk bulking and selling, beadworks and beekeeping.

The activities of Nareto Women Group will contribute to specific objectives of the sub project, which are;

1) To increase pasture production in Kajiado County by 20% from baseline by August 2021
2) To rehabilitate at least 1000 acres of rangeland in Kajiado County by August 2021
3) To improve community drought preparedness and resilience by 10% from baseline in Kajiado County by August 2021
4) To improve livestock productivity thus enhanced food security by 20% from baseline in Kajiado County by August 2021

The key components are site preparation, pasture establishment and management, harvesting, storage and utilisation.

1.3 Rationale for the Summary Project Report

The Kenya government policy on projects, programmes or activities such as the proposed rehabilitation and pasture development project requires that an Environmental and Social Impact Assessment (ESIA) be carried out at the planning stages of projects. This is to ensure that significant impacts on the environment and social aspects are taken into consideration during the design, construction, operation and decommissioning of the project. The SPR was as a result of the recommendation of the County Director Environment(CDE) based on the screening checklist and report *(Appendix 9 and 10)*, but also because NEMA Public Notice on ESIA and Legal Notice No 31 which identifies the proposed project as Low risk, thus requiring only SPR.

1.4 Objectives of the SPR

The principal objective of the SPR is to highlight the possible positive and negative environmental and social impacts expected during the establishment and operation of the proposed project, with the aim of proposing the possible mitigation measures to the negative impacts. This is in line with ensuring that such a development does not negatively impact the environment in terms of social, health, economic and physical (soil, water, plant and animals) state of the area. The SPR identified the possible environmental impacts during the construction, implementation and operational phases of the project. The exercise was carried out in accordance with the National Environmental Management Authority (NEMA) Environmental Impact Assessment and Audit Regulations and guidelines in addition to World Bank Environmental and Social Safeguard Policies.

In brief, the specific objectives of the study were to:

i. Describe the proposed project including the technology to be used.
ii. Collect, collate and present baseline information (Physical environment; Biological environment and Socioeconomic and cultural environment)
iii. Identify impacts, both positive and negative, the direct, indirect, cumulative, irreversible, short- term and long-term effects anticipated; and identify mitigation measures.

iv. Undertake analysis of alternatives by systematically comparing feasible alternatives to the proposed project
v. Carry out stakeholders' participation and consultations to collect the concerns, expectations, and opinions of affected, concerned and interested stakeholders.
vi. Prepare a comprehensive Environmental and Social Management Plan (ESMP)
vii. Present results of the SPR in such a way that they can guide in informed decision-making.

1.5 SPR Approach and Methodology

The environmental and social screening was done by the County Environment and Social Safeguards Officer (CESSCO) in consultation with NEMA where the SPR was recommended *(Appendix 9 and 10).* Data collection was carried out by the ESIA experts through admission of questionnaires (See sample, *Appendix 4*), observations and photography, site visits and desktop environmental and social studies where necessary in the manner and criteria specified in Part V (section 31-41) of the Environmental Impact Assessment and Audit Regulations 2003 (revised 2019).

The report applied an inter alia approach incorporating environmental, social, cultural, economic, legal, safety and health impacts of the project. The integrated nature of the impacts review ensured all possible negative impacts were identified and adequately mitigated. Given that nature and magnitude of the proposed rangeland rehabilitation and pasture development project, a summary environmental and social impact assessment project report, was opted for, to ensure comprehensiveness and completeness of the assessment as per the guidelines. The methodology followed during the assessment was as follows:

1.5.1 Environmental screening

The environmental screening exercise was conducted during the month of December 2020 to determine whether an environmental impact assessment would be required and what level of assessment was necessary. This was done in line with the requirements of the EMCA (Cap 387), specifically the second schedule which categorizes projects into; Low Risk Projects; Medium Risk Projects and High-Risk Projects.

According to the 2nd schedule of Environmental Management and Coordination Act (EMCA Cap 387) – amendment via legal notice no. 31 – April 2019, the proposed rangeland rehabilitation and pasture development project lies within Category (1) ***Low Risk Projects***. The screening process revealed that anticipated social issues would be minimal given there would be no displacement of persons and only site-specific environmental impacts will be realized. Therefore, the proponent through the Environmental Consultant undertook an Environmental Impact Assessment to submit a **Summary Project Report (SPR)** pursuant to Regulation 7 (1) of the Environmental (Impact Assessment and Audit) (Amendment) Regulations, 2019.

Further, World Bank project classification was also considered since the proposed Nareto Women SHG Rangeland rehabilitation and pasture development project will be financed by World Bank (WB) or with financial participation of, the World Bank, through the KCSAP. The

WB classifies its projects into four environmental assessment categories (A, B, C, and FI) according to the likely impacts on the environment. The proposed project was found to be under World Bank Category B classification since the project impacts will be site specific, few if any of them are irreversible; and in most cases adverse effects, will be limited (some minor including minimal soil disturbance, loss of flora and fauna and health and safety impacts during construction and operational phases) and mitigatory measures can be designed. Such impacts have been clearly identified both at screening stage and in this SPR report with comprehensive mitigation measures being fully designed and described in ESMMP.

1.5.2 Desktop study

Desktop study included documents review on the nature of the proposed activities, project documents including designs, policy and legislative framework as well as the environmental setting of the area among others. Key documents reviewed included the following: Kenya policies, strategies and guidelines; National and County Laws and regulations; applicable Multilateral Environmental Agreements (MEAs) and World Bank policies safeguards.

1.5.3 Physical inspection of the site and surrounding

Physical inspection of the proposed site which included field investigation at site and surrounding areas was done in on 10th-11th March 2020. The field investigations were meant for physical inspections of the site characteristics and the environmental status of the surrounding areas to determine the anticipated impacts from the project.

1.5.4 Public participation

Public participation via the use of public meetings & questionnaires, key stakeholder and informant interviews were carried out during the exercise. To ensure adequate public participation in the ESIA process, questionnaires were administered to: the project stakeholders, project site neighbours to the proposed rangeland rehabilitation and pasture development project in Mile 46 Village and other surrounding enterprises. The information gathered was subsequently synthesized and incorporated into the EIA summary project Report.

Given the nature of the project and anticipated impacts, two (2) public meetings were conducted targeting respective members of the CBO and the neighbouring community on 10th and 11th March 2021 at the chief's camp, Mile 46 Village where 25 participants attended (see ***appendix v***-Attendance list and ***Appendix vi***-minutes of the public consultation meeting). This was done in order to incorporate the concerns and views of all persons and individuals in the project neighbourhood. Further, key informant interviews/consultations were conducted to incorporate views from key stakeholders as described in chapter 5.

1.6 Data Analysis, Documentation and Report Structure

The Environmental Impacts Assessment report was compiled from the findings in accordance with the EIA guidelines issued by NEMA for Summary Project Report. The Consultant ensured constant briefing of the proponent during the exercise.

The exercise culminated with the production and documentation of this summary project report designed to ensure that the proposed development complies with the Environmental Management and Coordination Act (EMCA, Cap 387). The report structure is organized in 8 chapters as outlined below: -

- Chapter 1: *Introduction:* Gives Background Information to the Study Describing the Objectives and the Terms of Reference.
- Chapter 2: *Location of the Project:* Description of Project Site.
- Chapter 3: *Nature of the Project:* Project Description.
- Chapter 4: *Baseline Conditions:* Outlines the Baseline Information of the Study Area.
- Chapter 5: *Public Participation and Stakeholder Consultations:* Summarizes the outcome of the Stakeholder Engagement and Public Consultations process.
- Chapter 6: *Potential Impacts and Mitigation Measures:* Environmental and Social Impact Assessment and Mitigation of Potential Impacts of the Project.
- Chapter 7: Environmental, Social Management and Monitoring Plan (ESM&MP)
- Chapter 8: *Conclusion and Recommendations:* Concludes the findings and recaps the main recommendations.

1.7 Responsibilities and Undertaking

The KCSAP Kajiado provided a technical team to provide information required by the consultant. The proponent also facilitated stakeholder engagement through public participation and provided the relevant project documents and information to enable the consultant compile the report.

2 THE LOCATION OF THE PROJECT

2.1 Project Location

The proposed sub-project will be located approximately 25km off Nairobi-Namanga highway and will sit on **25** acres of land in Mile 46 village, Elangata Waus location, Iloodikilani ward. The project location can be well described as shown in Table 2.1 below.

Table 2.1: Project Location

Area	Project Location
County	Kajiado
Sub County	Kajiado West
Ward	Iloodokilani
Location	Elangata Waus
Village	Mile 46

The proposed is located on **Latitude $1^0$53’44.72571”S and Longitude $36^0$34’21.41034”E 1237m above sea level above** mean sea level. Figure 2.1 below shows an administrative location of the project area.

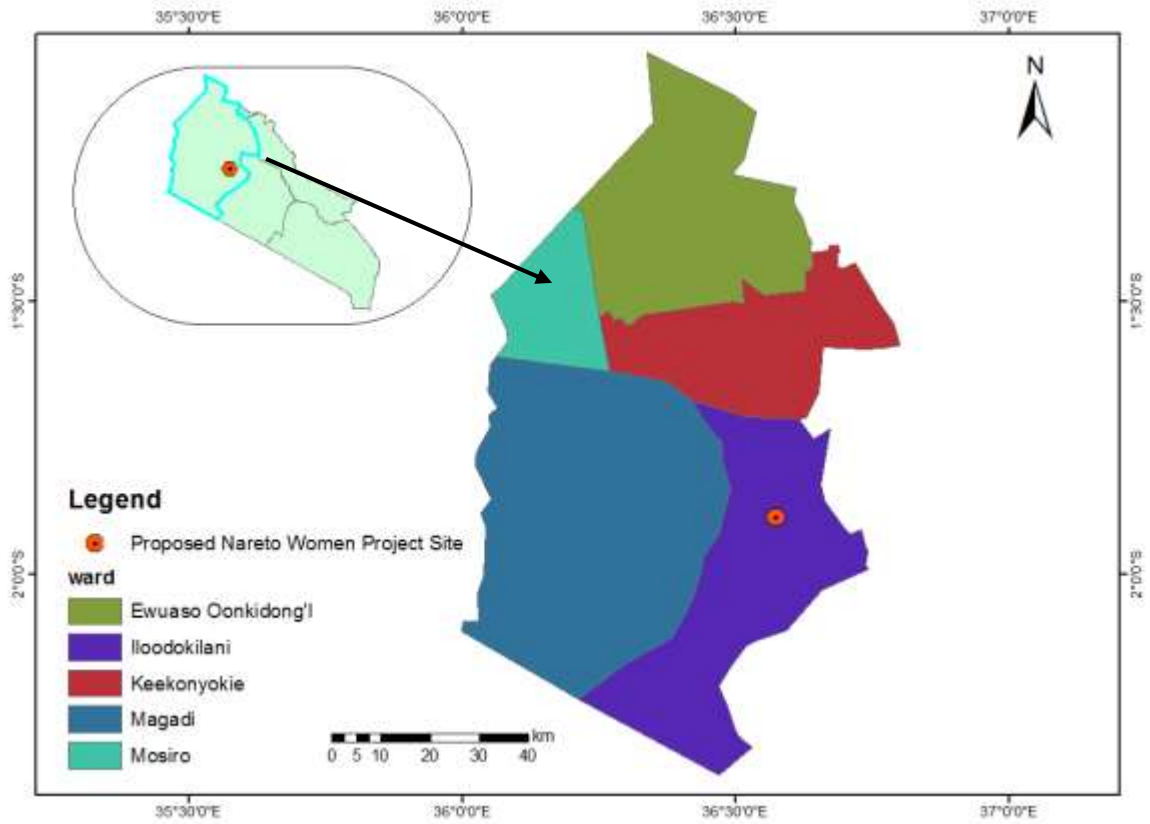

Figure 2.1: Kajiado West Sub-County wards

A geographical satellite image of the project location showing the proposed project site is shown in figure 2.2 below. The proposed rangeland rehabilitation and pasture development project is about 25km off A104 Nairobi-Namanga highway. The project is accessed via a murram road connecting the project site in Mile 46 Village to the Nairobi-Namanga highway.

Figure 2.2: Location of project site in Mile 46 Village

2.2 Land Ownership

The land proposed for the sub project belongs to the community *(Appendix 2).* Out of the total acreage (1,050 acres consisting of a livestock market, water pan and unfenced community grazing area) for community land **Nareto Women Self Help Group** were allowed to utilise a portion of the land (25 acres of the grazing area) to develop a pasture sub project on behalf of the community since a larger portion of the land had been idle and commonly used as a communal grazing area.

There are no environmentally sensitive areas within the project location. However, areas near water structures tend to be overgrazed during dry seasons. Due to the vastness of the grazing area, there is regeneration of grassland within a short period of rains. Culturally, the Maasai community conserve trees. The proposed sub project is an agricultural activity and the land is agricultural which is in line with the physical planning zonation.

3 NATURE OF THE PROJECT

3.1 Introduction

This chapter describes the project setting, design, materials, project activities and the cost of the sub project.

3.2 Design Concept and Material

The siting, design concept, criteria and operationalisation for the sub project were developed in accordance with the general guidelines and standards used in the design and development of rangeland rehabilitation and pasture prodution as developed by the Ministry of Agriculture and Livestock.

The supporting stuctures namely; the fence and haybarn were also developed in line with the Kenyan Building and Construction Standards (***Appendix 3***)

3.2.1 Project Design

The main activities to be undertaken under this sub-project comprise the following:

- Community mobilization & identification of beneficiaries
- Preparation including fencing, site clearance and seed bed preparation.
- Purchase of Pasture seed
- Pasture establishment and management to comprise sowing of pasture fields, weed control and manuring
- Range rehabilitation to include soil conservation structures (terracing, strips/gabions), Range pits, land ripping and silvopastoralism
- Harvesting of pasture and seeds
- Hay and Seed Store construction
- Utilization of stored hay.

3.2.2 Materials, equipment and labour

The project will be developed using efficient land preparation equipment and machinery. Climate smart technologies will be employed in soil ripping, pasture management and harvesting. The haybarn will employ standard construction material and procedures while ensuring that the safety of the neighboring communities and the environment is not

compromised. These materials that will be used shall be locally and internationally accepted and shall meet the threshold of public health, occupational safety and environmental standards. The main materials, equipment and workforce for this project will be;

- Soil rippers
- Hay ballers
- Tractors
- Hay brush cutters
- Timber
- Steel of difference sizes
- Wire mesh
- Welding, Cutting Materials and Equipment
- Galvanised box profile roofing sheets gauge 30
- Paving slabs (Cement, Sand and Ballast)

3.3 Proposed Project Activities

The activities associated with the proposed project have been categorized under four phases of project implementation namely; planning, Land preparation and construction of the haybarn, operation, and closure/decommissioning as discussed in the following subsection.

3.3.1 Planning Phase Activities

The main activities considered during this phase are: community mobilization, public consultation, tendering, design works process as required by procurement regulations and site hand over.

3.3.2 Land preparation and Construction Phase Activities

Construction phase entails the following activities:

- Site preparation including site clearance, seed bed preparation and fencing.
- Procurement of rangeland pasture seeds
- Pasture establishment and management
- Range rehabilitation to include soil conservation structures (terracing, strips/gabions), Range pits, land ripping and silvopastoralism
- Hay and Seed Store construction

3.3.3 Operation Phase Activities

The project operational activities will include: pasture management, harvesting of hay and storage at the haybarn and utilization of the stored hay.

3.3.4 Decommissioning Phase Activities

Decommissioning of the haybarn and fence will become necessary if or when the project goals change, when the need arises, climatic conditions or change of government policy as regards the land use. Once this occurs, the affected structures will be demolished. Non-reusable materials will be sold to licensed scrap metal dealers. The closure of the project will involve stopping all activities and demolishing the built structures and any fences. The affected land shall be landscaped and replanted with suitable indigenous grass and trees.

3.4 Project Cost and Implementation Schedule

The total sub project cost is estimated to **Kenya Shillings 5,000,000.00.**

4 BASELINE CONDITIONS

4.1 Physiographic and Natural Conditions

4.1.1 Physical & Topographic Features

According to the County Integrated Development Plan (CIDP) 2018-2022, Kajiado County is characterised by plains, valleys and occasional volcanic hills. The lowest altitude is about 500 metres above sea level at Lake Magadi while the highest is 2500 metres above sea level in Ngong Hills. The landscape within the county is divided into Rift Valley, Athi Kapiti plains and Central Broken Ground. The altitude ranges between 600 and 1740metres above sea level. The project area comprise gentle slopes and dominated by plains (figure 4-1).

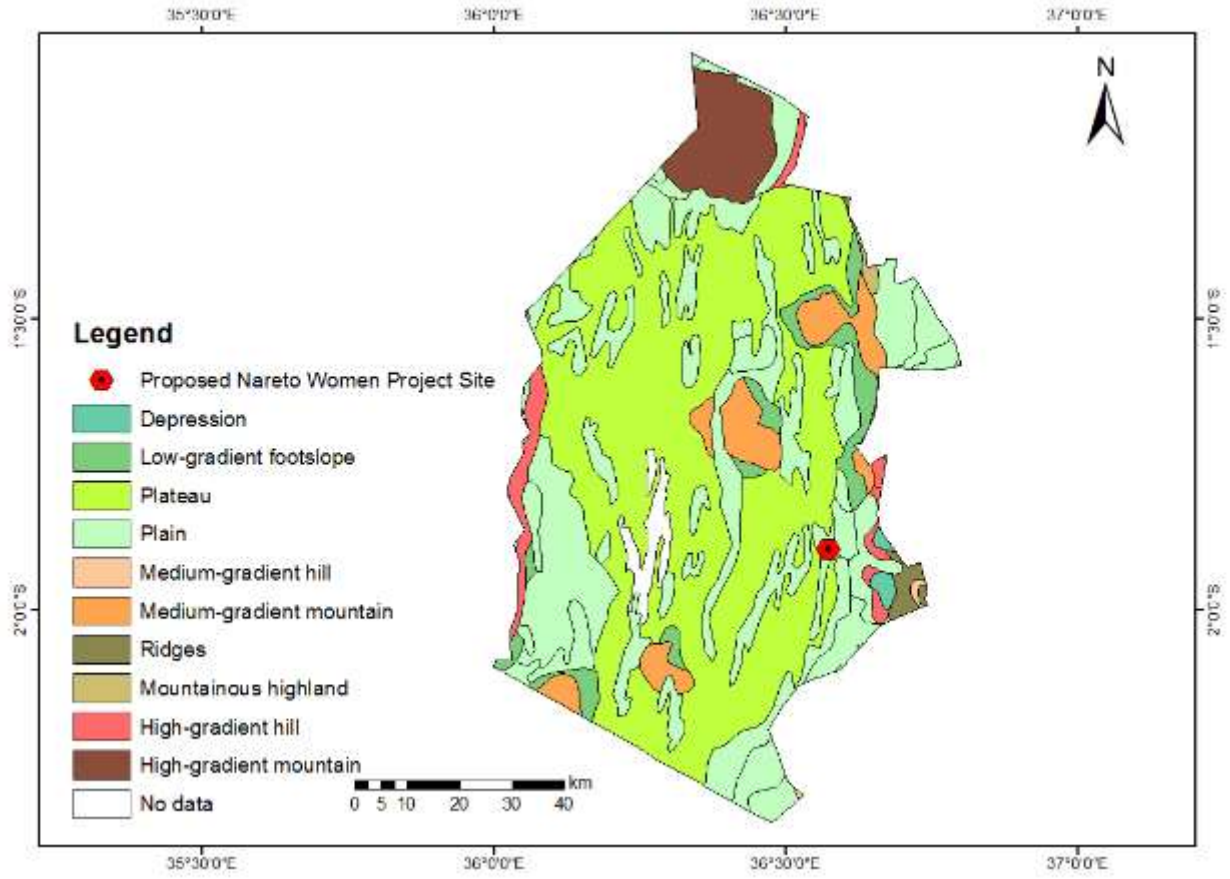

Figure 4.1: Landforms in Iloodokilani ward

4.1.2 Geology and Soils

The County has three geological regions namely Quaternary volcanic, Pleistocene and basement rock soils. Quaternary Volcanic soil is found in the Rift Valley. Basement System Rocks which comprise various gneisses, cists, quartzite and crystalline limestone, are found mainly along the

river valleys and some parts of the plains. The project area mainly comprise of andesite, trachites, phonolites and pyroclastic rocks (Figure 3-2)

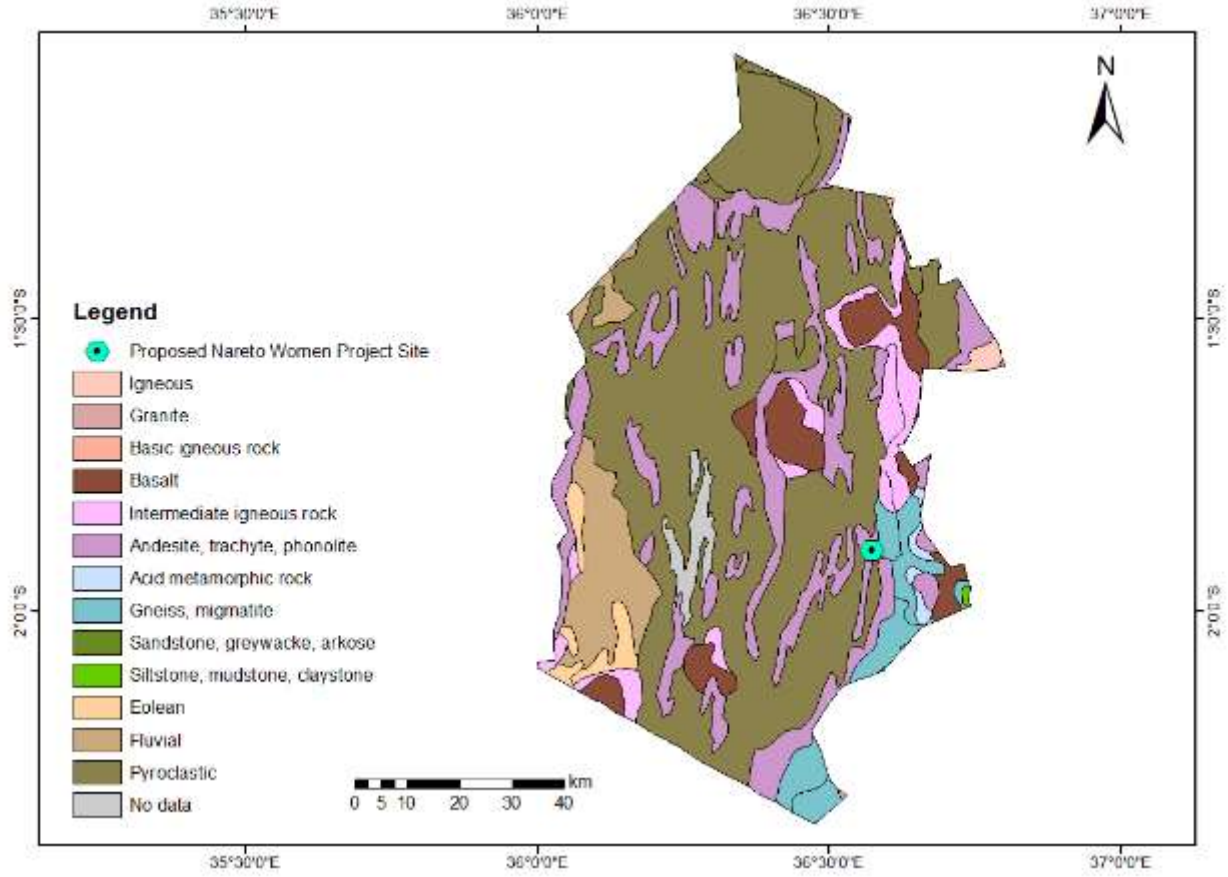

Figure 4.2: Lithology of the project area

Pleistocene soils are found in the inland drainage lake system around Lake Amboseli. Quarrying of building materials is also done within the county. The main soil type in the project area comprise Eutric Cambisols and the Rhodic Nitisols (figure 3-3).

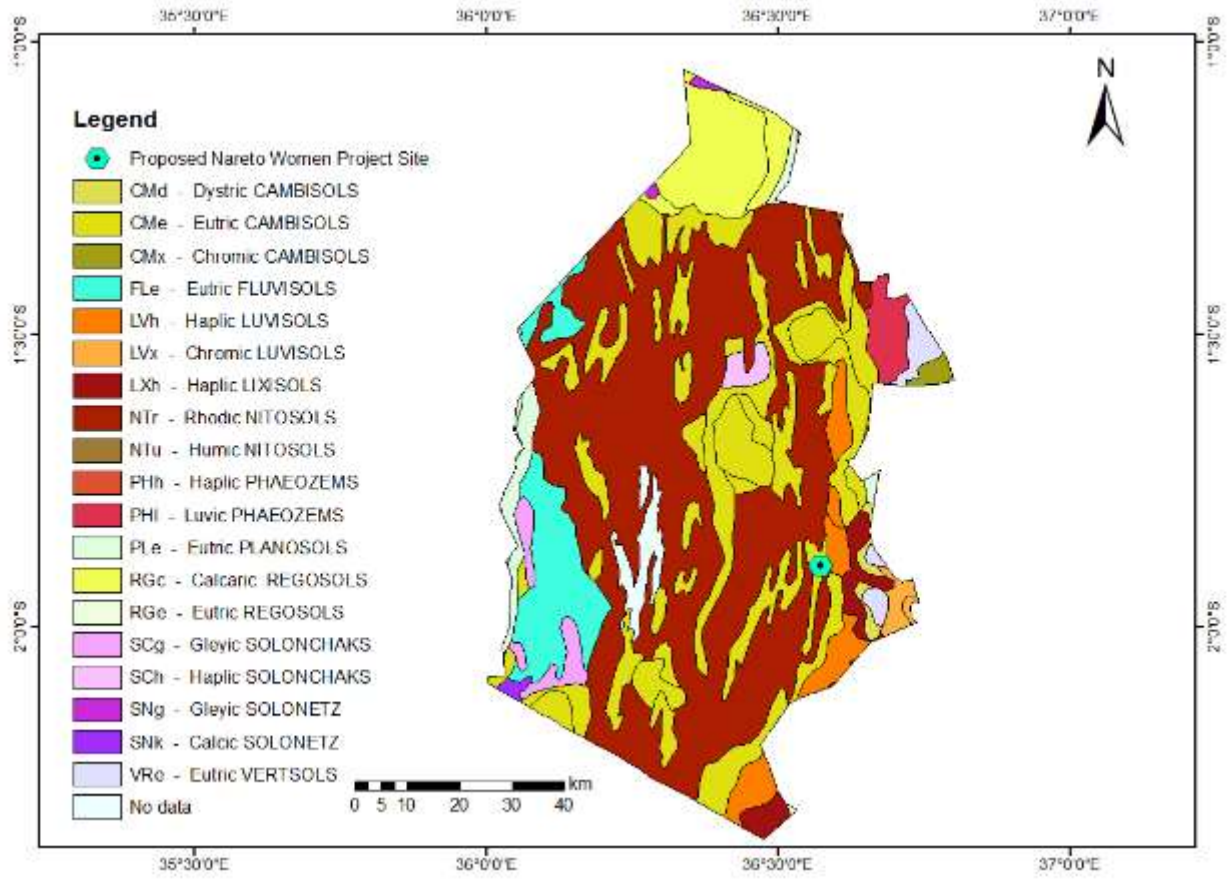

Figure 4.3: Soils in the project Area

4.1.3 Ecological Conditions

The amount of surface water varies from area to area. Vegetation type in the county is determined by altitude, soil type and rainfall. In many instances it has been modified by animal and human activity. Grazing, browsing, charcoal burning, extraction of fuel wood and cultivation are the major causes of vegetation reduction. In the lower parts of Mt. Kilimanjaro, indigenous trees have been cleared to create room for agriculture. Vegetation is scarce in low altitude areas and increases with altitude. Ground cover throughout the county varies seasonally with rainfall and grazing intensity. Canopy cover ranges from less than 1 percent on heavily settled areas to about 30 percent on steep hills. The project area lies within the Elangata Waus area mainly served by Toroka River System. The water from the dry river bed/alluvial aquifer system is mostly extracted using scoop holes.

4.1.4 Climatic Conditions

The county has a bi-modal rainfall pattern. The short rains fall between October and December while the long rains fall between March and May. There is a general rainfall gradient that increases with altitude. The bimodal rainfall pattern is not uniform across the County. The long

(March to May) rains are more pronounced in the western part of the County while the short (October to December) rains are heavier in the eastern part. The rainfall amount ranges from as low as 300mm in the Amboseli basin to as high as 1250mm in the Ngong hills and the slopes of Mt. Kilimanjaro.

Temperatures vary both with altitude and season. The highest temperatures of about 34^{o}C are recorded around Lake Magadi while the lowest of 10^{o}C is experienced at Loitokitok on the eastern slopes of Mt. Kilimanjaro. The coolest period is between July and August, while the hottest months are from November to April.

4.1.5 Land and Land use

The common vegetation types predominant in Kajiado County are open grasslands, wooded and bushed grassland, bush and woodland, and forests. Among these types, bushes and woodland occupy a larger area of the County ranging about 44% of the total area of the County. This is followed by the open grasslands, and wooded and bushed grasslands, which occupy 26% each. Forests cover only 2% of the County. In the proposed project site area the land is vast with some areas covered by dense indigenous trees and natural shrubs.

4.2 Socio-economic Environment.

Socio-economics involves the collection of baseline data including demographic details, such as households, population, employment pattern, literacy, general health, tribal, communication & welfare facilities such as educational institutions, hospitals, project awareness amongst the public, infrastructure facilities, economic resources, cultural and aesthetic attributes etc. as per the requirements under environmental impact assessments.

4.2.1 Demographics Data

There is a notable variation in population density in the county. According to the Kenya National Bureau of Statistics census of 2019, the current population density of Kajiado is 51 persons per square kilometer (Kenya National Bureau of Statistics (KNBS), 2019). However, the highest population density was observed in Kajiado North due to the proximity to Nairobi and the high population densities in urban areas closer to the city. The county's population growth is 5.5 percent occasioned by migration from the neighbouring counties attracted by employment opportunities and availability of land for settlement (County Government of Kajiado, 2018). On the other hand, the lowest population densities are in Kajiado West owing to the vast land primarily inhabited by pastoralists (Table 3-1).

Table 4.1: Population density by sub-county

County/Sub-County	Population	Land Area in (Sq km)	Population Density (No. per sq.km)
Kajiado	**1,107,296**	**21,871**	**51**

Isinya	207,715	1,072	196
Kajiado Central	159,520	4,240	38
Kajiado North	304,404	111	2,773
Kajiado West	181,622	7,862	23
Loitoktok	190,174	6,337	30
Mashuuru	63,861	2,251	29

Source: KNBS: 2019 Kenya Population and Housing Census

Average household size for Kajiado from the KNBS 2019 census was 3.5 while the national average stands at 3.9.

4.2.2 Income and Poverty Levels

There are high levels of poverty in the county with more than 47 percent of the population living below the poverty line. Major causes of poverty include illiteracy, frequent droughts, poor infrastructure and inadequate water resources. A major effect of poverty is high rate of school dropouts as parents are unable to raise school fees. The high dropouts subsequently result to child labour as the school going children work to supplement family income. In addition, the poor often experience nutrition related conditions that contribute to high morbidity rate among children and women(County Government of Kajiado, 2014)

According to National Drought Management Authority, in Kajiado County about 52% of the population practise pastoralism, 31% are engaged in employment (formal/and informal), 12% are engaged in agro-pastoral activities while the remaining 5% practice mixed farming (NDMA, 2017) see figure 1.6. The human poverty index which gives a focus to the most deprived groups in an area in the three essential elements of a human life places the county at is 27.0 percent (County Government of Kajiado, 2018). Approximately 40% of the urban population in Kenya lives in Low Income Areas (LIAs). Considering the rapid growth rate, providing services to LIAs remains the greatest challenge of Kenya's water sector for the decades to come(Water Services Regulatory Board, 2019).

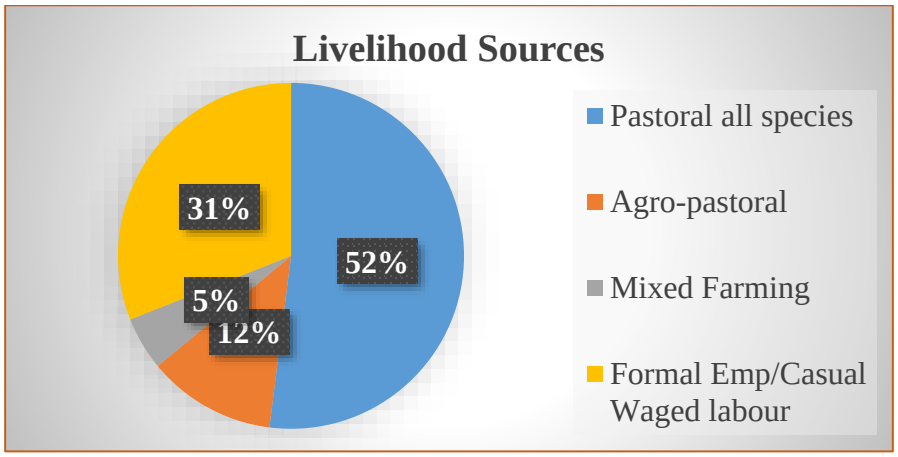

Figure 4.4: Sources of Income in the County

4.2.3 Land ownership and settlement patterns

The land is Kajiado can be categorized threefold: community land, private land and public land and registrable as leasehold or freehold. In many rural areas, the land has title deeds estimated at 95% while in many urban areas, the people with title deeds are as low as 5% owing to continued land sub-division for urban development. The settlement patterns are driven by socioeconomic activities including access to energy and road network.

4.2.4 Proposed project Awareness

The main purpose of conducting an ESIA is to create project awareness across the various stakeholders including the community about the positive and negative impacts associating with the project. Building up from the previous studies, awareness was created for the proposed project potential impacts and on how mitigation measures will be implemented. Majority of the respondents were now aware of the proposed project and all the interviewed respondent agreed that the project should proceed to the next step.

5 PUBLIC PARTICIPATION AND STAKEHOLDER CONSULTATIONS

5.1 Overview

The Kenyan government has enshrined the need for human societies' involvement in project development in accordance to the principles of public participation as provided for in Articles 1(2), 10(2), 35, 69(1)(d), 118, 174(c) and (d), 184(1)(c), 196,201(a) and 232(1)(d) of the the 2010 Constitution of Kenya. In addition, EMCA, 1999 requires active public participation in project development. The proposed project has incorporated public consultations in order to understand the local impacts, needs and wishes of the community and eventually incorporate them into the final designs and operations of the project.

5.2 Objectives of Community and Stakeholders Consultation

The key objectives of the consultation and public participation for proposed rangeland rehabilitation and pasture development project in Mile 46 Village, Iloodokilani ward was to:

i. Disseminate and inform the public and stakeholders about the project with Special reference to its key components and description
ii. Create awareness among the public on the need for the ESIA for the proposed project
iii. Gather comments, suggestions and concerns of the interested and affected parties
iv. Incorporate the information collected in the ESIA
v. Build community consensus and acceptance of the proposed project.

5.3 Methodology of Public Participation and Consultation

Public participation for the proposed project was conducted through the public consultative meetings and admission of questionnaires to allow for systematic understanding and interaction of the project beneficiaries, neighbours, local community members/surrounding enterprises and any other would be affected/interested parties.

5.3.1 Public consultation questionnaires

ESIA questionnaires were administered, to gather information from key stakeholder and the members of the public. This was done using structured questionnaires to assess the environmental and socio-economic views of the respondents. A total of 7 questionnaires were administered in the project area. Filled questionnaires administered in the project area are appended to this report (***Appendix 4***)

5.3.2 Public consultation meetings

In seeking the views of the key stakeholders, and any other would be affected/interested parties the consultant organized a consultative meeting targeting the Nareto Women SHG members, the administration, the proponent key staff at County and sub-county level, the ward representatives and other key staff on 10th-11th March 2021. The meeting was used to publicize the proposed rangeland rehabilitation and pasture development project and the anticipated effects and benefits. The table 5-1 below presents a summary of the participants of the public consultative meetings. The list of participants is appended to this report (***Appendix 6***).

Table 5.1: Summary of Stakeholder Consultative Meeting

S/No.	Venue	Number of Participants			Date of Meeting
		Below 35 yrs	Above 35 yrs	Total	
1	***Mile 46 Market Centre***	5	20	25	**10th March 2021**
Total Participants		**5**	**20**	**25**	

A total of 25 participants attended the stakeholder consultative meetings. During the public participation meeting, stakeholders had a chance to interact with the proponent represented by the EIA expert and ministry of agriculture officials at county and sub-county level. The findings are incorporated into this report and captures the issues, suggestions, concerns and recommendations from public meetings on site. The meetings were well attendend and the attendees participated actively during the meetings (Plate 5-1 and 5-2).

Plate 5-1: Participants follow the meeting proceedings

Plate 5-2: Active participation by the members of the public in attendance

5.4 Consultation and Disclosure Outputs

The appendices present the information on the public consultations undertaken under the environmental impact assessment for the proposed rangeland rehabilitation and pasture development project. This information includes a sumary of responses as detailed in the minutes (*Appendix 5*). It was noted that members lauded the project and were eager to see the start of the project. However, there were a few areas that the members sought clarity. The negative and positive impacts as discussed in the public participation forum is as presented in the minutes. *(See Appendix 5).*Further more, a comprehensive analysis of the impacts is pressented in chaper 6 of this SPR. A summary of the key concerns raised by the participants is provided in table 5-2 below:

Table 5.2: Summary of Issues Raised by the Community and Stakeholders and Response

Key Issue	Stakeholder concerns	Response
1. Water Source	Alice Jemeli Tiapapusha sought to know the water source once the project has been fenced and grass-grown. She wanted to know whether a borehole will be sunk or a dam will be built. Similar concerns were shared by Karanti Mereru	The technical team responded that there was no provision for sinking a borehole or connecting piping to the nearby water borehole and dam. However, it was noted that the grass to be grown was to be drought tolerant and the employment of conservation agriculture. The improved grass variety from KALRO would be adaptable to the climatic conditions of the area, the grass would be able to survive amid water stresses and also grow very fast depending on the varieties grown. Different varieties would be grown to ensure the grass is available throughout the season.
2. Soil Erosion	Group chairlady highlighted that the area was known for soil erosion and poor farming methods which might result in soil erosion.	The technical team appreciated the concern and acknowledged that the same had been considered, noting that community will be trained on contour farming and strip farming to mitigate the issues of soil erosion.
3. Invasive Rat and Termite Species	Shaankai Kidintoi noted the likely invasion of rat species to the pastures and also Invasive termite species in stores was raised by Jemeli.	The technical team responded that possible remedies would be to apply Integrated Pest Management Systems moreso using known cultural and verified practices. i.e.; eliminate wood in contact with the ground during store construction, do not let moisture accumulate near the foundation.

		Reduce moisture and humidity in crawl spaces, never to store firewood or wood debris against foundations or inside crawlspaces and use of mulch sparingly, especially if you already have termites or other conducive conditions.
4. Human-Wildlife Conflicts	The meeting attendants noted that elephants were common in the area and there was possibility of human wildlife conflicts.	It was suggested that local techniques will be applied such as the prevention mechanisms that will be include to put up beehives within the farm area and plant pepper alongside grass. This one would be included into the ESM&MP.

5.5 Salient issues

It is clear from the questionnaires received back that the proposed Rangeland rehabilitation and pasture development project at Mile 46 Village will serve an important role of providing the community improved nutrition as the women will not need to move long distances to access milk where the animals migrate in search of pasture. All the residents admitted that they were interested in this project more solely for their improved income from sale of milk, hay and honey.

6 POTENTIAL IMPACTS AND MITIGATION MEASURES

This chapter presents the assessment of the issues likely to arise as a result of implementation of the proposed sub project. The impacts are presented in-regard to their likelihood of occurrence on the physical, biological, occupational and socio-economic environments.

6.1 Positive Environmental and Social Impacts

The anticipated positive impacts include the following:

6.1.1 Increasing Livestock Productivity

The proposed project on rangeland rehabilitation and pasture development will ensure availability of pasture throughout the season thus improving farm productivity. Kenya Climate Smart Agriculture Project (KCSAP) will thus be in line with the government's Big Four Agenda which includes (1) **Food security and nutrition** (2) Affordable universal health care (3) Affordable housing and (4) Enhancing manufacturing. The project will encourage higher agricultural production while at the same time ensuring supply of food from the farmers.

6.1.2 Creation of Employment Opportunities for Residents of the Project Area

The proposed project will provide short term and long-term employment opportunities to the local community. The construction phase will provide short-term opportunities for casual work and semi-skilled labour. During the operational phase, long-term employment opportunities will also be created which will generate income and improve their livelihoods

6.1.3 Building Resilience to Climate Risks

Residents of Mile 46 village and its environs will benefit from access to a pasture throughout the year. The pasture variety will be able to withstand droughts and thus enable residents' access pasture closer home. There would thus be reduced loss of livestock from lack of pasture.

6.1.4 Reduced Migration and Improved Food Nutrition

The availability pasture closer to the residence will ensure that the women and children will have access to milk as the animals will not migrate in search of pasture. Therefore, the project will come along with improved nutrition for the women and children and reduced distances in search of pasture and milk.

6.1.5 Improved Livelihoods and Local Economy

The members of Nareto SHG will realize income through sale of milk, pasture and honey. The income will enable the women improve the livelihoods of their families. Additionally, there will be an increase in economic activity around the project area. The construction labour force will require food and other items that will be bought from the local community.

6.1.6 Improved Vegetation Cover

During project operation phase, the grass will be fully established thus will come along with environmental benefits that include reduced erosion. Vegetation-cover also reduce the impact

of floods as the presence of vegetation increase soil infiltration and reduce the magnitude of rainwater transformed to runoff.

6.1.7 Proper Utilization of Available Space

The proposed project will ensure proper utilization of the existing otherwise under-utilized space to include all the amenities necessary in Mile 46 Village. In the absence of the project, the space would lie idle and generate no income to the interested SHG and revenue to the county and national government.

6.2 Anticipated Negative Impacts and Mitigation Measures in Preparatory Phase

6.2.1 Spread of COVID-19 Amongst Community Members During Consultations

During implementation of the ESIA, various consultative activities will be undertaken. For efficient and meaningful engagement, a wide range of individual participants, groups in the local community and other stakeholders will be involved. The types of consultations to be used to pass information shall be through public Baraza's, electronic means shall be used where possible and one-on-one basis meetings while observing the COVID-19 mitigation measures to ensure safety stakeholders involved, the community at large and the client. The consultations will involve verification of PAPs covering the occupants of the affected area and vulnerable persons and groups; awareness raising, sensitization of PAPs and gauging attitude to the project; training and capacity building for livelihoods restoration, grievance redress, execution of site - specific surveys among others. If carried out conventionally, these activities would lead to close interaction between the proponent and the community members leading to a high risk of spreading COVID-19 amongst community members during the consultation process.

To minimize the risk of spread of COVID-19 amongst community members, alternative means of consultation will be required as mitigation measures to ensure social distancing and appropriate communication measures. The mitigation measures will be supervised by a communications/ stakeholder engagement / social safeguards expert in the project proponent's team.

Mitigation measures:

- Electronic means of consulting stakeholders and holding meetings shall be encouraged whenever feasible. One-on-one engagements for the PAPs while observing social distance and adhering to PPE wearing shall be enforced;
- Avoid concentrating of more than 15 community members at one location. Where two or more people are gathered, maintain social distancing of at least 2 meters;
- The team carrying out engagements within the communities on one-on-one basis will be provided with appropriate PPE for the number of people they intend to meet;
- Community members should be sensitised and encouraged to take vaccination against COVID-19.
- Use traditional channels of communications (TV, newspaper, radio, dedicated phone-lines, public announcements and mail) when stakeholders do not have access to online

channels or do not use them frequently. Allow participants to provide feedback and suggestions.

a) Hold meetings in small groups, mainly in form of FGDs if permitted depending on restrictions in place and subject to strict observance of physical distancing and limited duration.
b) In situations where online interaction is challenging, disseminate information through digital platform (where available) like Facebook and WhatsApp & Chart groups.
c) Ensure online registration of participants, distribution of consultation materials and share feedback electronically with participants.

6.3 Anticipated Negative Impacts and Mitigation Measures During Construction Phase

6.3.1 Spread of Covid -19 During Construction Phase

During construction phase, there is a possibility for the spread of Covid-19 among workers as there will be an influx of people from different backgrounds/ locations.

Mitigation measures:

- The Contractors will develop a Standard Operating Procedure SOPs for managing the spread of Covid-19 during project execution and submit them for the approval of the Supervision Engineer and the Client before mobilization. The SOPs shall be in line with the World Bank guidance on COVID-19, Ministry of Health Directives and site-specific project conditions;
- Mandatory provision and use of appropriate Personal Protective Equipment (PPE) shall be required for all project personnel including
- Avoid concentrating of more than 15 workers at one location. Where there are two or more people gathered, maintain social distancing at least 2 meters. All workers and visitors accessing worksites every day or attending meetings shall be subjected to rapid Covid-19 screening which may include temperature check and other vital signs;
- The project shall put in place means to support rapid testing of suspected workers for covid-19;
- Install handwashing facilities with adequate running water and soap, or sanitizing facilities at entrance to work sites including consultation venues and meetings and ensure they are used;
- Ensure routine sanitization of shared social facilities and other communal places routinely including wiping of workstations, door knobs, hand rails etc
- Availability of SOP(s), Training material, PPE, sanitising facilities etc.
- Community members should be sensitised and encouraged to take vaccination against COVID-19.

6.3.2 Impacts on Flora and Fauna

Existing vegetation especially the shrubs shall be disturbed during land preparation. This includes soil ripping, seed bed preparation and site clearance for foundation excavation for construction of the hay barn and fence. The area is relatively flat with scanty vegetation.

Mitigation Measures

The following measures for mitigating against adverse impacts on flora and fauna are recommended;

- Precise points for pole erection should be identified to ensure minimal shrub cutting along the proposed fence
- Selective clearance to avoid cutting of indigenous trees where unnecessary
- Replanting of trees along the fence edges

6.3.3 Possible Increase in Soil Erosion

During public consultation and field investigation exercise, it was noted that the area was known to be prone to soil erosion. Therefore, land preparation that will pave way for rangeland rehabilitation and pasture development will come along with soil disturbance that may exacerbate soil erosion.

Mitigation Measures

The following measures for mitigating against adverse increase in soil erosion are recommended;

- Training farmers/group members on good agricultural practices
- Practicing conservation tillage and reseeding to ensure minimal soil disturbance
- Adopt contour and strip farming
- Identify map, design and construct of soil control structures e.g., terraces, diversion ditches in possible hotspots

6.3.4 Occupational Health and Safety Hazards

During construction the movement of construction materials may result in accidents if good supervision is not provided. Accidental cuts and bruises are common among construction workers as a result of the use of machinery and hand tools. These may also occur during decommissioning and operational stages of project whereby safety risks resulting from any leftover electrical cables, uncovered manholes and steel structures which are potential causatives of physical injury to passers-by if this phase is not well handled.

Mitigation:

- Use of standard operating procedures for all machinery and equipment
- Ensure Material Safety Data Sheets (MSDS) for all chemicals used in the field are provided
- Provide appropriate personal protective equipment (PPE).
- Redesign manual processes and routine work tasks to reduce heavy lifting/repetitive activities.
- Train workers in general safety procedures including first aid.
- Use designated routes for machinery and personnel

6.3.5 Increased Spread of STD, HIV & AIDS

The residents of Mile 46 Village expressed concern that there is likely increase in incidences of health impacts such as sexually transmitted diseases including HIV & AIDS especially during construction of the project. They noted that possible illicit behaviours such as prostitution may increase leading to spread of STD, HIV/AIDS due to influx of workers and perceived 'quick money' from the project.

Mitigation

The following should be implemented to mitigate sspread of STD, HIV & AIDS:

- Contractor to develop appropriate awareness content and implement awareness sessions for workers on HIV/AIDs and other STDs. This can be done through the use of educative posters and tool box meetings.
- Ensure an adequate and accessible provision of condoms to workers both male and female.
- Contractors to develop a code of conduct and ensure it's signed by all workers with physical presence on site as well as within the project area.

6.3.6 Gender Based Violence and Sexual Harassment

This impact is triggered during Project Construction Phase when the Contractor fails to comply with the gender inclusivity requirements in hiring of workers and entire Project Management as per required by Gender Policy 2011 and 2/3 gender rule.

Mitigation

- Ensure clear human resources policy against sexual harassment that is aligned with national law
- Integrate provisions related to sexual harassment in the employee COC
- Ensure appointed human resources personnel to manage reports of sexual harassment according to policy
- The Contractor shall require his employees, sub-contractors, sub-consultants, and any personnel thereof engaged in construction works to individually sign and comply with a Code of Conduct with specific provisions on protection from sexual exploitation and abuse
- The contractor will implement provisions that ensure that gender -based violence at the community level is not triggered by the Project, including:
- Effective and on-going community engagement and consultation, particularly with women and girls;
- Review of specific project components that are known to heighten GBV risk at the community level, e.g., compensation schemes; employment schemes for women; etc.

6.3.7 Sexual Exploitation and Abuse (SEA)

This impact refers to sexual exploitation and abuse committed by Project staff against communities and represents a risk at all stages of the Project, especially when employees and community members are not clear about prohibitions against SEA in the Project. Given that the project will be smaller in nature, it is anticipated that the mitigation will be through management and coordination to include integration of SEA in job descriptions,

employments contracts, performance appraisal systems, etc.; development of contract policies related to SEA, including whistle blower protection and investigation and disciplinary procedures; training for all project management; management of coordination mechanism for case oversight, investigations and disciplinary procedures; supervision of dedicated PSEA focal points in the project and trained community liaison officers.

Mitigation Measures to Risk of SEA

- Develop and implement a SEA action plan with an Accountability and Response Framework as part of the C-ESMP. The SEA action plan will follow guidance on the World Bank's Good Practice Note for Addressing Gender-based Violence in Investment Project Financing involving Major Civil Works (Sept 2018).
- The SEA action plan will include how the project will ensure necessary steps are in place for:
- Prevention of SEA: including COCs and ongoing sensitization of staff on responsibilities related to the COC and consequences of non-compliance; project-level IEC materials;
- Response to SEA: including survivor-centered coordinated multi-sectoral referral and assistance to complainants according to standard operating procedures; staff reporting mechanisms; written procedures related to case oversight, investigation and disciplinary procedures at the project level, including confidential data management;
- Engagement with the community: including development of confidential community-based complaints mechanisms discrete from the standard GRM; mainstreaming of PSEA awareness-raising in all community engagement activities; community-level IEC materials; regular community outreach to women and girls about social risks and their PSEA-related rights;
- Management and Coordination: including integration of SEA in job descriptions, employments contracts, performance appraisal systems, etc.; development of contract policies related to SEA, including whistle blower protection and investigation and disciplinary procedures; training for all project management; management of coordination mechanism for case oversight, investigations and disciplinary procedures; supervision of dedicated PSEA focal points in the project and trained community liaison officers.

6.4 Anticipated Negative Impacts and Mitigation Measures on Operational Phase

6.4.1 Gender-Based Violence (GBV) at the Community Level

This impact refers to gender-based violence that women and girls may experience as a result of Project implementation. This includes, for example, an increase in intimate partner violence (IPV) when compensation schemes that share funds equally among husband and wife at the household level do not provide adequate sensitization and safety measures to reduce potential for increased tensions due to females receiving funds. This also refers to other GBV-related risks incurred as a result of income received from sale of hay and pasture seeds that do not adequately consult men in the community.

Mitigation Measures to Risk of GBV at the community level

Develop and implement provisions that ensure that gender-based violence at the community level is not triggered by the Project, including:

- effective and on-going community engagement and consultation, particularly with women and girls;
- review of specific project components that are known to heighten GBV risk at the community level, e.g., compensation schemes; employment schemes for women; sale of hay and pasture seeds; etc.
- Specific plan for mitigating these known risks, e.g., sensitization around gender-equitable approaches to compensation and employment
- Ensure adequate referral mechanisms are in place if a case of GBV at the community level is reported related to project implementation.

6.4.2 Possible Human Wildlife Conflict

The establishment of pasture in the area would likely attract wild animals in search of the same. This is likely to trigger human wildlife conflicts in the form of attacks by wild animals e.g., elephants given that elephants are common wildlife within the project area.

Mitigation:

- Prevention of human wildlife conflict by putting up beehives within the farm area
- Local techniques including planting pepper alongside grass.

6.4.3 Invasive Rat and Termite Species

A lot of grass encourages rat reproduction, this, in turn, reduces plant nutrients and affects livestock growth. Additionally, the possibility of termites affecting harvested grass stored in stores could be a major challenge

Mitigation:

- Introduce rat traps where necessary
- Biological control through cats
- Use of treated timber for construction materials
- Treat the foundation with anti-termite

6.4.4 Loss of Seeds/Pasture to Droughts

It is notable that the weather patterns vary from season to season, therefore there exists a possibility of exposure of planted pasture to extreme drought causing the pasture to die off before establishment.

Mitigation Measures

The following measures for mitigating against adverse impacts are recommended;

- The improved grass variety from KALRO should be selected that can withstand the existing climatic conditions.

- Use modern technologies in seeding and land preparation to ensure soil water conservation.

6.4.5 Pests and Diseases

Caterpillars have been known to invade crops/ pasture especially when young. This would be a major drawback to the goal of the project. There is thus a need to ensure the effects are mitigated/prevented.

Mitigation Measures

The following measures for mitigating against adverse impacts are recommended;

- An Integrated Pest Management System would be used to control pests i.e., introduction of pest-eating insects to counter the effects of caterpillars.

6.4.6 Mismanagement of Project Activities

During operation phase, accountability and equitable share of grass proceeds and produce will be paramount. There exists the possibility of a lack of transparency and a proper share of harvested grass if there is no strong and transparent committee/management structures leading to conflicts. Lack of adequate capacity within the group members would pose threat to project sustainability

Mitigation:

- The group to make use of existing grievance redress mechanism in case of conflicts
- The community should ensure the Social Accountability and Integrity Committee are empowered to perform their duties
- The project through KCSAP should train the group members on proper farming methods, improved varieties and proper record/ book keeping
- Having regular elections as per the constitution

6.4.7 Occupational Health and Safety Hazards

During operation, the operation of machinery and equipment will present a number of occupational health and safety risks. Significant hazards will result from machinery operation. This includes accidents and incidents that range from cuts, bruises, trips, falls and slips.

Mitigation:

- Use of standard operating procedures for all machinery and equipment
- Ensure Material Safety Data Sheets (MSDS) for all chemicals used in the field are provided
- Provide appropriate personal protective equipment (PPE)
- Redesign manual processes and routine work tasks to reduce heavy lifting/repetitive activities
- Train workers in general safety procedures including first aid

- Use designated routes for machinery and personnel

6.5 Anticipated Impacts during the Decommissioning Phase

6.5.1 Loss of Pasture and Storage Facility

The termination of the project at the end of project life will bring to a close an organised pasture development project. During drought periods, the women and children left behind (homesteads) as a result of migrations in search of pasture may lose the benefits accrued from the project e.g., access to milk.

Mitigation:

- The proponent should ensure that the community members are sensitized and prepared to look for alternative source of pasture and livelihoods

6.5.2 Loss of Revenue and Employment Opportunities

During project, operation there will be revenue collection from the farm produce sale and various inputs to the farming systems employed by farmers. The other source of revenue includes through market generation outside the rangeland rehabilitation and pasture development project. The impact is high and immediate as it is anticipated and can be mitigated by training farmers on other forms of business and means of getting pasture.

Mitigation:

- Community to be trained on alternative source of revenue and jobs

6.5.3 Increased Generation of Solid Wastes

Decommissioning activities will generate various solid wastes ranging from debris, wrappings, concrete, corrugated iron, steel rods, rafters, purlins etc. Poor handling and disposal of such waste will lead to environmental pollution.

Mitigation:

- Careful dismantling to ensure materials remain as re-usable as possible
- Selling or donating the re-usable or recyclable materials to avoid waste
- Cleaning and proper site rehabilitation by adhering to a NEMA approved Decommissioning plan

6.5.4 Occupational Health and Safety Hazards

Mitigation:

- Use of standard operating procedures for all machinery and equipment
- Ensure Material Safety Data Sheets (MSDS) for all chemicals used in the field are provided
- Provide appropriate personal protective equipment (PPE)
- Redesign manual processes and routine work tasks to reduce heavy lifting/repetitive activities

- Train workers in general safety procedures including first aid
- Use designated routes for machinery and personnel

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

7.1 Introduction

The project proponent acknowledges that the proposed project activities will have some impacts on the biophysical environment, health and safety, and socio-economic well-being of Mile 46 Village residents, traders, rangeland rehabilitation and pasture development project occupants and other business community stakeholders. Thus, the main focus will be on reducing the negative impacts and maximizing the positive impacts associated with the project activities through a programme of continuous improvement. An environmental and social management plan has been developed to assist the proponent in mitigating and managing environmental and social impacts associated with the life cycle of the project. It is noteworthy that key factors and processes may change through the life of the project and considerable provisions have been made for dynamism and flexibility of the ESMP. As such, the ESMP should be subjected to periodic review for improvement purposes.

Tables 8-1 and 8-2 form the core of this ESMP for the construction, operational and decommissioning phases of the proposed Rangeland rehabilitation and pasture development project. In general, the tables outline the potential environmental, socio-economic, health and safety risks associated with the project and details all the necessary mitigation measures, their financial costs, as well as the persons responsible for their implementation and monitoring. The ESMP should be used as checklist in the initial environmental audit of the project.

It is worth noting that the key responsibilities regarding compliance to the proposed ESM&MP during the site clearance will be proponent, construction and land preparation period will be the Contractor for hay barn construction and land preparation whereas those in operation stage will be the responsibility of the proponent. It is important that the project proponent ensures adequate monitoring and evaluation for the Contractor for non-conformances and adequate resources are allocated for operational stage.

7.2 Environmental and Social Management Plan

Table 7.1: Environmental and Social Management Plan (ESMP)

Potential Impact	Proposed Mitigation Measures	Responsibility	Monitoring means/ Frequency	Verifiable Indicators	Cost (Ksh)
Preparatory Phase					
Spread of COVID-19 Amongst Community Members During Consultations	• Electronic means of consulting stakeholders and holding meetings shall be encouraged whenever feasible. One-on-one engagements for the PAPs while observing social distance and adhering to PPE wearing shall be enforced; • Avoid concentrating of more than 15 community members at one location. Where two or more people are gathered, maintain social distancing of at least 2 meters; • The team carrying out engagements within the communities on one-on-one basis will be provided with appropriate PPE for the number of people they intend to meet; • Community members should be sensitised and encouraged to take vaccination against COVID-19. • Use traditional channels of communications (TV, newspaper, radio, dedicated phone-lines, public	Contractor / Proponent	Throughout the Preparatory Phase	• Availability of SOP(s), Training material, PPE, sanitizing facilities etc. • Number of handwashing stations setup. • Number of people vaccinated against covid 19. • Fumigation reports. • Number of signage put up informing on social distancing. • Number of thermal guns in use on site.	30,000

Potential Impact	Proposed Mitigation Measures	Responsibility	Monitoring means/ Frequency	Verifiable Indicators	Cost (Ksh)
	announcements and mail) when stakeholders do not have access to online channels or do not use them frequently. Allow participants to provide feedback and suggestions. d) Hold meetings in small groups, mainly in form of FGDs if permitted depending on restrictions in place and subject to strict observance of physical distancing and limited duration. e) In situations where online interaction is challenging, disseminate information through digital platform (where available) like Facebook and WhatsApp & Chart groups. f) Ensure online registration of participants, distribution of consultation materials and share feedback electronically with participants.				
Total Cost for Preparatory Phase					***30,000***
Potential Impact	**Proposed Mitigation Measures**	**Responsibility**	**Timeline**	**Verifiable Indicators**	**Cost (Ksh)**
Construction Phase					
Spread of Covid-19 During	• The Contractors will develop a Standard Operating Procedure SOPs	Contractor / Proponent	Throughout the Construction Period	• Availability of SOP(s), Training material,	30,000

Potential Impact	Proposed Mitigation Measures	Responsibility	Monitoring means/ Frequency	Verifiable Indicators	Cost (Ksh)
Construction Phase	for managing the spread of Covid-19 during project execution and submit them for the approval of the Supervision Engineer and the Client before mobilization. The SOPs shall be in line with the World Bank guidance on COVID-19, Ministry of Health Directives and site-specific project conditions; • Mandatory provision and use of appropriate Personal Protective Equipment (PPE) shall be required for all project personnel including • Avoid concentrating of more than 15 workers at one location. Where there are two or more people gathered, maintain social distancing at least 2 meters. All workers and visitors accessing worksites every day or attending meetings shall be subjected to rapid Covid-19 screening which may include temperature check and other vital signs; • The project shall put in place means to support rapid testing of suspected workers for covid-19; • Install handwashing facilities with adequate running water and soap, or			PPE, sanitizing facilities etc. • Number of handwashing stations setup. • Number of people vaccinated against covid 19. • Fumigation reports. • Number of signage put up informing on social distancing. • Number of thermal guns in use on site.	

Potential Impact	Proposed Mitigation Measures	Responsibility	Monitoring means/ Frequency	Verifiable Indicators	Cost (Ksh)
	sanitizing facilities at entrance to work sites including consultation venues and meetings and ensure they are used; • Ensure routine sanitization of shared social facilities and other communal places routinely including wiping of workstations, door knobs, hand rails etc • Availability of SOP(s), Training material, PPE, sanitising facilities etc. • Community members should be sensitised and encouraged to take vaccination against COVID-19.				
Impacts on Flora and Fauna	• Precise points for pole erection should be identified to ensure minimal shrub cutting along the proposed fence • Selective clearance to avoid cutting of indigenous trees where unnecessary • Replanting of trees along the fence edges	Proponent	Planning/pre-construction/site clearance	• No. and type of vegetation cleared • No. and type of indigenous species re-planted • Size of area cleared • Size of area re-vegetated	20,000
Possible Increase in Soil Erosion	• Training farmers/group members on good agricultural practices • Practicing conservation tillage and reseeding to ensure minimal soil	Contractor and proponent	Construction/site clearance	• Presence/ absence of stockpiled excavated earth material • Number of trees and	20,000

Potential Impact	Proposed Mitigation Measures	Responsibility	Monitoring means/ Frequency	Verifiable Indicators	Cost (Ksh)
	disturbance • Adopt contour and strip farming • Identify map, design and construct of soil control structures e.g., terraces, diversion ditches in possible hotspots			grass planted. • Type/Number of soil construction structures in place. • Number and Type of trainings of soil conservation. • No. of silt traps installed	
Occupational Health and Safety Hazards	• Use of standard operating procedures for all machinery and equipment • Ensure Material Safety Data Sheets (MSDS) for all chemicals used in the field are provided • Provide appropriate personal protective equipment (PPE). • Redesign manual processes and routine work tasks to reduce heavy lifting/repetitive activities. • Train workers in general safety procedures including first aid. • Use designated routes for machinery and personnel	Contractor / Proponent	Daily throughout the Construction Period	• Presence of SOPs • HSE inspection reports • Training reports • Training attendance sheets • Orientation report • No. of toolbox talks conducted	80,000
Increased Spread of STD, HIV & AIDS	• Contractor to develop appropriate awareness content and implement awareness sessions for workers on HIV/AIDs and other STDs. This can be done through the use of educative	Contractor / Proponent	Throughout construction Period	• Number of awareness campaigns • Presence of educative posters • Presence of signed	20,000

Potential Impact	Proposed Mitigation Measures	Responsibility	Monitoring means/ Frequency	Verifiable Indicators	Cost (Ksh)
	posters and tool box meetings. • Ensure an adequate and accessible provision of condoms to workers both male and female. • Contractors to develop a code of conduct and ensure it's signed by all workers with physical presence on site as well as within the project area.			code of conduct	
Gender Based Violence and Sexual Harassment	• Ensure clear human resources policy against sexual harassment that is aligned with national law • Integrate provisions related to sexual harassment in the employee COC • Ensure appointed human resources personnel to manage reports of sexual harassment according to policy • The Contractor shall require his employees, sub-contractors, sub-consultants, and any personnel thereof engaged in construction works to individually sign and comply with a Code of Conduct with specific provisions on protection from sexual exploitation and abuse • The contractor will implement provisions that ensure that gender - based violence at the community	Contractor / Proponent	Throughout construction Period	• Mitigation plan for GBV occurring at the community level as a result of project implementation • Number of GBV cases happening at the community level that receive survivor-centered referral and care	25,000

Potential Impact	Proposed Mitigation Measures	Responsibility	Monitoring means/ Frequency	Verifiable Indicators	Cost (Ksh)
	level is not triggered by the Project, including: • Effective and on-going community engagement and consultation, particularly with women and girls; • Review of specific project components that are known to heighten GBV risk at the community level, e.g., compensation schemes; employment schemes for women; etc.				
Sexual Exploitation and Abuse (SEA)	• Develop and implement a SEA action plan with an Accountability and Response Framework as part of the C-ESMP. The SEA action plan will follow guidance on the World Bank's Good Practice Note for Addressing Gender-based Violence in Investment Project Financing involving Major Civil Works (Sept 2018). • The SEA action plan will include how the project will ensure necessary steps are in place for: • Prevention of SEA: including COCs and ongoing sensitization of staff on responsibilities related to the COC and consequences of non-compliance; project-level IEC	Contractor / Proponent	Throughout construction Period	• SEA Action Plan • Code of Conduct • Number of staff trainings • SEA FP • Community Liaison trained in PSEA • IEC materials for workers' sites and community • Discrete SEA reporting pathway • Relevant policies, e.g. investigations and discipline and whistleblower protection	5,000

Potential Impact	Proposed Mitigation Measures	Responsibility	Monitoring means/ Frequency	Verifiable Indicators	Cost (Ksh)
	materials; • Response to SEA: including survivor-centered coordinated multi-sectoral referral and assistance to complainants according to standard operating procedures; staff reporting mechanisms; written procedures related to case oversight, investigation and disciplinary procedures at the project level, including confidential data management; • Engagement with the community: including development of confidential community-based complaints mechanisms discrete from the standard GRM; mainstreaming of PSEA awareness-raising in all community engagement activities; community-level IEC materials; regular community outreach to women and girls about social risks and their PSEA-related rights; • Management and Coordination: including integration of SEA in job descriptions, employments contracts, performance appraisal systems, etc.; development of contract policies			• Monthly minutes from SEA coordination meetings	

Potential Impact	Proposed Mitigation Measures	Responsibility	Monitoring means/ Frequency	Verifiable Indicators	Cost (Ksh)
	related to SEA, including whistle blower protection and investigation and disciplinary procedures; training for all project management; management of coordination mechanism for case oversight, investigations and disciplinary procedures; supervision of dedicated PSEA focal points in the project and trained community liaison officers.				
Total Cost for Construction Phase					***200,000***
Potential Impact	**Proposed Mitigation Measures**	**Responsibility**	**Timeline**	**Verifiable Indicators**	**Cost (Ksh)**
Operational Phase					
Gender-Based Violence (GBV) at the Community Level	Develop and implement provisions that ensure that gender-based violence at the community level is not triggered by the Project, including: • effective and on-going community engagement and consultation, particularly with women and girls; • review of specific project components that are known to heighten GBV risk at the community level, e.g., compensation schemes; employment schemes for women; sale of hay and pasture seeds; etc. • Specific plan for mitigating these	Contractor / Proponent	Throughout Operational Period	• Mitigation plan for GBV occurring at the community level as a result of project implementation • Number of GBV cases happening at the community level that receive survivor-centered referral and care	30,000

Potential Impact	Proposed Mitigation Measures	Responsibility	Monitoring means/ Frequency	Verifiable Indicators	Cost (Ksh)
	known risks, e.g., sensitization around gender-equitable approaches to compensation and employment • Ensure adequate referral mechanisms are in place if a case of GBV at the community level is reported related to project implementation.				
Human Wildlife Conflict	• Prevention of human wildlife conflict by putting up beehives within the farm area • Local techniques including planting pepper alongside grass.	Contractor / Proponent	Throughout Operational Period	• Number of beehives procured • Presence of planted pepper	100,000 (20 beehives)
Invasive Rat and Termite Species	• Introduce rat traps where necessary • Biological control through cats • Use of treated timber for construction materials • Treat the foundation with anti-termite	Contractor / Proponent	Throughout Operational Period	• Number of rat traps installed • Physical presence of termites	10,000
Loss of Seeds/ Pasture to Droughts	• The improved grass variety from KALRO should be selected that can withstand the existing climatic conditions. • Use modern technologies in seeding and land preparation to ensure soil water conservation.	Contractor / Proponent	Throughout Operational Period	• Type of grass planted	10,000 part of project cost
Production Losses as a Result of Pests and Diseases	• An Integrated Pest Management System would be used to control pests i.e., introduction of pest-eating	Proponent	Throughout Operational Period	• Percentage of post-harvest losses	15,000

Potential Impact	Proposed Mitigation Measures	Responsibility	Monitoring means/ Frequency	Verifiable Indicators	Cost (Ksh)
	insects to counter the effects of caterpillars.				
Mismanagement of Project Activities	• The group to make use of existing grievance redress mechanism in case of conflicts • The community should ensure the Social Accountability and Integrity Committee are empowered to perform their duties • The project through KCSAP should train the group members on proper farming methods, improved varieties and proper record/ book keeping • Having regular elections as per the constitution	Proponent	Throughout Operational Period	• Presence of a Social Accountability and Integrity Committee • Number of conflicts addressed	Part of project cost
Occupational Health and Safety Hazards	• Use of standard operating procedures for all machinery and equipment • Ensure Material Safety Data Sheets (MSDS) for all chemicals used in the field are provided • Provide appropriate personal protective equipment (PPE) • Redesign manual processes and routine work tasks to reduce heavy lifting/repetitive activities • Train workers in general safety procedures including first aid • Use designated routes for machinery	Contractor / Proponent	Throughout Operational Period	• Presence of SOPs • HSE inspection reports • Training reports • Training attendance sheets • Orientation report • No. of toolbox talks conducted	20,000

Potential Impact	Proposed Mitigation Measures	Responsibility	Monitoring means/ Frequency	Verifiable Indicators	Cost (Ksh)
	and personnel				
Total Cost for Operational Phase					***185,000***
Potential Impact	**Proposed Mitigation Measures**	**Responsibility**	**Timeline**	**Verifiable Indicators**	**Cost (Ksh)**
Decommissioning Phase					
Loss of Pasture and Storage Facility	• The proponent should ensure that the community members are sensitized and prepared to look for alternative source of pasture and livelihoods	KCSAP / Proponent	During Project Decommissioning	• Number of sensitization meetings on sensitization on alternative livelihoods • Number of proposed alternative livelihoods	80,000 (Future estimates)
Loss of Revenue and Employment Opportunities	• Community to be trained on alternative source of revenue and jobs	KCSAP / Proponent	During Project Decommissioning	• Number of trainings / alternative livelihoods proposed	10,000
Increased Generation of Solid Wastes	• Careful dismantling to ensure materials remain as re-usable as possible • Selling or donating the re-usable or recyclable materials to avoid waste • Cleaning and proper site rehabilitation by adhering to a NEMA approved Decommissioning plan	Proponent	During Project Decommissioning	• Number/ documentation on reusable solid waste materials • Income generated from sale of waste material • Licensed decommissioning plan from NEMA	10,000

Potential Impact	Proposed Mitigation Measures	Responsibility	Monitoring means/ Frequency	Verifiable Indicators	Cost (Ksh)
Occupational Health and Safety Hazards	• Use of standard operating procedures for all machinery and equipment • Ensure Material Safety Data Sheets (MSDS) for all chemicals used in the field are provided • Provide appropriate personal protective equipment (PPE) • Redesign manual processes and routine work tasks to reduce heavy lifting/repetitive activities • Train workers in general safety procedures including first aid • Use designated routes for machinery and personnel	Contractor / Proponent	Routine Inspection / During Project Decommissioning	• Presence of SOPs • HSE inspection reports • Training reports • Training attendance sheets • Orientation report • No. of toolbox talks conducted	30,000
Total Cost for Operational Phase					***130,000***

7.3 Environmental Monitoring Plan

Table 7.2: Environmental Monitoring Plan

Key Component	Parameters to be monitored	Points to be monitored	Frequency of monitoring	Sampling Points	Total samples	Total Cost (Ksh.)	Lab Materials and Equipment/Other Requirements	Responsibility	Relevant legislation/g guidelines
Environmental Issues									
Soil Erosion	No of terraces build Methods of land preparation employed Vegetation cover Soil loss	On the field	Monthly	2	2	5000	Universal soil loss Sediment load in run-off	Proponent	Water Quality Regulations (2006)
Air Quality	Noise & excessive vibrations and Dust	Inside and right outside the project site	During land preparation, harvesting and Store construction and operations	Minimum 2	5	5,000	Noise Meter Air quality monitor	Contractor and Proponent	Noise and Excessive Vibration Pollution Control) Regulations, 2009 Air Quality Regulations ,2014

Key Component	**Parameters to be monitored**	**Points to be monitored**	**Frequency of monitoring**	**Sampling Points**	**Total samples**	**Total Cost (Ksh.)**	**Lab Materials and Equipment/Other Requirements**	**Responsibility**	**Relevant legislation/g guidelines**
Occupational Health and safety	No of accidents, incidents and fatalities No of trainings conducted Risk assessments done Number of persons trained Number of HSE meetings carried out	In and around the project site area	During land preparation, harvesting and Store construction and operations	Entire site	N/A	50,000	Trainings (Fire, First Aid, EHS) Safety Inspections Incident Register	Contractor and Proponent	OSHA,2007
Social Issues									
Human Wildlife Conflict	Number of attacks by wildlife Acreage of pasture destroyed	At the farm/field level	As and when they occur	-	-	Total payments for damages/ compensation	Field personnel	Proponent	Wildlife Conservation and Management Act (2013)

Key Component	**Parameters to be monitored**	**Points to be monitored**	**Frequency of monitoring**	**Sampling Points**	**Total samples**	**Total Cost (Ksh.)**	**Lab Materials and Equipment/Other Requirements**	**Responsibility**	**Relevant legislation/g guidelines**
Employment	Number of employees from local community	Project Site	Quarterly	During employment	Number of new employees	Total payment for casuals	Employee registry	Contractor and Proponent	Employment Act, 2007 WIBA, 2007
Spread of Diseases and infections	New infections of STD, HIV & AIDS, and COVID-19	Project Employees	Quarterly	During employment	Number of new infections	30,000	DOSHS Designated Health Practitioner (DHP)	Contractor and Proponent	OSHA,2007

8 CONCLUSION AND RECOMMENDATION

The rangeland rehabilitation and pasture development project by Nareto SHG has raised a number issues of importance to the environment, social, health and also economic wellbeing through and an in-depth assessment and evaluation of the environmental and social impacts. In addition, the project has number of negative impacts that has an adverse effect to the environment, social and economic being of the project site during the various phases of project. To enable the project to be realized then, specific mitigation measures has been proposed. The following recommendations for the avoidance and mitigation for the adverse environmental and social impacts from the proposed project are as highlighted.

- A tree planting programme for the farmers to be implemented in line with KCSAP objectives of reducing greenhouse gas emissions. This can be promoted by giving tree seedlings to farmers at the start of planting season.
- The improved grass variety from KALRO should be selected that can withstand the climatic conditions, grow very fast and be available throughout the season
- The community to be trained on contour farming and strip farming to mitigate the issues of soil erosion
- Employ local techniques for prevention of human wildlife conflict by putting up beehives within the farm area and planting pepper alongside grass.
- The project through KCSAP should train the group members on proper farming methods, improved varieties and proper record/ book keeping.
- Education and awareness creation on COVID-19, HIV aids control and prevention measures including adherence to MOH guidelines
- Installation works in the proposed Project is carried out in accordance with approved designs, regulations, policies and laws;
- The proponent, supervising engineer and the contractor should work together to ensure full implementation of the ESMP for proper enhancement and mitigation of impacts emanating from the project

It therefore concluded that the positive impact outweighs the negative impacts raised. Mitigation measures for the negative impacts have been given and in the end it is economically viable and therefore the project should be allowed to proceed.

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APPENDICES

Appendix 1: Certificate of Registration of Nareto Women SHG

Appendix 2: Community Land Resolution/ Consent Form

Kenya Climate Smart Agriculture Project – Kajiado County

LAND RESOLUTION AND CONSENT FORM

ITEM	DESCRIPTION
Name of Investment:	Up-scaling Livestock Productivity Through Rangeland Rehabilitation and Pasture Development
Implementing Team:	Nareto Women Self Help Group
Project Location:	Mile 46 Holding Ground
GPS Coordinates:	S1°53'44.72571" E36°34'21.41034"
Estimated cost of the investment:	4,999,375.00
Source of Funding:	Kenya Climate Smart Agriculture Project (KCSAP)
Financial Year:	2020/2021

1

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TERMS OF THE AGREEMENT

1. We the residents/users of the investment/group of **NARETO WOMEN SELF HELP GROUP** discussed and agreed that, **MILE 46 HOLDING GROUND LAND** Shall be site of the Proposed **PASTURE PRODUCTION PROJECT** and that
2. We all are aware of the Kenya Climate Smart Project and this proposed sub-project at **MILE 46 HOLDING GROUND.**
3. We all are aware that the land set aside for the investment is community land and no one is claiming individual ownership and no alternative claims will be made later on the land.
4. We all have no problem with the site of the investment
5. We have all agreed unanimously that the project implementation should continue.
6. We all shall strive to peacefully resolve any conflicts with other communities/groups/clans concerning the investment and that we would strive to peacefully co-exist and resolve any conflict arising out of the investment facility following due process provided by the laws of Kenya.
7. The land to be donated was identified in consultation with all residents and users of the Land
8. We all understand the likely impacts of proposed activities on donated land.
9. We all understand that the community could have refused this investment.
10. We all agreed to this investment and donation of the land without coercion, manipulation, or any form of pressure on the part of public or traditional authorities.
11. We all agreed that we do not require any monetary or non-monetary benefits or incentives as a condition for the donation.
12. The land being donated will not reduce the remaining land area to a level below that required to maintain the livelihoods of occupiers and users of land at current levels and will not require the relocation of any household.
13. If any structure will be moved or any access to land be limited as a result of the subproject, support will be provided to the individual so that their livelihoods are not adversely affected
14. The land is free of encumbrances or encroachment and is not claimed by any individual and its ownership is not contested.

We have been designated by the community/group of **NARETO WOMEN SELF HELP GROUP**

2

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Confirm the above information to be true and that we have resolved to abide by ALL terms of this agreement. (Please attach minutes of community/group meeting, where the community/group agreed to the use and conversion of this land for this purpose and any related documents)

S/NO.	NAME	VILLAGE/LOCATION	ID/NO.	SIGNATURE
1.	DUSHAN LEPAPA	SINGIRAINE	129 52390	
2.	SUYANTA TANIE	OLTEPESI	011 6868 ~~0485~~	
3.	LESHAINE MLOIKENYA	KILONITO	0092508	
4.	SHANKA KIPINTOI	ELANGATA-WUAS	5797267	
5	FRAIDAH N. KILUNKU	MILE 46	12950215	

Witnessed on this 19th Day of March in the Year 2021: by:

1. Area Chief

S/NO.	NAME	ID/NO.	SIGNATURE & R /STAMP
1	JOSHUA P. PESI	22602440	CHIEF ELANGATA WUAS P.O. Box 435 KAJIADO Date:

2. Ward Administrator

S/NO.	NAME	ID/NO.	SIGNATURE & R /STAMP
1	WILFRED OMBASA O.	24091150	Date

3. ~~Community Land Registrar~~/Land Adjudication Officer

S/NO.	NAME	ID/NO.	SIGNATURE & R /STAMP
1	J.K. LESSAN	8872661	LAND ADJUDICATION & SETTLEMENT OFFICER 23 MAR 2021

3

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4. County Government (Physical Planning Department)

S/NO.	NAME	ID/NO.	SIGNATURE & R /STAMP
1	Mathew Sulta	29632670	23 MAR 2021

5. County Department of Livestock Production

S/NO.	NAME	ID/NO.	SIGNATURE & R /STAMP
1	Elijah Miriti	20662954	P.O.Box 130 - 01100 KAJIADO Date: 23/03/2021

6. County Project Coordinator (**Kenya Climate Smart Agriculture Project**)

S/NO.	NAME	ID/NO./PNO	SIGNATURE & R /STAMP
1	DANIEL NYAGAKA	19930248467	COUNTY PROJECT COORDINATOR K.C.S.A.P. KAJIADO Date: 23/3/2021

4

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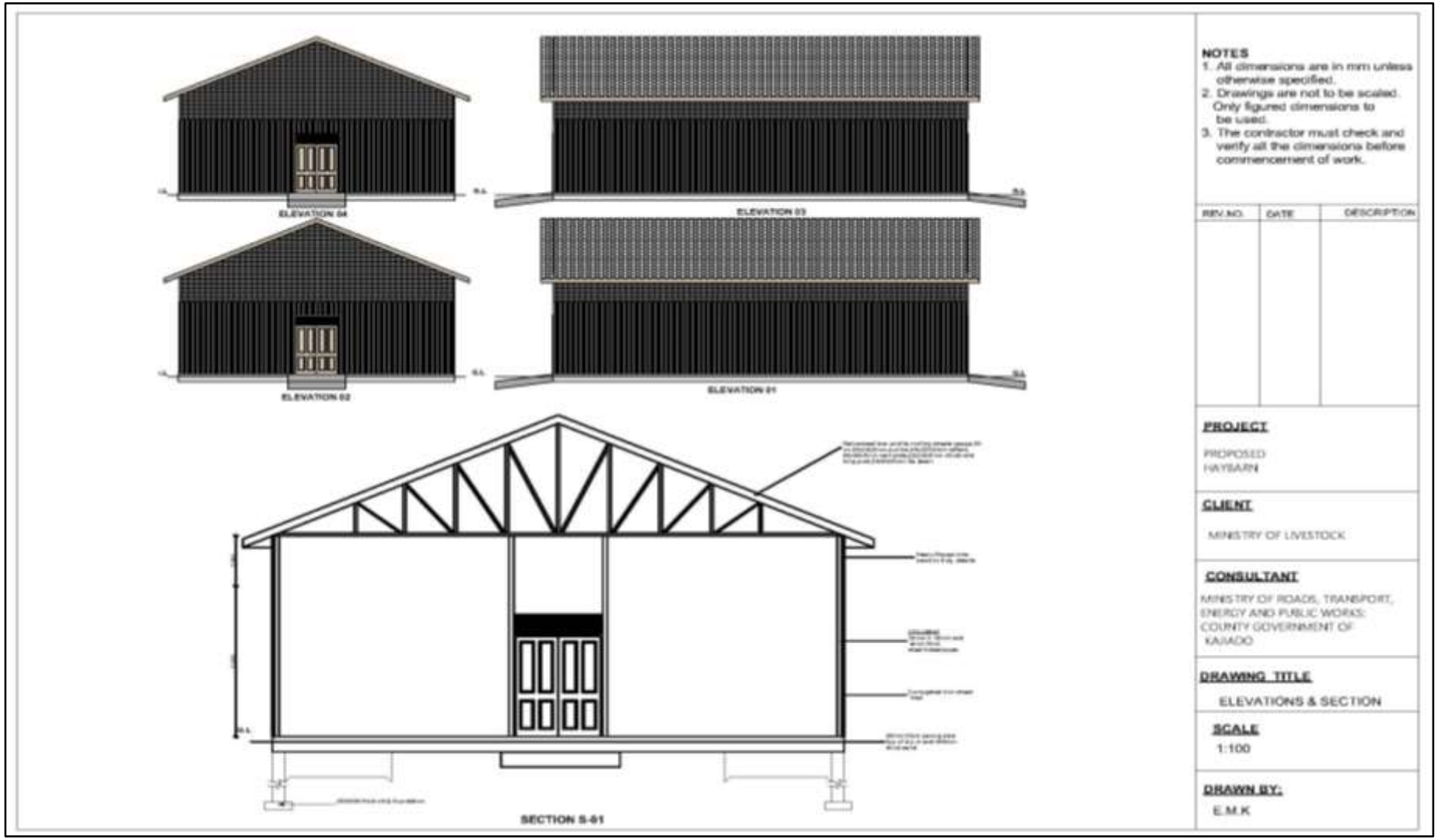
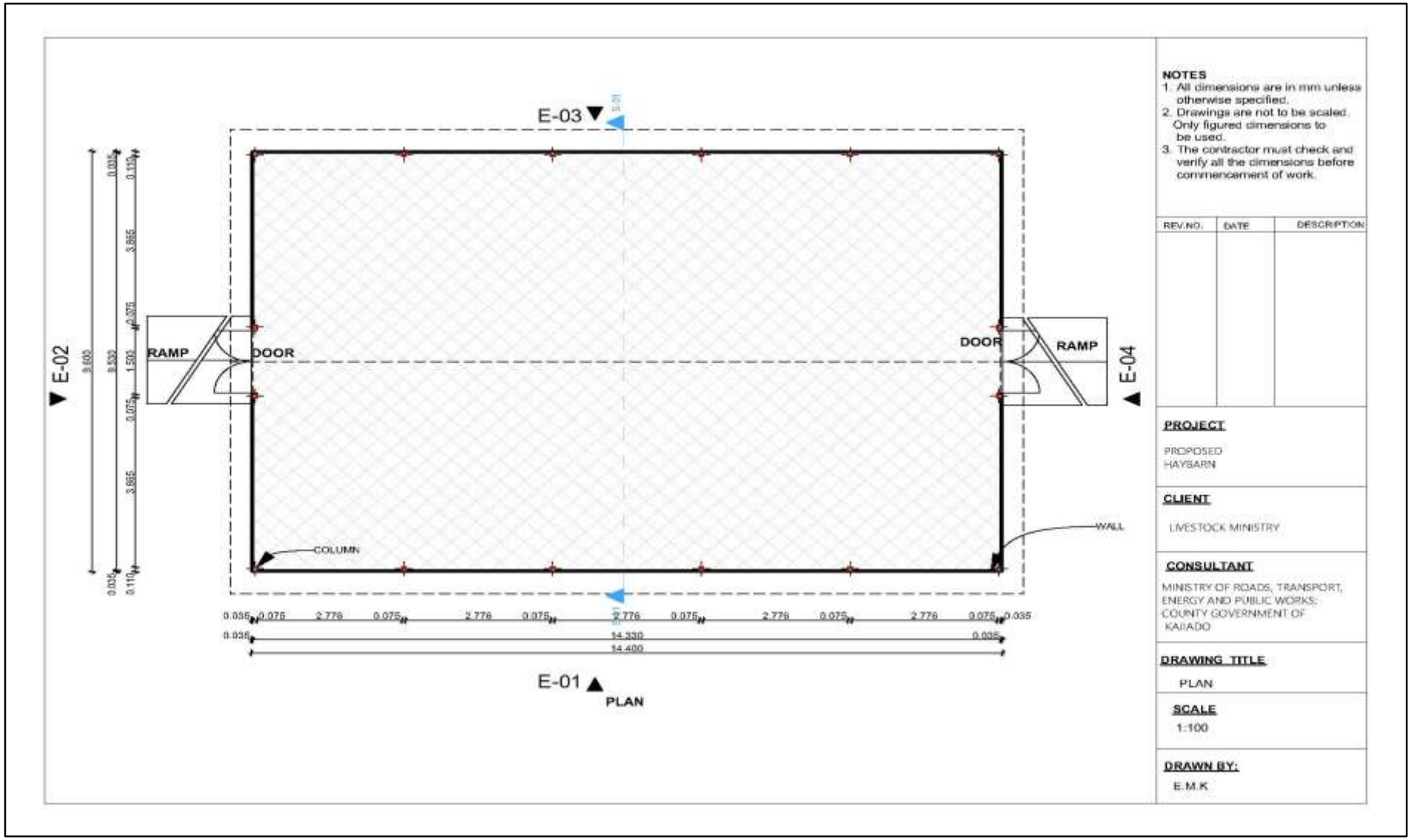
Appendix 3: Site Layout Plan/Drawings




E-03
E-02
E-04
E-01
RAMP
DOOR
DOOR
RAMP
COLUMN
WALL
PLAN
NOTES
1. All dimensions are in mm unless otherwise specified.
2. Drawings are not to be scaled. Only figured dimensions to be used.
3. The contractor must check and verify all the dimensions before commencement of work.
REV.NO.
DATE
DESCRIPTION
PROJECT
PROPOSED HAYSARN
CLIENT
LIVESTOCK MINISTRY
CONSULTANT
MINISTRY OF ROADS, TRANSPORT, ENERGY AND PUBLIC WORKS: COUNTY GOVERNMENT OF KAJIADO
DRAWING TITLE
PLAN
SCALE
1:100
DRAWN BY:
E.M.K

Appendix 4: Copies of Filled Public Consultation questionnaires

Environmental and Social Impact Assessment of the Proposed Rangeland Rehabilitation and Pasture Development Sub-Project

SUMMARY PROJECT REPORT QUESTIONNAIRE

PROPOSED **RANGELAND REHABILITATION AND PASTURE DEVELOPMENT SUB-PROJECT AT** MILE 46 /ELANGATA-WOAS. Pursuant to the provisions of the Environmental Management and Co-ordination Act (1999), and the Environmental (Impact Assessment and Audit) Regulations (2003) revised in 2015, World Banks Safeguard Policies, Public Health Act and Legal Supplement 2003; an Environmental and Social Site Assessment for ESIA is being conducted for the proposed Rangeland Rehabilitation and Pasture Development Sub-Project.

RESPONDENT'S DETAILS

Name GLADYS NESHOU PARMELED

ID No. 26663500 Mobile No. 0723530648

County KAJIADO Location ELANGATA-WOAS

Sub County KAJIADO WEST Sub Location OLOSEGIAN

Ward ILOODOKILANI Village OLORAPIL

(Please note that these details are required for the purposes of authenticity in relation to the proposed Sub Project)

1. Are you aware of the proposed Rangeland Rehabilitation and Pasture Development Sub-Project? Yes ☑ No ☐
2. How far is you house/land from the proposed sub-project site (in kms) 7
3. Are you familiar with the activities involved in the Rangeland Rehabilitation and Pasture Development Sub-Project?

   Yes ☑ No ☐

Page 1 of 2

If YES, do you expect any interference as a result of the proposed sub-project implementation

Yes ☑ No ☐

If Yes Briefly explain (Negative Impacts)

Sickness

4. Do you think this proposed sub-project is suitable and compatible with the surrounding developments?

Yes ☑ No ☐

5. Within this area, are there similar sub-projects?

Yes ☐ No ☑

If YES how far are they from the proposed sub-project site (in Kms).....

6. What are some of the positive impacts you can attach to this sub-project?

Milk through out

Money

7. Are there any sensitive ecosystems within the area (e.g. swamps, water body, forest, etc.)?

Yes ☐ No ☑

If yes Specify.....

8. Any other comments/suggestions you would like to make in relation to this proposed sub-project.

There will be too many moving cattle from one place to another

Signature ..... **Date** 10/05/2021

THANK YOU FOR YOUR RESPONSE

Page 2 of 2

Environmental and Social Impact Assessment of the Proposed Rangeland Rehabilitation and Pasture Development Sub-Project

SUMMARY PROJECT REPORT QUESTIONNAIRE

PROPOSED **RANGELAND REHABILITATION AND PASTURE DEVELOPMENT SUB-PROJECT AT**..Elangata Wuas / mile 46..... Pursuant to the provisions of the Environmental Management and Co-ordination Act (1999), and the Environmental (Impact Assessment and Audit) Regulations (2003) revised in 2015, World Banks Safeguard Policies, Public Health Act and Legal Supplement 2003; an Environmental and Social Site Assessment for ESIA is being conducted for the proposed Rangeland Rehabilitation and Pasture Development Sub-Project.

RESPONDENT'S DETAILS

Name..SELLY CHERONO BIRGEN.....

ID No. 13205189..... Mobile No..0114423226.....

County...Kajiado..... Location..Elangata Wuas.....

Sub County..Kajiado West..... Sub Location..Elangata Wuas.....

Ward..Iloodokilani Ward..... Village..mile 46.....

(Please note that these details are required for the purposes of authenticity in relation to the proposed Sub Project)

1. Are you aware of the proposed Rangeland Rehabilitation and Pasture Development Sub-Project? Yes [✓] No [ ]
2. How far is you house/land from the proposed sub-project site (in kms)...3 kms...
3. Are you familiar with the activities involved in the Rangeland Rehabilitation and Pasture Development Sub-Project?

   Yes [✓] No [ ]

Page 1 of 2

If YES, do you expect any interference as a result of the proposed sub-project implementation

Yes [✓] No [ ]

If Yes Briefly explain (Negative Impacts)

~~bee~~ Soil Rat

4. Do you think this proposed sub-project is suitable and compatible with the surrounding developments?

Yes [✓] No [✓]

5. Within this area, are there similar sub-projects?

Yes [ ] No [✓]

If YES how far are they from the proposed sub-project site (in Kms).....

6. What are some of the positive impacts you can attach to this sub-project?

Money Milk

7. Are there any sensitive ecosystems within the area (e.g. swamps, water body, forest, etc.)?

Yes [ ] No [✓]

If yes Specify..... There will be a distance from the proposed site

8. Any other comments/suggestions you would like to make in relation to this proposed sub-project.

we are going to make profit by selling milk

Grass

Signature ..... **Date** 10/3/2021

THANK YOU FOR YOUR RESPONSE

Page 2 of 2

Environmental and Social Impact Assessment of the Proposed Rangeland Rehabilitation and Pasture Development Sub-Project

SUMMARY PROJECT REPORT QUESTIONNAIRE

PROPOSED **RANGELAND REHABILITATION AND PASTURE DEVELOPMENT SUB-PROJECT** AT ELANGATA WUAS / mile 46 Pursuant to the provisions of the Environmental Management and Co-ordination Act (1999), and the Environmental (Impact Assessment and Audit) Regulations (2003) revised in 2015, World Banks Safeguard Policies, Public Health Act and Legal Supplement 2003; an Environmental and Social Site Assessment for ESIA is being conducted for the proposed Rangeland Rehabilitation and Pasture Development Sub-Project.

RESPONDENT'S DETAILS

Name Frickah Kilunku

ID No. 12950215 Mobile No. 0740614284

County KAJIADO Location ELANGATA WUAS

Sub County KAJIADO WEST Sub Location ELANGATA WUAS

Ward LOODOKILANI Village Mile 46

(Please note that these details are required for the purposes of authenticity in relation to the proposed Sub Project)

1. Are you aware of the proposed Rangeland Rehabilitation and Pasture Development Sub-Project? Yes ☑ No ☐
2. How far is you house/land from the proposed sub-project site (in kms) 3 kms
3. Are you familiar with the activities involved in the Rangeland Rehabilitation and Pasture Development Sub-Project?

   Yes ☑ No ☐

Page 1 of 2

If YES, do you expect any interference as a result of the proposed sub-project implementation

Yes ☑ No ☐

If Yes Briefly explain (Negative Impacts)

soil erosion, Rats, pests, Animals

4. Do you think this proposed sub-project is suitable and compatible with the surrounding developments?

Yes ☑ No ☐

5. Within this area, are there similar sub-projects?

Yes ☐ No ☑

If YES how far are they from the proposed sub-project site (in Kms).....

6. What are some of the positive impacts you can attach to this sub-project?

money, milk products through out the seasons

7. Are there any sensitive ecosystems within the area (e.g. swamps, water body, forest, etc.)?

Yes ☐ No ☑

If yes Specify..are far from the proposed site

8. Any other comments/suggestions you would like to make in relation to this proposed sub-project.

my suggestion is there will be no more drought to our animals, and we are going to make profit through our farm

Signature .....Halah **Date** 10/3/2021

THANK YOU FOR YOUR RESPONSE

Page 2 of 2

Environmental and Social Impact Assessment of the Proposed Rangeland Rehabilitation and Pasture Development Sub-Project

SUMMARY PROJECT REPORT QUESTIONNAIRE

PROPOSED **RANGELAND REHABILITATION AND PASTURE DEVELOPMENT SUB-PROJECT** AT...Elangata Wuas..... Pursuant to the provisions of the Environmental Management and Co-ordination Act (1999), and the Environmental (Impact Assessment and Audit) Regulations (2003) revised in 2015, World Banks Safeguard Policies, Public Health Act and Legal Supplement 2003; an Environmental and Social Site Assessment for ESIA is being conducted for the proposed Rangeland Rehabilitation and Pasture Development Sub-Project.

RESPONDENT'S DETAILS

Name.....Lilian.....Letema.....

ID No. .....—..... Mobile No.....07.07.140.302.....

County.....Kajiad.....West..... Location...Elangata Wuas.....

Sub County.....Kajiad.....West..... Sub Location.....Olosirian.....

Ward.....Iloodokilani..... Village.....

(Please note that these details are required for the purposes of authenticity in relation to the proposed Sub Project)

1. Are you aware of the proposed Rangeland Rehabilitation and Pasture Development Sub-Project? Yes ☐ No ☐
2. How far is you house/land from the proposed sub-project site (in kms)...2.0...km.
3. Are you familiar with the activities involved in the Rangeland Rehabilitation and Pasture Development Sub-Project?

   Yes ☑ No ☐

Page 1 of 2

If YES, do you expect any interference as a result of the proposed sub-project implementation

Yes ☑ No ☐

If Yes Briefly explain (Negative Impacts)

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4. Do you think this proposed sub-project is suitable and compatible with the surrounding developments?

Yes ☑ No ☐

5. Within this area, are there similar sub-projects?

Yes ☑ No ☐

If YES how far are they from the proposed sub-project site (in Kms).....

6. What are some of the positive impacts you can attach to this sub-project?

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7. Are there any sensitive ecosystems within the area (e.g. swamps, water body, forest, etc.)?

Yes ☐ No ☐

If yes Specify.....

8. Any other comments/suggestions you would like to make in relation to this proposed sub-project.

.....

.....

.....

Signature ..... **Date**.....

THANK YOU FOR YOUR RESPONSE

Page 2 of 2

Environmental and Social Impact Assessment of the Proposed Rangeland Rehabilitation and Pasture Development Sub-Project

SUMMARY PROJECT REPORT QUESTIONNAIRE

PROPOSED **RANGELAND REHABILITATION AND PASTURE DEVELOPMENT SUB-PROJECT AT**..ELANGATA WUAS / Mile 46.. Pursuant to the provisions of the Environmental Management and Co-ordination Act (1999), and the Environmental (Impact Assessment and Audit) Regulations (2003) revised in 2015, World Banks Safeguard Policies, Public Health Act and Legal Supplement 2003; an Environmental and Social Site Assessment for ESIA is being conducted for the proposed Rangeland Rehabilitation and Pasture Development Sub-Project.

RESPONDENT'S DETAILS

Name..AGNES N SETEI

ID No. ..5342175 Mobile No..0728215078

County..KAJIADO Location..ELANGATA-WUAS

Sub County..KAJIADO WEST Sub Location..~~Ilodo~~ ELANGATA-WUA

Ward..ILOODOKILANI Village..LESONKOIO

(Please note that these details are required for the purposes of authenticity in relation to the proposed Sub Project)

1. Are you aware of the proposed Rangeland Rehabilitation and Pasture Development Sub-Project? Yes [✓] No [ ]
2. How far is you house/land from the proposed sub-project site (in kms)..3Km..
3. Are you familiar with the activities involved in the Rangeland Rehabilitation and Pasture Development Sub-Project?

   Yes [✓] No [ ]

Page 1 of 2

If YES, do you expect any interference as a result of the proposed sub-project implementation

Yes ☐ No ☑

If Yes Briefly explain (Negative Impacts)

.....

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4. Do you think this proposed sub-project is suitable and compatible with the surrounding developments?

Yes ☑ No ☐

5. Within this area, are there similar sub-projects?

Yes ☐ No ☑

If YES how far are they from the proposed sub-project site (in Kms).....

6. What are some of the positive impacts you can attach to this sub-project?

.....

Awearess

Skill

.....

7. Are there any sensitive ecosystems within the area (e.g. swamps, water body, forest, etc.)?

Yes ☐ No ☑

If yes Specify.....

8. Any other comments/suggestions you would like to make in relation to this proposed sub-project.

.....

The Piget will help the Community when there is drought or not

Signature Nareto **Date** 10th/3/2021

THANK YOU FOR YOUR RESPONSE

Page 2 of 2

Environmental and Social Impact Assessment of the Proposed Rangeland Rehabilitation and Pasture Development Sub-Project

SUMMARY PROJECT REPORT QUESTIONNAIRE

PROPOSED **RANGELAND REHABILITATION AND PASTURE DEVELOPMENT SUB-PROJECT** AT......Elantansusu M46 AL- Mile 46-...... Pursuant to the provisions of the Environmental Management and Co-ordination Act (1999), and the Environmental (Impact Assessment and Audit) Regulations (2003) revised in 2015, World Banks Safeguard Policies, Public Health Act and Legal Supplement 2003; an Environmental and Social Site Assessment for ESIA is being conducted for the proposed Rangeland Rehabilitation and Pasture Development Sub-Project.

RESPONDENT'S DETAILS

Name......Jenipher Mosenye......

ID No. ...... Mobile No......

County......Kajiado...... Location......

Sub County......kajiado west...... Sub Location......Elantaganateas......

Ward......Oldoro oloodokilani...... Village......46......

(Please note that these details are required for the purposes of authenticity in relation to the proposed Sub Project)

1. Are you aware of the proposed Rangeland Rehabilitation and Pasture Development Sub-Project? Yes ☑ No ☐
2. How far is you house/land from the proposed sub-project site (in kms)......2 km......
3. Are you familiar with the activities involved in the Rangeland Rehabilitation and Pasture Development Sub-Project?

   Yes ☑ No ☐

Page 1 of 2

If YES, do you expect any interference as a result of the proposed sub-project implementation

Yes ☐ No ☑

If Yes Briefly explain (Negative Impacts)

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4. Do you think this proposed sub-project is suitable and compatible with the surrounding developments?

Yes ☑ No ☐

5. Within this area, are there similar sub-projects?

Yes ☐ No ☑

If YES how far are they from the proposed sub-project site (in Kms).....

6. What are some of the positive impacts you can attach to this sub-project?

Skills

and.....

.....

.....

7. Are there any sensitive ecosystems within the area (e.g. swamps, water body, forest, etc.)?

Yes ☐ No ☑

If yes Specify.....

8. Any other comments/suggestions you would like to make in relation to this proposed sub-project.

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.....

.....

Signature ..... **Date** 10/3/2021

THANK YOU FOR YOUR RESPONSE

Page 2 of 2

Environmental and Social Impact Assessment of the Proposed Rangeland Rehabilitation and Pasture Development Sub-Project

SUMMARY PROJECT REPORT QUESTIONNAIRE

PROPOSED **RANGELAND REHABILITATION AND PASTURE DEVELOPMENT SUB-PROJECT** AT ELANGATA-WUAS / 46 MILE Pursuant to the provisions of the Environmental Management and Co-ordination Act (1999), and the Environmental (Impact Assessment and Audit) Regulations (2003) revised in 2015, World Banks Safeguard Policies, Public Health Act and Legal Supplement 2003; an Environmental and Social Site Assessment for ESIA is being conducted for the proposed Rangeland Rehabilitation and Pasture Development Sub-Project.

RESPONDENT'S DETAILS

Name ALICE JEMELI

ID No. 21569042 Mobile No. 0722 405 110

County KAJIADO Location ELANGATA-WUAS

Sub County KAJIADO WEST Sub Location ELANGATA-WUAS

Ward LOODOKILANI Village LESO GOYO

(Please note that these details are required for the purposes of authenticity in relation to the proposed Sub Project)

1. Are you aware of the proposed Rangeland Rehabilitation and Pasture Development Sub-Project? Yes ☑ No ☐
2. How far is you house/land from the proposed sub-project site (in kms) 5KM
3. Are you familiar with the activities involved in the Rangeland Rehabilitation and Pasture Development Sub-Project?

   Yes ☑ No ☐

Page 1 of 2

If YES, do you expect any interference as a result of the proposed sub-project implementation

Yes ☐ No ☒

If Yes Briefly explain (Negative Impacts)

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4. Do you think this proposed sub-project is suitable and compatible with the surrounding developments?

Yes ☒ No ☐

5. Within this area, are there similar sub-projects?

Yes ☐ No ☒

If YES how far are they from the proposed sub-project site (in Kms).....

6. What are some of the positive impacts you can attach to this sub-project?

- Creating employement
- Availability of grass near our home
- Improvement of our livestock breeds.

7. Are there any sensitive ecosystems within the area (e.g. swamps, water body, forest, etc.)?

Yes ☐ No ☒

If yes Specify.....

8. Any other comments/suggestions you would like to make in relation to this proposed sub-project.

- We are eager to work together to uplift our community development.

Signature ..... **Date** 10/8/2021

THANK YOU FOR YOUR RESPONSE

Page 2 of 2

Appendix 5: Minutes of Public Consultation meetings Held at the Chief's Office, Eloodikiani Ward, Kajiado West Sub County

Date: 10th March 2021; OlooserianVillage (Maili 46), Elangata'was Location

Attendance

The members in attendance were mainly women from Nareto Women Self Help Group, some community members, the Area Chief Mr. Joshua P. Pesi, Kajiado CESSCO and the Environmental Lead Experts. The list of attendance is attached in Appendix 6.

Agenda

1. Opening remarks
2. Team & Project Introduction and Background
3. Comments, Questions and Answers
4. A.O.B

Min 1: Opening Remarks

The meeting was called to order by Chief Mr. Joshua P. Pesi who had mobilized the members for the meeting at 1:00 pm. He then invited a madam Lesheine Medukenya to officially open the meeting with a word of prayer. The Chief then recognized the members who were present, followed by a brief session of self-introduction.

Figure A.1: Lead Expert addressing the meeting

Figure A.2: Standing Left Kajiado CESSCO Chesire Komen and Right is the Area Chief Mr. Joshua P.Pesi addressing the meeting

Min 2: Team & Project Introduction and Background

The ESIA Expert introduced the project and the ESIA study (SPR) for the Proposed Rangeland Rehabilitation and Pasture Development Project. The Chief alluded that the main issue they had been facing was having all their cattle grazing in far places due to pasture in seasons of drought. This has been affecting most women as they are the ones usually left behind with not food especially milk at home. It is for this reason that this project was initiated to supplement their nutritional need in times of drought by rehabilitation and development of a 25 acres piece of land for the Nareto Women Self Help Group.

The Kajiado CESSCO Mr. Chesire then alluded that there was a need for the committee to expand and propose 4 more members from the current 7 to make the number odd and nominate 3 members from the group to act as the Social Accountability and Integrity Committee. The CESSCO alluded that the project was World Bank-funded from the National Government to County Government of Kajiado then the Community. The project was a KCSAP project under the Ministry of Agriculture. So far, the community had signed the land resolution form/ agreement by the Chief, Five people from the groups including the Nareto Women's Group chairlady, and were awaiting the Women Ward Admin to sign.

The initial proposal was 500 acres but this was thought through and scaled-down 25 acres for four groups chosen from different sub-counties in Kajiado. The group has 220 members all-female with 11 officials. Youth and widowed women are also part of the committee. The project is aimed to fulfill the three KCSAP objectives of Improved Agricultural Productivity, Build resilience in climate change situations and reduce the emission of greenhouse gasses.

Nareto Women Self Help Group will do 25 acres of Pasture Development. The project will give grass, fence the area, help them put up a store, provide a hand grass cutter, manual bailer and a chopper. Mr. Chesire also added that the County Government might purchase a tractor to help in the farm activities. This will be scaled up by the community through training others and enable families to put up the same lessons at an individual level. The beneficiaries would also help in educating others. He also added that this activity was important to enable licensing by Nema who will receive the report after clearance from the World Bank team.

Mr. Chesire also added that the project was initially written by the Department of Livestock Kajiado and the county has been working with KALRO on a research of 4 species of grass some exotic and this will be introduced to the community through training and provision of seedlings for the same. The training would be on different harvesting stages, storage, allow the group to choose how to sell and distribute grass among the 220 members. Mr. Chesire later welcomed the Lead Experts to proceed with the meeting.

The Lead Expert gave a brief background of the processes through EMCA and the recently amended act of 2019 to the project. He also mentioned the World Bank's environmental and social safeguard policies and how they are important in the process of ESIA. Citing examples from the recent cases that were reported on issues that were overlooked through the process e.g. three rare giraffes were electrocuted when they walked into low-hanging power lines within a conservation area in western Kenya killing one of the most endangered subspecies; Rothschild's giraffe and how the contractor mitigated issues relating to wildlife corridors along the Standard Guage Railway in Tsavo East. He also stated the need of categorizing the project as an SPR as it was alow risk project before giving them ground to express their positive and negative opinions on the proposed project. Some of the positive opinions raised were;

Min 3: Comments, Questions and Answers

Positive Impacts:

Agnes Naomi Setei: The project will help capacity build the group into understanding different varieties of grasses and this will give direct benefits through grass produce.

Shaankai Kidintoi: Since the project kicked off, the community has gained a lot and will gain more after its fully effected;

- The produce from sales of milk would help them educate their children and run family expenses.

- The grass would also help provide for livestock during drought period therefore building resilience and assure there are some livestock left at home for milking as others fetch for pastures.

Lesheine Medukenya:
The project will bring unity and more benefits to enable them to help those who are doing poorly.
The beneficiary families would benefit and have an assurance of milk throughout the season.
Josphat Omari:

- Fencing of the farm field will keep away wild animals
- The project would promote employment to the youth and men living in the community.

Kiberenke Lokeru:
She was happy to welcome the project and alluded that it was important to entrust women with such projects since this will enable them to help their families and animals. She added that the project would empower both girls and women.
Fridah Kilunku:
The project would enable the get seeds to sell.

Community Concerns:

1. **Alice Jemeli Tiapapusha:** After the project has been fenced and grass-grown, where will the water come from? Can the project sink a borehole?
2. Can the water from the nearby dam and borehole be channeled into the grass farm?
3. **Karanti Mereru:** Why has the project not been done near the dam?
    - *Remarks: No need to channel water from a borehole and the nearby dam: The improved grass variety from KALRO would be such that; depending on the climatic region, the grass would be able to survive amid water stresses and also grow very fast depending on the varieties grown. Different varieties would be grown to ensure the grass is available throughout the season.*

Negative Impacts:
Group Chairlady:

1) **Soil Erosion:** The area is known for soil erosion and poor farming methods might result in soil erosion. *Remarks: The community will be trained on contour farming and strip farming to mitigate the issues of soil erosion.*

2) **Fears of drought after planting:** The different grass varieties would assure continuous availability of pasture throughout the season. *Remarks: The new grass varieties will be an improvement of the indigenous species.*

Suyianta Tante:

1) **Possibility of Pests and Diseases:** Caterpillars have been known to invade crops/ pasture especially when young. This would be a major drawback to the goal of the project. *Remarks: An Integrated Pest Management System would be used to control pests i.e., introduction of pest-eating insects to counter the effects of caterpillars.*

Shaankai Kidintoi:

1) **Invasive rat species:** A lot of grass encourages rat reproduction, this, in turn, reduces plant nutrients and affects livestock growth. *Remarks: Introduce rat traps and where necessary, spray them off.*

Alice Jemeli Tiapapusha:

1. **Invasive termite species in stores:** The possibility of termites affecting harvested grass stored in stores could be a major challenge. *Remarks: Possible remedies would be to apply Integrated Pest Management Systems, Eliminate wood in contact with the ground during store construction, Do not let moisture accumulate near the foundation. Reduce moisture and humidity in crawl spaces, Never to store firewood or wood debris against foundations or inside crawlspaces and use of mulch sparingly, especially if you already have termites or other conducive conditions.*
2. **Human-Wildlife conflicts (Attacks by wild animals e.g. elephants):** Elephants are common wildlife within the project area. *Remarks: The best prevention mechanism will be to put up beehives within the farm area and plant pepper alongside grass.*

Fridah Kilunku:

1. Accountability and equitable share of grass proceed and produce. There is also the possibility of a lack of transparency and a proper share of harvested grass if there is no strong and transparent committee. *Remarks: The community should ensure a proper social accountability and integrity committee with proper record of the projects activities.*

2. **Lack of capacity to run the pasture development project:** Lack of adequate capacity within the group members would pose threat to project sustainability. *Remarks: The project through KCSAP should train the group members on proper farming methods, improved varieties and proper record/ book keeping.*

Other possible effects that would negatively affect the project includes;

- Spread of Covid 19 during consultation processes
- Spread of Covid 19 among workers during the construction phase and
- Locust invasion

Min 4: A.O.B

There being no A.O.B, the meeting adjourned at 2:30 pm with a word of prayer from **Shaankai Kidintoi.**

Appendix 6: List of Attendants for Public Consultation

SUMMARY PROJECT REPORT QUESTIONNAIRE

CHIEF ELANGATA-WUAS
P.O. Box 435 - 01160,
KAIJIADO
Date: 17/03/2021

Project Title: *Environmental and Social Impact Assessment of the Proposed Rangeland Rehabilitation and Pasture Development Sub-Project in* Mile 46 – Oloosesian Village, Kajiado West Sub County for Nareto Women Group

Date: 10 March, 2021 **Venue:** Chief's Camp

PUBLIC PARTICIPATION ATTENDANCE LIST

NO	NAME	DESIGNATION / VILLAGE	Below 35 Year	Above 35 Years	ID NO. / P No.	TELEPHONE NUMBER	SIGNATURE
1	Joshua P Pesi	Chief		✓	22602440	0720846455	[signature]
2	Agnes N Setei	Lesogoyo		✓	8342175	0728215078	[signature]
3	Nasei Ntorome Mpereus	Kilonito					
4	Alice Jemeri Tiapapinka	Lesogoyo		✓	21569042	0722405110	[signature]
5	Nailepu Pusaren	Indupa		✓		0704382924	[signature]
6	Fridah Kilunku	Inkiwanjoni		✓		0740614264	
7	Shaankai Kidintoi	Inkiwanjatoi				0715256105	[signature]
8	Kiberenke Lokeru	Olooseqian		✓		0725269023	[signature]

CHIEF ELANGATA-WUAS
P.O. Box 435 - 01160,
KAJIADO
Date: 16/03/2021

SUMMARY PROJECT REPORT QUESTIONNAIRE

Project Title: *Environmental and Social Impact Assessment of the Proposed Rangeland Rehabilitation and Pasture Development Sub-Project in* Mile 46 – Oloosichan Village, Kajiado West Sub-County for Nareto Women Group

Date: 18 March, 2021 **Venue:** Chief's Camp

PUBLIC PARTICIPATION ATTENDANCE LIST

NO	NAME	DESIGNATION / VILLAGE	Below 35 Year	Above 35 Years	ID NO. / P No.	TELEPHONE NUMBER	SIGNATURE
	Kiparia Ntooki	Iloshon		✓			
	Pamela Simion		✓			0746217310	
	Suyianta Tante	Oltepesi		✓		0705-250838	
	Sally Birgen	Iloshon		✓		0114423226	
	Evalyne Sarinke	Oloosirian	✓			0715-621556	
	Memusi Sironka	19/11/29	✓		26663492	0718659333	
	Joseph Omam	NRB		✓	2005013442	0720man	[signature]
	Erick O. Owua	NRB		✓	24477629	0721178524	[signature]

CHIEF ELANGATA-WUAS
P.O. Box 335 - 01100,
KAJIADO
Date: 19/03/21

SUMMARY PROJECT REPORT QUESTIONNAIRE

Project Title: *Environmental and Social Impact Assessment of the Proposed Rangeland Rehabilitation and Pasture Development Sub-Project in* Mile 46 Oloosetrian Village, Kajiado West Sub County for Nareto Women Group

Date: 19th March 2021 **Venue:** Chief's Camp

PUBLIC PARTICIPATION ATTENDANCE LIST

NO	NAME	DESIGNATION / VILLAGE	Below 35 Year	Above 35 Years	ID NO. / P No.	TELEPHONE NUMBER	SIGNATURE
	Kiranti Merery	Oloosetrian		✓		0791747842	
	Suyanta Tinti	Iloshon		✓		0112941187	
	Jeniffer Musenya	Iloshon	✓			0758379681	
	Kanai Musenya					0792898232	
	Lasheine Medukenya	Kilonito					
	Pushan Lepapa	Singiraine		✓		0104903418	
	Naserian Sironka	Ikiwanjani		✓		0745374955	
	Gladys Parmeley	Iloshon	✓			0722530648	
	Atanus Chesire	KCSAP-Kajiado				0721342421	[signature]

Appendix 7: NEMA Practicing License (Lead Expert)

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/ERPL/14132

Application Reference No: NEMA/EIA/EL/18547

M/S **JOSPHAT OMARI**
(individual or firm) of address

P.O. Box 1500-00600, Nairobi

is licensed to practice in the

capacity of a (Lead Expert/Associate Expert/Firm of Experts) **Lead Expert**
registration number **7645**

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

Issued Date: **2/18/2021** Expiry Date: **12/31/2021**

Signature.....

(Seal)
Director General
The National Environment Management Authority

P.T.O.

ISO 9001: 2008 Certified

Appendix 8: Group Pin Certificate

Appendix 9: ESS Screening Checklist

nema

NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY
OFFICE OF THE COUNTY DIRECTOR OF ENVIRONMENT, KAJIADO
PO BOX 620-0110
KAJIADO

REF: NEMA/CDE/KJD/4/8/16/VOL 3 **DATE: 4TH December, 2020**

TO; COUNTY PROJECT COORDINATOR
KENYA CLIMATE SMART AGRICULTURE PROJECT
KAJIADO COUNTY

RE: SUMMARY PROJECT REPORT (SPR) FOR THE PROPOSED RANGELAND REHABILITATION AND PASTURE DEVELOPMENT AT VARIOUS PARTS OF KAJIADO COUNTY

Please note that **Pastoral Farmers Field Schools Approach in Rangeland Rehabilitation** and **Pasture Development,** will not require a Comprehensive Project Report (CPR) commonly referred to as Environmental Impact Assessment (EIA) due to the magnitude of the project and the need to support community livelihood.

You will be required to submit a Summary Project Report (**SPR**) for each site which must be done by a NEMA licensed EIA expert. Project regular monitoring will be key in ensuring the success of such project and mitigation of Impacts

COUNTY DIRECTOR OF ENVIRONMENT
24 DEC 2020
KAJIADO

DANIEL MUTUTHO
FOR: COUNTY DIRECTOR OF ENVIRONMENT
KAJIADO COUNTY

Our Environment, Our Life, Our Responsibility

Scanned with CamScanner

Environmental and Social Screening Checklist for Up-scaling Livestock Productivity through Integration of Pastoral Farmer Field Schools Approach in Rangeland Rehabilitation & Pasture Development

Section A: Background information

Name of County……*Kajiado*……	
Name of CPCU/Monitoring Officer/Researcher ……*Athanus Chesire*……	
Sub-project location……*County Wide*……. Name of CBO/Institution……*Pastoral Farmer Groups*…….. Postal Address…… Contact Person……*County Director of Livestock Production* … Cell phone…… Sub-project name…… *Up-scaling Livestock Productivity through Integration of Pastoral Farmer Field Schools Approach in Rangeland Rehabilitation & Pasture Development* …….	
Estimated cost (KShs.)……*20,000,000.00*……	
Approximate size of land area available for the sub-project……*Over 500 acres*… Objectives of the subproject…… *1) To establish and operationalize 5 Pastoral farmer field schools in Kajiado County by December 2021.* *2)To increase pasture production in Kajiado County by 20% from baseline by August 2021* *3)To rehabilitate at least 1000 acres of rangeland in Kajiado County by August 2021* *4)To improve community drought preparedness and resilience by 10% from baseline in Kajiado County by August 2021* *5)To improve livestock productivity thus enhanced food security by 20% from baseline in Kajiado County by August 2021*	
Activities/enterprises undertaken…… *a) Training of 20 PFFS Facilitators for 21 days* *b) Operationalization of PFFSes* *c) Demo Site Preparation* *d) Purchase of Pasture seed* *e) Pasture establishment and mgt* *f) Range rehabilitation* *g) Harvesting &Equipment* *h) Construction of storage structures* i) *Purchase of utilization equipment*	
How was the sub-project chosen?…… *i. Community Integrated Action Plan development at the beginning of the KCSAP project* *ii. Kajiado County Integrated Development Plan (2018-2022)* Expected subproject duration……*Over 2 years*……	

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		√
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 ESMP 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 communicable diseases such as 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? *NB: If the answer is yes, the sub-project should not proceed.*		√
Adversely affect environmentally sensitive areas or critical habitats – wetlands, woodlots, natural forests, rivers, protected areas including national parks, reserves or local sanctuaries, etc.)? *NB: If the answer is yes, the sub-project should not proceed.*		√
Affect the indigenous biodiversity (flora and fauna)? *NB: If the answer is yes, the sub-project should not proceed.*		√
Cause any loss or degradation of any natural habitats, either directly (through project works) or indirectly? *NB: If the answer is yes, the sub-project should not proceed.*		√
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?		√
Use irrigation system in its implementation?		√

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

SECTION E: Pesticides and Agriculture Chemicals

Will the sub-project:	Yes	No
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.)?		√

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 subproject?		√

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?

☐ CPCU and CDE will provide detailed guidance on mitigation measures as outlined in the ESMF; and

☑ Specific advice is required from CDE, Lead Officer and CPCU 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 KCSAP PIU 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 EIAs, 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 EIA report at a public place accessible to project-affected groups and local NGOs/CSOs.

Completed by:

Name:...*Athanus K. Chesire*.....

Position:...*County Environment & Social Safeguards Compliance Officer* .....

Signature:..... Date: 4/12/2020

Appraisal by CDE:

Name: DANIEL MUTUTHO

Position: Environmental Inspector : Kajiado County NEMA

Signature:..... Date: 4th/12/2020

NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY
COUNTY DIRECTOR OF ENVIRONMENT
04 DEC 2020
KAJIADO
P. O. Box 620
Email: kajiado@nema.go.ke

Scanned with CamScanner

Note:

Project category	Characteristics
A	Full and extensive ESIA needed- irreversible environmental impacts; impacts not easy to pick or isolate and mitigation cost expensive; ESMP design not easily done; Must have the EIA done and future annual EAs instituted
B	Site specific environmental impacts envisaged; mitigation measures easy to pick, not costly and ESMP design readily done; need an ESIA and future EAs
C	Have minimal or occasionally NO adverse environmental impacts; exempted from further environmental processes save environmental audits

Appendix 10: Screening Report

Site Implementing Team: Nareto Women Group

Sub-county: Kajiado West
Ward: Iloodokilani
Project Location (Village): Mile 46
Contact Person: KoninaTaraiya
Telephone: 0745446353
GPS Coordinates: Mile 46 Holding Ground
S1^{0}53'44.72571"
E36^{0}34'21.41034"

Thematic area	Description
Site Details	• The implementing team is registered as **Nareto Women Self Help Group** with the County Government of Kajiado, Department of Gender and Social Services. • Its leadership comprises of democratically elected officials comprising of chairperson, secretary and treasurer. • The team has a constitution/by laws to govern its operations. • The team has 220 members (All female). • On grievance handling mechanism, the group impose fines to errant members and seek intervention of elders to assist them handle grievances of high magnitude.
Project Objectives	• Milk bulking and selling • Bead works • Bee keeping
Land Ownership & Availability	• The land proposed for the project belongs to the County Government of Kajiado. It was previously used as a holding ground. • The parcel of land has a total acreage of 1050 acres. 25 acres will be hived off for the proposed project. • Currently, part of this land is used as a livestock market. Community water pan has been constructed on another portion of the land. However, a large parcel of the land is idle and used as communal grazing area. • The area chief confirmed that any organised group within the locality will be allowed to utilise a portion of the land to develop pasture sub project on behalf of the community. • The land is vast with some areas covered by dense indigenous trees and natural shrubs. The land is not fenced.
Environmental and Site Suitability	• Soils: The land being proposed for the project has sandy loamy soil. The land is virgin since it had not been cultivated earlier.

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	• Topography: The land slope is a bit gentle. Some areas exhibit some erosion. • Possible social & environmental impacts: The project will have no negative impacts. Many positive impacts will be accrued by implementing the project as it will lead to conservation of soil and water as well as providing pasture for animals hence improving household incomes.
Project sustainability	• Community contribution: 25 acres has been set aside by the County Government. The team will carry out site clearance on the parcel of land to pave way for establishment of pasture. They will also provide labour during fencing, pasture establishment, weeding and harvesting.

Consultation in Mile 46 Chief's Office

Proposed site - Mile 46

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