MINISTRY OF AGRICULTURE, LIVESTOCK AND FISHERIES

STATE DEPARTMENT FOR CROP PRODUCTION AND AGRICULTURAL RESEARCH

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT FOR THE THE PROPOSED LODONY SALE YARD IN KASEI, POKOT NORTH, WEST POKOT COUNTY.

PROGRAM TO BUILD RESILIENCE FOR FOOD AND NUTRITION SECURITY IN THE HORN OF AFRICA-KENYA

Summary Project Report **September 2021**

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FACT SHEET

Project Name	Construction of The Proposed Lodony Livestock Sale Yard and Associated Amenities in Alale, Pokot north Subcounty, West Pokot County
Assignment Name	Environmental and Social Impact Assessment (ESIA)
Location	Lodony Village, Amukuriat Sub-location, Alale location, Kacheliba Constituency, Pokot north Subcounty, West Pokot County
GPS Coordinates	Latitude 2°16'13.47"S and Longitude 35°0'33.91"E 1601 m above sea level
Project Description	Livestock Sale Yard comprising of offices, loading and offloading ramp, toilet structure, fencing, kiosks and a raised platform.
Proponent	Project Coordinator, Program to build resilience for food and nutrition security in the horn of Africa-Kenya
Address of the Proponent	Hill Plaza 9th Floor, Ngong Road P.O. Box 30028 00100 Nairobi.

CERTIFICATION

Project Title: Environmental and Social Impact Assessment for Lodony Livestock Sale Yard in Alale, Pokot North Subcounty; West Pokot County.

Declaration by the Consultant

I hereby certify that the information contained herein are true to the best of my knowledge and belief.

Signature of the EIA Registered Expert
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Declaration by Proponent

I hereby certify that the information contained herein is true to the best of my knowledge and belief.

Signed at ……**Nairobi**……..on this…**9th** …….. Day of **September, 2021.**

Signature:

Designation: **Environmental Specialist DRSLP II**…..

THE PROJECT COORDINATOR
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EXECUTIVE SUMMARY

Introduction

The Program to build resilience for food and nutrition security in the horn of Africa-Kenya (DRSLP II) is expected to benefit all the farmers and pastoralist in the impacted and selected counties in Kenya. The areas under intervention are situated in the seven counties of arid and semi-arid area of Kenya namely, Baringo, Marsabit, Samburu, Turkana, West Pokot, Isiolo and Garissa. The target study area for this study is Alale ward in Pokot north sub-county.

The government of Kenya through the the Program to build resilience for food and nutrition security in the horn of Africa-Kenya intends to construct livestock sale yard for community to improve livestock and farming activities within the community. The project is aimed at strengthening livelihood resilience and improving the community capacity to cope with drought that is recurrent in ASAL areas. The project is located on land that is donated by the community purposely for communal/public use.

Project Description

The main design components of the project include:

- fencing,
- construction of sanitation facilities,
- offices,
- market stalls,
- Animal loading ramps and
- Raised platforms.

This will ensure the infrastructure improvement of the market and increased competition with other well-established livestock markets in the county in addition to the strengthening of community marketing capacity.

Project Objectives

The primary objective of the proposed project is to develop Lodony Livestock Sale Yard in Alale, Pokot north Subcounty; West Pokot County with all attendant facilities.

ESIA Methodology

The study approach and methodology for this exercise were structured such as to cover the requirements under the EMCA, 1999 as well as the EIA/Audit regulations as stipulated under the Gazette Notice No. 56 of 13th June 2003. 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.

The key activities that were undertaken during the assessment included:

a) Literature Review: A detailed review of available documentation;
b) Consultations with the Proponent regarding the proposed project details, the site planning, and implementation plan;
c) Interviews and consultations with the local community surrounding the proposed project as well as representatives of various organizations;
d) Data collection and physical inspections of the proposed site;
e) Evaluation of the activities around the site and the environmental setting of the wider area through physical observations as well as from existing information in literature; and
f) Reporting, review, and submissions.

Policy, Legal and Regulatory Framework

The Kenya Government policy on all new projects, programmes or activities requires that an environmental social 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 Lodony Livestock sale yard 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 2 of the Africa Development 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). Therefore, the proponent – 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

Impactsand Proposed Mitigation Measures

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. This will assist the contractor and proponent to check impact verses the proposed mitigation measures in the various levels/phases of the proposed project. The following Table summarises these Impacts and the mitigation measures.

Table 0-1: Summary of impacts and mitigation measures

Potential Negative Environmental Impacts	**Mitigation Measures**
1.Architectural incompatibility leading to distortion of neighborhood aesthetic image	• Harmonize building scale with existing development in neighborhood. • Harmonize detail, material and finishes for roofs and walls with existing development in the neighborhood.
2. High expectations amongst community members	• Adequate community consultations ,consistent communication involvement through meetings
3. Disruption of existing natural environment and modification of micro-climate – • Increased development density • Increased glare/solar reflection • Reduced natural ground cover • Obstruction of ventilating wind • - Increased surface run-off	• Careful layout and orientation of buildings with respect to wind and sun direction. • Adequate provision of green and open space planted with grass, shrub and tree cover. • Minimum use of reflective building material and finishes for roof, wall and pavement.
4. Pollution and health Hazards • Dust and other construction waste • Noise generation from construction activities.	• Damping down of site e.g. sprinkling water to dusty areas on construction site. • Containment of noisy operation, including locating noise operations away from sensitive neighbors. • Construction work limited to day time only and take shortest time possible.

Potential Negative Environmental Impacts	Mitigation Measures
5. Increased loading on Infrastructure Services • Increased demand on water, sanitation services etc. • Increase surface run-off	• Encourage rainwater harvesting • Provision of increased water storage capacity • Provide adequate storm water drainage system
6.Worker accidents and health infection	• Employ skilled and trained workers, provide protective clothing. • Prepare clear work schedule and the organization plan. • Have adequate worker insurance cover • Enforce occupational health and safety standards.
7.High pressure on existing Water Resources	Install water tanks and other water saving technology at the site to save on water usage; Train market users on water saving techniques; Carry out rainwater harvesting to supplement tapped water.

Conclusion and Recommendation

The proposed development of Lodony Livestock Sale Yard has raised a number of positive impacts to the environment, social, health and also economic wellbeing through consultation and community awareness and discussion on the impacts at various levels of project implementation. In addition, the proposed project has a number of negative impacts raised which have adverse effects at the three levels of project implementation to the environment, social and economic being of the individuals living near the project site and will depend on the project.

The proposed project ESIA was carried out in line with the national laws and regulations, AfDB guidelines and the Bank's safeguards, as outlined in the Environmental Management and Co-ordination Act (1999), and the Environmental (Impact Assessment and Audit) Regulations (2003) revised in 2015 and Africa Development Banks safeguard policies. Mitigation measures for the potentially significant and/or adverse environmental and social impacts and safety risks have been provided as an integral part of this ESIA report.

To enable the project to be realised then, specific mitigation measures have been proposed. The following are some of the conclusive remarks on the proposed project based on the impacts and assessment done.

i. The proposed project is highly welcomed by the community since the livestock production is the main economic activity in the area and the Sale yard will enable the livestock keepers access to a good market.
ii. The community has embraced the project and is awaiting its construction.
iii. The EMSP has allocated the responsibility and costs to offset the negative impacts and enhance the positive impacts of the project on the social and environmental conditions of the project area.

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LIST OF ACRONYMS AND ABBREVIATIONS

CIDP	County Integrated Development Plan
CMS	Convention on Migratory Species
CPCU	County Project Coordination Unit
CSR	Corporate Social Responsibility
DRLSP	Drought Resilience and Sustainable Livelihoods Programme
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
Km	Kilometers
Km^2	Square Kilometers
m	Meters
M	Million
m^3	Cubic Meter
MEA	Multilateral Environmental Agreements
mm	Millimeter
MOALF	Ministry of Agriculture, Livestock and Fisheries
NEAP	National Environmental Action Plan
NEMA	National Environment Management Authority
PEPB	Pest Control Products Board
PPE	Personal Protective Equipment
RCC	Reinforced Cement Concrete
SESA	Strategic Environmental and Social Assessment
DRSLP II	Small-Scale Irrigation and Value Addition
UG	Underground
UNFCCC	United Nations Framework Convention on Climate Change
WRA	Water Resources Authority

CHAPTER 1:INTRODUCTION

1.1 Purpose

The Ministry of Agriculture, Livestock, Fisheries and Cooperatives; Program to build resilience for food and nutrition security in the horn of Africa-Kenya herein referred to as the proponent, intends to Construct a Livestock Sale Yard at Alale in West Pokot County to enhance community resilience and provision of ready and close market to the local and neighboring communities. It also cushions livestock farmers against adverse weather effects such a drought and mitigate by providing a market with correct weighing services. This is better because in absence, the farmers would rely on visual observations and assessments of body condition, specifically ribs, back, hip and hook bones, to gauge the degree of fattiness of their livestock. The project therefore, entails construction of a saleyards with fencing, construction of offices, market stalls, animal loading ramps, raised platforms and sanitation facilities to prevent open defecation.

The project is aimed at improving access and availability of ready market in Alale through capacity building on livestock production/fattening and market provision and construction of the livestock-sale yard.

In complying with the Kenyan development regulations, the proponent commissioned the Experts to prepare this Environmental and Social Impact Project (ESIA) Report for the Proposed Construction of Livestock Sale Yard. 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 of the Project

Lodony Livestock market project is one of the many projects being implemented and improved by the Program to build resilience for food and nutrition security in the horn of Africa-Kenya. The program is designed to focus on seven counties. The areas under intervention are situated in the seven counties of arid and semi-arid area of Kenya namely, Baringo, Marsabit, Samburu, Turkana, West Pokot, Isiolo and Garissa. The target study area for this study is Alale ward in Pokot north sub-county. These counties have been chosen due to a number of factors, most importantly among them is that the areas receive low to moderate rainfall. Recurrent droughts and unpredictable rainfall patterns are characteristic of arid and semi-arid lands (ASALs), which receive less than 600 mm of annual rainfall. The broad objective of the programme is to contribute to poverty reduction by enhancing agricultural productivity and income, and food security among beneficiaries of these 7 counties.

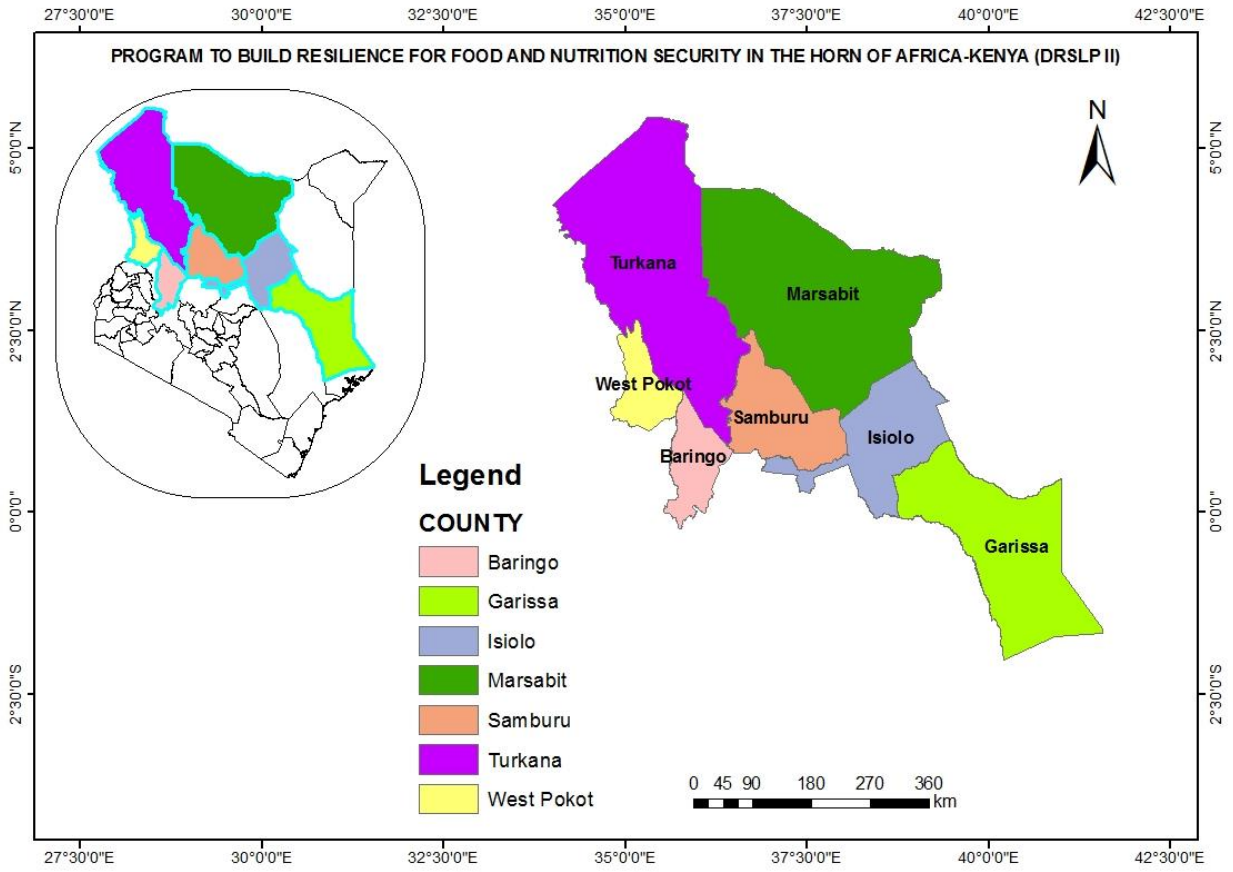

Figure 1-1: Project Target Counties

Specifically, it aims to improve the drought resilience of arid and semi-arid land communities through the following four key components:

Component 1:Strengthening the resilience of drought prone areas and Pastoral and Agro-Sylvo-Pastoral Production systems to Climate Change:The component comprise:

- Support for Sustainable Management of Agro-pastoral land
- Development of Climate Resilient Infrastructure
- Promotion of Climate-smart innovations and technologies

Component 2:Supporting Agribusiness Development through the following:

- Access to advisory services, financing and markets;
- Supporting Development of Entrepreneurship
- Promoting Domestic Bio-digesters and Solar Energy

Component 3:Strengthening Adaptive capacity to Climate Change by means of:

- Development of Climate Services
- Building capacity of main stakeholders in the agro-pastoral sectors in the drought prone areas for mainstreaming and monitoring Climate Change
- Strengthening the Operational Capacity for resilience

Component 4:Program Coordination and Management

The specific objectives of the proposed project is to;

(i) To increase agricultural productivity, promote commercialization and competitiveness of high value crops and livestock produced by target communities
(ii) Increase market access and trade in high value crops, livestock and livestock products
(iii) Improve sector-wide institution building, implementation and coordination mechanisms.

1.3 Project Justification

The traditional zebu is the main breed in Pokot north and North Sub-Counties for meat production while West Pokot and Pokot South Sub-Counties keep improved dairy cows such as Ayrshire and Friesian. There are 686,375 indigenous Zebu cattle, 460,327 sheep, 551,596 goats, 30,617 camels, 36,473 donkeys and 397 pigs. The annual production of beef stands at 3.6 million kg valued at Ksh.653 million while annual milk production is
4.7 million litres valued at Ksh.134 million. The livestock subsector has huge potential for generating household income and revenue for the county
Indigenous cattle and goats are mainly kept for their milk, beef and hides. Their solid wastes are also used as manure and as raw material for compost pits that are used for biogas generation. The locals also keep donkeys, which are used for transportation of water, and farm produce. From the socioeconomic study, findings reveal that all respondents in the project area keep livestock, which are grazed out in the open. Stall-feeding is relatively expensive and due to scarcity and high cost of fodder, many farmers prefer open grazing.

The project will contribute greatly to poverty reduction mainly as a result of enhanced income obtained from the increase in production and sale of livestock and also from alternative sources of incomes to be supported by the project. The infrastructure supported under the project will improve livestock production and post-handling facilities improving economic returns to pastoralist.
The participatory approach adopted under the project will enhance the capacity of beneficiaries, especially women, to take advantage of proven technologies to increase profitability of livestock production. The project will contribute to reduction of poverty and improve livelihoods of the pastoralists. The major benefits will accrue from the project's contribution to development of sustainable practices, nutrition, and sustainable environmental management practices. The poor segments of the target population who often have limited access to resources will benefit by having access to pastoralists' organizations and training opportunities.

1.4 Scope of Activities

The scope of activities for this assessment entailed;

- Description of the proposed project
- Description of the physical, biological and social environment
- Determination of the Potential Environmental Impacts of the Proposed Project:
- Development of environmental and social management plan to mitigate negative impacts
- Development of the ESIA monitoring plan

1.5 Rationale for ESIA

The Kenya Government policy on all new projects, programmes or activities requires that an environmental social 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 LODONY Livestock Sale Yard project as a ***Low Risk Project*** specifically part (e) "***Livestock holding grounds and cattle dips***"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 2 of the Africa Development 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). Therefore, the proponent – undertook Environmental and Social Impact Assessment and developed a Summary Project Report (SPR) pursuant to Regulation 7 (4) of the Environmental (Impact Assessment and Audit) (Amendment) Regulations, 2019

1.6 Study Approach and Methodology

1.6.1 Approach

The Assessment process adopted a participatory and collaborative approach in the course of the assignment. These approaches encouraged active involvement of the stakeholders, who had crucial perspectives and knowledge of the areas' conditions, traditions and social structure. It also assisted the personnel to acquire reliable data, using a variety of formal and informal techniques that were employed within a short timescale.

The assignment was conducted in line with the NEMA guidelines for an ESIA outlined in Environmental Management and Coordination Act Cap 387, and in consideration of international guidelines on environmental and social policies, guidelines and assessment procedures.

1.6.2 Methodology

The assessment was guided by the methodology described by the EMCA Cap 387 and the Environmental (Impact assessment/Audit Regulations 2019.and Africa Development Bank's safeguard policies. The various amendments to the Act, notably, the EMCA (amendments) 2015 and Legislative supplement No. 63 of 19 August 2016 were also consulted extensively during the assessment.

The ESIA study was carried out through a mix of methods namely; desk review, field assessments and public consultations with the communities of possible project beneficiaries, the project beneficiaries, relevant County government department and National Government institutions and agencies.

CHAPTER 2:PROJECT DESCRIPTION

2.1 Project Location

The project will be located in Lodony Village, Amukuriat Sub-location, Alale Location, Kacheliba Constituency, Pokot north Sub County in West Pokot County. Administratively, the County is sub-divided into five sub-counties, namely Pokot north, Pokot South, Pokot North, West Pokot and Kipkomo. It is further subdivided into 16 wards, 20 divisions, 65 locations and 224 sub-locations. The proposed project lies in Alale Ward, Kacheliba Constituency as shown in figure 2-1 below.

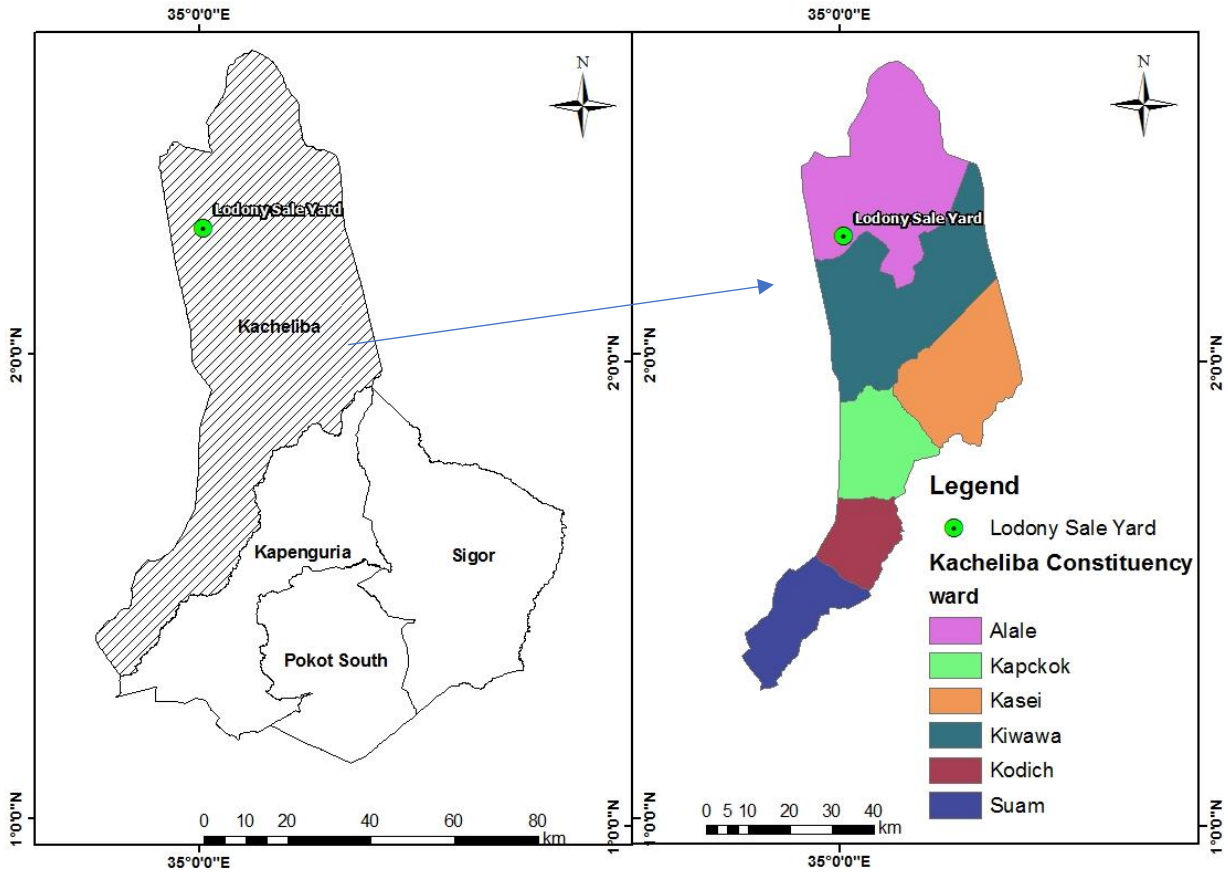

Figure 2-1: Proposed project location

A google map satellite image of the project location is shown in figure 2.2 below;

Figure 2-2: Google Earth Image of the proposed Livestock Sale Yard Project

Source: Google Earth

2.2 Design Concept and Material

The siting, design concept and criteria for the livestock sale yard were developed in accordance with the general guidelines and standards used in the design of livestock holding structures in Kenya and are in line with international standards for best practice by the County Government of West Pokot, through the Program to build resilience for food and nutrition security in the horn of Africa-Kenya.

2.2.1 Design

The proposed livestock-selling yard shall be of permanent construction with a project life of more than ten years. The proposed project consists of offices, loading and offloading ramp, toilet structure, fencing, kiosks and a raised platform. The project is intended to serve Alale and other neighboring villages and communities. The design shows no major to non-disruption of structures since there is no existing structures at the site.

2.2.2 Material

The project will be constructed using modern construction material and procedures while ensuring that the safety of the neighboring communities and the environment is not

compromised. These materials shall be locally and internationally accepted that meet the threshold public health, occupational safety and health as well as environmental standards. The main construction materials and equipment for this project will be; (i) Reinforced Concrete, (ii) Mild Steel (iii)Base Bolts (iv)Reinforcement steel (v) Concrete Molds, (vi)Raw construction materials e.g. sand, cement, gravel, hardcore, among others and general labor force (skilled and unskilled)

2.3 Proposed Project Activities

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

2.3.1 Planning Phase Activities

The main activities considered during this phase are: community mobilization, tendering services as required by procurement regulations, site hand over,hand over of drawing and building plans and site layout.

2.3.2 Construction Phase Activities

Construction phase entails the following activities:

- Procurement of construction materials and gathering them at the site
- Ground clearing and excavation of trenches for the foundation.
- Construction of floor, walls and roof as per the design.
- Construction of platforms and ramps as per design
- Installation of weighing machines.

2.3.3 Operation Phase Activities

On project completion the facilities would be utilized for the intended purpose. The livestock- selling yard will be monitored to ensure that the capacity of livestock held is not exceeded to prevent livestock stampede. The process shall be continuous with regular checks during the market days to enable the structure to serve the required and the intended purpose

2.3.4 Decommissioning Phase Activities

Decommissioning of the market 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 fences. The affected land shall be, landscaped and replanted with suitable indigenous grass and trees.

2.4 Waste during Construction

Table below indicates the types of waste to be generated during project implementation and proposed options for their management.

Table 2-1: Waste during construction

Type of Waste	Proposed Waste Management Option
Used oil filters and fuels, spilled cement and other building materials	• Accumulate safely and dispose-off through licensed hazardous waste handler
Empty plastic & metal containers	• Issue out to staff for reuse • Issue out to the local community as part of Corporate Social Responsibility (CSR) contribution • Reuse within the project site e.g. for fabricating solid waste containers • Return to the supplier
Empty gunny bags	• Issue out to the local community • Reuse within project site • Return to supplier
Polythene papers	• Accumulate safely and sell to licensed recyclers of polythene papers
Scrap metals	• Accumulate at designated site for selling to licensed scrap metal dealers
Soil	• Use excess soil and top for leveling ground and landscaping
Waste generated in operation	• Burn waste generated in a designated point.

2.5 Project Cost and Implementation Schedule

Based on the technical design's bills of quantity (BOQ) for offices, loading and offloading ramp, toilet structure, fencing, kiosks and a raised platform. The project implementation is estimated to cost **Kenya Shillings twelve Million (KES: 12,000,000).**

CHAPTER 3:BASELINE CONDITIONS

3.1 Land Ownership

The proposed project will be located in a community land within Lodony village. There are no environmentally sensitive areas within the project location. The surrounding to the project mostly comprise natural vegetation characterised by few trees, grasslands and shrubs. The proposed project is thus in keeping with the surrounding environment as it is in line with the physical planning zonation. Community resolution forms are appended to this report (***Appendix i***)

3.2 Environmental Management Supportive Infrastructure

The proposed project site houses a number of environmental supportive infrastructure. The proposed design includes an ablution block to be built at the project site. The inhabitants of the area have limited supply of clean drinking water. The site is situated along an all weather road. There residents of Alale have limited access water resources.

3.3 Conformity to existing land use plan/Zonation

The project will be located in LODONY Village, near Alale where there are no similar projects in close proximity. The surrounding comprise shrubland and mixed shrub/grassland. The project will not be out of character with the surrounding. There are no physical planning zonation restricting projects of similar nature at the site. The proposed project is thus in keeping with the surrounding environment as it is in line with the physical planning zonation.

3.4 Description of Environmentally sensitive areas

There are no environmentally sensitive areas within the project location. There are no sensitive ecosystems that will be affected by the proposed sale yard project. The water will be obtained from existing sources. There are no protected areas in close proximity to the proposed project. Additionally, there were no known flora or fauna listed in IUCN red list that are likely to be affected by the proposed project.

3.5 Physiographic and Natural Conditions

3.5.1 Land use patterns and socio-economic activities

Land use patterns in Alale Ward feature nomadic pastoralism, livestock rearing, limited irrigated agriculture, subsistence agriculture and sparse settlements. The bulk of the

population in the area practice nomadic pastoralism owing to the dry weather conditions. The average household has 50 cows, 150 sheep and 150 goats. The main livestock types reared include cows, goats and sheep.

3.5.2 Vegetation

The area has a variety of vegetation including a mixture of exotic and natural vegetation. Vegetation includes moist forest, dry woodland, bushland, and desert scrub. The highland areas are covered by forests, but deforestation owing to population pressure outpaces the designation of forest reserves; to increase forest cover, which is critical to water retention. The project site is likely to experience temporal vegetative disturbance more so during the construction phase. This will however be replaced by landscaping on completion.

3.5.3 Topography

The county is characterized by a variety of topographic features. On the Northern and North Eastern parts are the dry plains, with an altitude of less than 900 m above sea level. The low altitude areas include Alale, Kacheliba, Kongelai, Masol and parts of Alale. These areas are prone to soil erosion due to flash floods. The proposed site in Lodony Village, Alale ward sits on a relatively flat area with gentle slopes. The altitude of the project site is at 1602 m above sea level.

3.5.4 Geology and soils

Alale Ward is characterised by gneiss rocks in the high altitude areas and fluvial deposits in the low altitude areas. The soils are primarily chromic cambisols sandwiched between humic cambisols and calcaric cambisols. West Pokot is especially vulnerable since its soils are sandy and generally have low fertility. One of the most apparent effects of climate change observed by farmers is the occurrence of floods that wash and contribute to soil erosion in the lowlands. Climate models predict increasing variability in the onset and duration of rains with significant increases in the risk of floods.

3.5.5 Rainfall and Climate

The county has a bimodal type of rainfall. The long rains fall between April and August while the short rains fall between October and February. There is, however, great variation in the total amount and distribution of the rainfall received in the county. The lowlands receive 600 mm per annum while the highlands receive 1,600 mm per annum. The county also experience great variations in temperature with the lowlands experiencing temperatures of up to 30^0 C and the highlands experiencing moderate temperatures of 15^0 C. These high

temperatures in the lowlands cause high evapo-transpiration which is un-favourable for crop production.

3.6 Socio-Economic Environment

3.6.1 Population

According to the 2019 Kenya Population and Housing census the total population of West Pokot County is 621,241. The male population stands at 307,013 while the female population stands 314,213. This translates into a sex ratio of 1:1.02. The total number of households in Alale Location was estimated at 15,009. The total nimber of households in Alale location was estimated at 2,868, this implies that the average number of persons per household at location level is 5.2. The total land area for Alale Location is 233.7km^2 depicting a population density of 64 persons per square kilometer (*KNBS 2019*).

3.6.2 Infrastructure and Access.

The road network in the County is predominantly earth and gravel surface which makes up 87 percent of the road network. The gravel surface roads cover a distance of 349 km while the earth surface roads cover 697 km. The total length of bitumen surface (tarmac) road is only 151 km. This means that for every 60.7 km2, there is 1 Km of a tarmac road and for every 1 Km of the same tarmac road, we have 4,180 persons. (West Pokot County Integrated Development Plan 2018-2022).

3.6.3 Housing

The main housing types in the county are grass thatched houses, semi-permanent and permanent houses. In overall, there are 88,026 grass thatched houses, 5,129 permanent and semi-permanent houses mainly found in the urban/town centres. Traditional manyattas are found in some parts of Pokot North and Pokot South Sub-Counties. The county housing sector is characterized by inadequacy of affordable and decent housing, low investment, extensive and inappropriate dwelling units.
In Pokot north sub-county where the project area is situated, the dominant roofing material for a majority of the of the households are roofed with grass/twigs, followed by iron sheet roofing while the remaining use dung/mud roofing (KNBS 2019). At the project site and its surrounding, the dominant roofing material is grass.

3.6.4 Agriculture

The main food crops produced include maize, beans, sorghum, fingermillet, Adurkoit Irrigation, Irish potatoes, sweet potatoes and bananas. The farmers also grow horticultural

crops which include fruits (mangoes, pawpaw, oranges, tree tomato and passion fruit) and vegetables both exotic and local (onions, cabbages, kales, pumpkins, sucha, cowpeas, saga, peas and carrots among others). The fruits and vegetables contribute immensely to food security as farmers use it for food as well as generate income to the households. Members of community from the project area practice livestock farming, irrigated crop production and rainfed farming where crops fail from extended droughts.

3.6.5 Energy Access

The main source of energy in the county is fuel wood which accounts 90 per cent of the energy needs of the county population. Petroleum energy is another source accounting for 5 per cent energy needs. Despite the presence of Turkwel Dam, which generates electricity, connection is still low with only 2 per cent of the population accessing electricity and only 10 trading centres connected with power. Electricity power outages are also prevalent in the county. Paraffin, which is another source of energy, is used by 8 per cent of population. Other sources of energy in the county include charcoal and solar. The county has a high potential for solar energy which remains untapped. The project area is not connected to the grid and community uses solar energy.

3.6.6 Health Access and Nutrition

The county has numerous gaps in most of the health system blocks. Most notably in Human Resources for Health and in terms of levels of care under Tier One (community health 26 services) there have 60 community units spread across the sub counties. Under Tier Two (dispensaries and health centres) we have 105 health facilities 10 being Health Centres. There are also five county hospitals under Tier Four. Currently there are no Tier five facilities but plans are underway to upgrade the county referral hospital to level five. In addition we have 6 private clinics and one mobile clinic under the Beyond Zero initiative. Nutritional status is very low especially in the rural arid and semi-arid areas of the County.
According to the 2014 Kenya Demographic and Health Survey stunting was at 45.9%, those underweight stood at 38.5% and wasting were at 14.3%. All these levels were above the WHO thresholds. The project will contribute to attainment of government's big four agenda on food and nutrition security.

CHAPTER 4: PUBLIC PARTICIPATION

4.1 Overview

In every society today, the welfare of societies and the quality of life is directly linked to the sustainable use of our natural resources. This has been duly recognized in Agenda 21, where it is stated that: "Special attention should be paid to the demand for natural resources generated by unsustainable consumption and to the efficient use of those resources consistent with the goal of minimizing depletion and reducing pollution."

The Kenyan government has enshrined the need for human societies' involvement in project development in the Constitution. This has been set out in the EMCA, 1999 and Environmental (Impact and Audit) Regulations, 2003. Community consultation and participation ensure that communities and stakeholders are part and parcel of the proposed developments and in so doing assures the sustainable use of resources. It has also demonstrated successfully that projects that go through this process will acquire a high level of acceptance and accrue benefits to a wider section of society.

Public consultations form a useful component for gathering, understanding and establishing likely impacts of projects determining community and individual preferences and selecting alternatives. Furthermore, through public participation, it is possible to enhance project designs and ensure the sustainability of the projects. 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.

4.2 Objectives

The main objectives of the public consultation process were to:

- Inform the public of the details of the proposed Project construction;
- Collect views on the positive and negative impacts anticipated by the local residents and how these can be overcome; and
- Build community consensus and acceptance of the proposed project.

4.3 Methodology

Public participation for the proposed Lodony Livestock Sale Yard in Alale was conducted through the admission of questionnaires to allow for systematic understanding and interaction of the project beneficiaries and immediate neighbours.

Questionnaires were issued to relevant stakeholders, local administration and individuals whom the EIA team deemed were likely to be directly or indirectly affected by the activities of the proposed development. A total of **10 questionnaires** were administered during the public consultation exercise. A sample of these questionnaires has been attached to the appendices for ease of reference (***Appendix ii***).

A second stage whose findings are incorporated into this report involved holding of public meeting (*baraza*) on site. During the baraza, stakeholders had a chance to interact with the proponent represented by the EIA expert and ministry of agriculture officers at county level.

Plate 1: Project public meeting attendants

Presentation of the project scope was outlined, after which an open discussion forum followed during which all pertinent issues were raised and agreed upon with all stakeholders. The deliberations of the public meeting are detailed in the attached minutes (***Appendix ii***). The public meeting was attended by **38 participants** from local community.

4.4 Consultation and Disclosure Outputs

The appendices present the information on the public consultations undertaken under the environmental impact assessment for the proposed Livestock Sale Yard. This information includes selected responses.

4.5 Salient issues

4.5.1 Opinion on Project implementation

It is clear from the questionnaires received back that the proposed Sale Yard will serve an important role of providing the community with an avenue to access market for their livestock. All the residents admitted that they were interested in this project more solely for their improved income from livestock and in so doing pointed to the benefit that will accrue to them.

4.6 Anticipated impacts

4.6.1 Positive Impacts

Positive impacts identified by stakeholders include the following:

- There will be market creation for local women by selling,hides, ornaments, tea, milk, clothing's among others.
- A controlled market will reduce selling and buying of stolen livestock from the local or the neighbouring community
- Anticipated improved breeds from the access to market
- Improved market to livestock keepers and traders
- Temporary employment creation for the youth and women
- Through construction of the yard, there will be reduction of side selling of livestock as well reducing imposing low prices on local livestock farmers at the homestead.
- During market days, there will be increase in trade of selling livestock and buying foodstuffs and other goods therefore increasing diversification of products since there will be introduction of new products to market and to the community.
- Improved household income for the commnity owing to reduced side selling
- Short distances of travel in search of markets
- Time-saving for other activities
- The proposed sale yard will have a spill over effect of attracting other developments in the area
- Improved local business in Alale including sprouting of other supporting businesses

4.6.2 Anticipated negative impacts

Some of the negative impacts identified include the following:

- Elevated noise levels during construction
- Higher risks of outbreaks of livestock diseases such as foot and mouth disesease
- Waste generation during construction and operational phases
- Accidents from construction activities
- Substandard works and leading to collapse of the sale yard super-structure
- Possible loss of trees and vegetation cover to clear the land for construction
- Dust and air pollution during construction
- HIV spread from newcomers
- COVID-19 spread from visitors and traders

4.7 Suggestions and comments from public consultations

- They are proposing for supply of clean water or construction of water supply to the site especially during market days.
- The proponent and the contactor should involve local administration during the construction phase of the project. Liaison with the community should also continue during construction work and initial operation of the sale yard
- Jobs opportunities that will arise during the construction of the Livestock Sale Yard in Alale should be reserved for the residents of the project areas.
- The community suggested that a veterinary office be set up at the Sale yard to help the community have easy access to the much needed veterinary services
- The locals suggested that a crush be constructed at the facility for ease of access during vaccinations
- The ESMP should include the need for proper clothing's such as gloves, gumboots to prevent snake bites
- Construction work should strictly observe standards of Occupational Health and Safety including the following;
    - Usage of safety gear and equipment by construction workers
    - Erection of safety signage along the construction route
    - Provision of sanitation facilities, clean water and food to construction workers
- The contractor should have a holding/ launching yard for materials and equipment to control environmental pollution.
- The contractor should also strive to use high quality construction materials as detailed in the design
- Community to enlighten on use of toilets and chief to follow on the use of the same
- Educating on HIV aids control

- The management committee and resident engineer to guide through the construction
- Close supervision by qualified personnel

CHAPTER 5:ANTICIPATED IMPACTS AND MITIGATION MEASURES

5.1 Preamble

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

5.2 Positive Impacts

The anticipated positive impacts include the following;

i. **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

ii. Improved and Reliable Market for Livestock

Residents of Alale and its environs will benefit from access to a livestock sale yard. Incidence of side selling and farmers' exploitation that occur due to lack of a well-organised market. The project will also lead to improved market prices of livestock.

iii. Increased Revenue Generation by the County and National Government

The project will contribute to the county and national government kitty. The contractor will pay Value Added Tax (V.A.T) on purchasing materials for the project. Construction workers will also pay income tax from their earnings while working on the project. The project after completion will allow the county government to collect revenue from the sales of farm products and other businesses arising in the market area.

iv. Injection of Money to the Local Economy

There will be a short-term 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. The stabilised supply of food stuff to the workers will lead to injection and sprouting of business; additionally, resources lost owing to low sales due to absence of market will be reduced.

7.3 *Negative Impacts*

The project will involve the following activities:

Table 7-1: Activities to be undertaken under the Project

Phase	Activities
Construction	• Delivery of construction metallic tubes, iron sheets for pit latrines and fittings to the construction site • Clearing of shrubs on the site • Temporal pole hole excavation • Delivery of material for bedding of concrete joints and associated valve chambers (e.g. sand, cement, and gravel) • Jointing of the tube sections (welding and bolting) • Backfilling of the pole hole with concrete
Operation	• Repair and maintenance of metallic poles • Connection of water to the site
Decommissioning	• Excavation and removal of construction supports from sites • Demolition of concrete joints and other civil works • Transportation of metallic tubes sections and fittings from the pipeline sites • Removal of solid wastes (i.e. earth material and civil wastes) from the site

The following negative impacts are associated with the construction, operation and decommissioning phases of the project.

5.3 Negative Impacts and Mitigation during Construction Phase

i. Impacts on flora and fauna

Existing vegetation especially the shrubs shall be disturbed during preparation for construction. The area is gently sloping. There is also the potential of small ants on site. The ants will be affected through digging holes for metallic poles.

Mitigation Measures

The following measures for mitigating against adverse impacts on flora and fauna are recommended to the proponent for implementation;

- Minimal shrub cutting along the Sale Yard fence. Indigenous trees should not be cut as much as is practically possible. In the event that the trees are fel, planting should be done to compensate for the same.
- Minimize unnecessary cutting of trees at the ground
- Precise points for pole erection should be identified and anthills should be avoided.
- Siting of the yard at a location where there will be minimal bush clearing

ii. Noise and Vibrations

Increased noise levels will be experienced from the use of heavy construction equipment and vehicle movement. Increased vibrations during construction by equipment and vehicular movement. Noise during the project construction will mainly be caused by vehicles transporting materials, offloading of the construction materials. The vibration effect during the construction period will mainly result from the operation of machinery. The site is not close to a school, health center and residence; this noise will therefore mainly affect those working on site who will have the necessary PPEs such ear plugs.

Mitigation Measures

- Movement of vehicles to and from the site should be done during the day and not at night to avoid disturbance through noise and vibrations.
- Offloading of the metallic bars should be with minimal banging and slow placement on each other to avoid unnecessary noises.
- Individuals engaged in high noise emitting activities should be having ear muffs to attenuate noise levels.
- Machinery including the generators for welding shall be serviced and maintained in optimal working conditions to minimize the noise that will be generated

iii. Air Quality and Dust Emission

Potential air quality and dust emission degradation will occur as a result of vehicular and equipment emissions/exhaust gases. Generation of dusts from trucks and vehicles accessing the construction areas as well as piling of material is expected to degrade the local air quality.

Mitigation Measures

- Use of new/serviced vehicle for transporting materials to avoid a lot of smoke emission which affects the air quality.
- Traffic movement shall be limited to as low as 30km/hr along the project access roads to reduce the risk of dust emission.
- Employees likely to be exposed to dust emission will be provided with dust masks.
- The contractor to minimize the number of motorized vehicles in use.

iv. Increased Vehicular and Human Traffic

During the construction phase of the project, there will be an influx of construction workers to the project sites. This might contribute to the disruption of social order within the local communities. Increased vehicular traffic during the transportation of construction materials might result in the destruction of light traffic roads and increase the risk of transportation accidents.

Mitigation Measures

- Large signs should be placed showing vehicular traffic to and from the site to avoid unnecessary accidents.

- Adequate community awareness should be done, to avoid any rejection of the influx of people to and from the site.

v. Generation of Solid Wastes

Project construction activities will generate various solid wastes ranging from cement bags waste, metallic pipes debris, other wrappings, equipment oils and greases, waste asphalt concrete, human wastes to food wastes. Poor handling and disposal of such waste will lead to environmental pollution. Such wastes have the potential to getting on fodder field and livestock might eat causing digestion problems and death.

Mitigation Measures

- Use of integrated solid waste management system through the following options: i) waste source reduction, ii) material reuse and recycling, and, iii) combustion,
- Disposing waste more responsibly in appropriate designated dumping sites
- Using construction materials that have minimal or no packaging to avoid the generation of excessive packaging waste, and
- Providing waste collection sites and facilities within the site.

6. Health and Safety Hazards

Construction workers and the local community will be susceptible to health and safety hazards during the construction phase of the project. Inherent occupational risks include musculo-skeletal injuries, and accidents from construction vehicles. The influx of construction workers may put pressure on existing local resources, cause social conflicts, promiscuity and the related sexually transmitted diseases. During construction, excess light produced from welding might affect the welder's eyes hence adequate measures should be adhered to.

Mitigation Measures

- Contractors to adhere to Occupational Health and Safety rules and regulations as stipulated in the Occupational Safety Act of Kenya of 2007
- Employers must provide and maintain clothing and appliance that are adequate, effective and suitably protective, including where necessary, suitable gloves, footwear, goggles and head coverings
- In case of accidents, injured persons should be given first aid and immediately taken to the hospital
- Investigation on the cause of accidents done and adequate conclusion to be arrived at

5.4 Negative Impacts and Mitigation during the Operation Phase

i. High pressure on existing Water Resources

Operation of the market will lead to a higher demand of water by the market users. This demand may lead to depletion of the water from the water service provider and at times water rationing will be required.

Mitigation

- Install water tanks and other water saving technology at the site to save on water usage;
- Train market users on water saving techniques;
- Carry out rainwater harvesting to supplement tapped water.

ii. Air pollution (Dust; Source emissions; odour/foul smells)

Air pollution may occur due to operation activities at the Livestock Sale Yard. These include piling of solid waste for a long time, rotting food stuffs, use of sanitary facilities without proper cleaning, burning waste on site as well as occurrence of uncovered manholes at the market.

Mitigation

- Animal waste and any carcases should be removed from the market and disposed of appropriately.
- Clean and dust away all market areas regularly;
- Solid waste should be regularly removed from the market collection points
- Manholes should be covered using airtight covers to reduce any air pollution inform of foul smell;
- Frequently (Hourly) clean the sanitary facilities by use of detergents;
- Unnecessary combustion of materials within the compound should be avoided.

iii. Solid Waste Generation

The market building after completion and upon occupation will generate solid and liquid wastes. The efficient management of the solid waste generated by the project during the operation phase rests on the hands of the Kiambu County Government

Mitigation

- Wastes should be disposed off in a regular and an appropriate manner by ensuring that the wastes are disposed of efficiently through reuse, recycling and proper disposal procedures
- Disposing waste more responsibly in appropriate designated dumping sites,
- Providing waste collection sites and facilities within the site.
- The Proponent should ensure that the market is connected to the septic tank to ensure proper discharge of liquid waste.

iv. Accidents and incidence occurrence

Accidents and incidences may occur during operations of the project. Occurrence of such incidences may include falling, being knocked down by vehicles, damage to goods and property.

Mitigation

- Ensure that provisions for reporting incidents, accidents and dangerous occurrences during operations using prescribed forms obtainable from the local Occupational Health and Safety Office (OHSO) are in place;

5.5 Negative Impacts and Mitigation Measures during the Decommissioning Phase

Decommissioning means the project has come to the end of its project life and thus the need for the restoration of the project area to its original status. This may necessitate change of policy measures due to project reaching its end life and many more. The following negative measures may arise during this phase;

i. Loss of a well organised market for Livestock Farmers

The termination of the project at the end of project life will bring to a close an organised market for local farmers. This will lead to individuals selling at the farm-level and reintroduction of side selling hence non-uniform prices and exploitation of farmers by traders.

Mitigation Measures

- Alternative market for the local community should be designed/ sourced

ii. Loss of Revenue

During project, operation there will be revenue collection from the livestock and various inputs to the farming systems employed by farmers. The other source of revenue includes through market generation outside the Sale Yard.

Mitigation Measures

- Train farmers on other forms of business and other strategies for accessing markets

iii. Loss of Jobs

There will be loss of livelihood when the jobs are lost from the people employed on the project.

Mitigation Measures

- Create awareness on the project closure to employees to ensure savings and diversification

iv. Increased Vehicular and Human Traffic

During the decommissioning phase of the project, there will be an influx of decommissioning workers to the project sites. This might contribute to the disruption of social order within the local communities. Increased vehicular traffic during the transportation of materials from the site might result in the destruction of light traffic roads and increase the risk of transportation accidents.

Mitigation Measures

- Large signs should be placed showing vehicular traffic to and from the site to avoid unnecessary accidents.
- Adequate community awareness should be done, to avoid any rejection of the influx of people to and from the site.

v. Generation of Solid Wastes

Project decommissioning activities will generate various solid wastes ranging from metallic pipes debris, equipment oils and greases, human wastes to food wastes. Poor handling and disposal of such waste will lead to environmental pollution. Such wastes have the potential to getting on fodder field and livestock might eat causing digestion problems and death.

Mitigation Measures

- Use of integrated solid waste management system through the following options: i) waste source reduction, ii) material reuse and recycling, and, iii) combustion,
- Disposing waste more responsibly in appropriate designated dumping sites,
- Providing waste collection sites and facilities within the site

vi. Health and Safety Hazards

Decommissioning workers and the local community will be susceptible to health and safety hazards during the decommissioning phase of the project. Inherent occupational risks include musculo-skeletal injuries, and accidents from vehicles. The influx of workers during decommissioning may put pressure on existing local resources, cause social conflicts, promiscuity and the related sexually transmitted diseases.

Mitigation Measures

- Decommissioning contractor to adhere to Occupational Health and Safety rules and regulations as stipulated in the Occupational Safety Act of Kenya of 2007
- Employers must provide and maintain appropriate PPE, including where necessary, suitable gloves, footwear, goggles and head coverings
- In case of accidents, injured persons should be given first aid and immediately taken to the hospital
- Investigation on the cause of accidents done and adequate conclusion to be arrived at

7.1 Impacts Assessment Matrix

Impact	Nature of Impact				Occurrence			
	Positive/ Negative	**Direct/ In-direct**	**Temporary/Permanent**	**Significance level (High, Moderate, Low)**	**Pre-construction**	**Construction**	**Operation**	**Decommissioning**
1. Improved Livestock Market	Positive	Direct	Permanent	High			■	
2. Creation of Local Employment Opportunities	Positive	Direct	Permanent	High	■	■	■	
3. Increased Revenue Generation by the County and National Government	Positive	Direct	Temporary	Moderate			■	
4. Injection of Money to the Local Economy	Positive	In-direct	Permanent	Moderate		■	■	
5. Peace and Reconciliation	Positive	In-direct	Permanent	Moderate			■	
6. Impacts on flora and fauna	Negative	In-direct	Temporary	Low		■		
7. Noise and Vibrations	Negative	Direct	Temporary	Moderate		■		■
8. Air Quality and Dust Emission	Negative	Direct	Temporary	Moderate		■		
9. Increased Vehicular and Human Traffic	Negative	Direct	Permanent	moderate		■		■

10. Generation of Solid Wastes	Negative	Both	Temporary	Moderate				
11. Health and Safety Hazards	Negative	Both	Temporary	Moderate				
12. Soil Erosion	Negative	Direct	Temporary	Moderate				
13. Loss of a well Organised	Negative	Direct	Both	High				
14. Loss of Revenue	Negative	Both	Permanent	High				
15. Loss of Job	Negative	Both	Permanent	High				

CHAPTER 6:ENVIRONMENTAL AND SOCIAL MONITORING PLAN (ESMP)

6.1 Introduction

The purpose of the ESMP is to ensure that environmental and social impacts and risks identified during the ESIA are effectively managed during the construction, operation and decommissioning of the proposed project. The ESMP specifies the mitigation and management measures for each impact/risk, party allocated responsibility, means of monitoring and frequency, objective verifiable indicators and an indicative budget. The ESMP also establishes a monitoring plan, capacity building plan and institutional arrangements to support its implementation.

The ESMP should be availed to contractor who will be awarded the tender for construction by the proponent. The contractor should follow the ESMP as stated and submit a quarterly mitigation progress report to the proponent to ensure that the proposed mitigation is followed to the latter.

6.2 Environmental and Social Management Plan (ESMP)

Figure 6-1: Environmental and Social Management Plan (ESMP)

Potential Impact	Mitigation/ Enhancement Measures	Responsibility	Monitoring means / Frequency	Verifiable Indicators	Estimated Costs (KSh.)
Construction Phase					
Impacts on flora and fauna	• Minimal shrub cutting along the yard fence. Indigenous trees should not be cut at all cost and if it should be then the yard should be moved. • Minimize unnecessary cutting of trees at the ground • Precise points for pole erection should be identified and anthills avoided.	Contractor	Throughout the construction phase	Number vegetation cut and anthills dug	Contractor's cost
Noise and Vibrations	• Movement of vehicles to and from the site should be done during the day and not at night •Offloading of the metallic bars should be with minimal banging and slow placement on each other to avoid unnecessary noises. • Cutting individuals should be having ear mags to avoid direct noise. • Machinery servicing and maintenance to optimal working conditions	Contractor	Throughout the construction phase	• State of machines used • Type of machines used for compaction	No direct costs anticipated

Air Quality and Dust Emission	• Use of new/serviced vehicle for transporting materials. • Traffic movement shall be limited to as low as 30km/hr.	Contractor	Throughout the construction phase	• Records of speed limits signs erected • Records of machine and vehicle service	Contractor Cost
Potential Impact	**Mitigation/ Enhancement Measures**	**Responsibility**	**Monitoring means / Frequency**	**Verifiable Indicators**	**Estimated Costs (KSh.)**
	• Provision of dust masks to employs. • Minimization of the number of motorized vehicles in use.			• Evidence of use of dust masks by workers on site	
Increased Vehicular and Human Traffic	• Signs placed showing vehicular traffic to and from the site to avoid unnecessary accidents. • Adequate community awareness should be done, to avoid any rejection of the influx of people to and from the site.	Contractor	Throughout the construction phase	• Number of accidents • Cases of workers rejection	No direct costs (integrated in the works costs)
Generation of Solid Waste	• Use of integrated solid waste management system • Disposing waste more responsibly in appropriate designated dumping sites, • Using construction materials that have minimal or no packaging to avoid the generation of excessive packaging waste, and • Providing waste collection sites and facilities within the site.	Contractor	Daily Inspection	• Presence/absence of scattered solid wastes at sites • Availability of waste receptors • No. of sensitization meetings held with workers	No direct costs (integrated in the works costs)

Health and Safety Hazards	• Occupational Health and Safety rules and regulations adherence. • Occupational Safety and Health Training for contractor's staff • Conduct orientation talks and visits • Investigation on the cause of accidents done	Contractor	Daily Monitoring	• Training reports • Training attendance sheets • Orientation report	Contractors cost
Operation Phase					
Potential Impact	**Mitigation/ Enhancement Measures**	**Responsibility**	**Monitoring means / Frequency**	**Verifiable Indicators**	**Estimated Costs (KSh.)**
Soil Erosion	• Re-vegetation of the surrounding area to assist in holding of soil. • Soil management measure	DRSLP II/County Government	Throughout operation phase	• Mass of soil lost • Amount of dust emitted	Proponent's cost
Introduction of Disease Vector Problems	• Introduction of livestock movement and vaccination permits.	County Government	Throughout operation phase	• Number disease infection cases	County Government's cost
Solid Waste Generation	• Disposing waste more responsibly in appropriate designated dumping sites, • Providing waste collection sites and facilities within the site.	County Government	Throughout operation phase	• Presence of litter on the site	County Government's cost
Decommissioning Phase					
Loss of a well Organised Livestock Market	• Alternative market for the local community should be designed/ sourced	County Government	At the Decommissioning Phase	•No of side selling experienced	County Government's cost

Loss of Revenue	• Train farmers on other forms of business and other livestock selling strategy	County Government	Decommissioning Phase	• Number of businesses • Alternative livestock selling	County Government's cost
Loss of Job	• Create awareness on the project closure to employs to ensure savings and diversification	County Government	Throughout the decommissioning phase	• Loss of livelihood number	County Government's cost
Increased Vehicular and Human Traffic	• Signs placed showing vehicular traffic to and from the site to avoid unnecessary accidents. • Adequate community awareness should be done, to avoid any rejection of the influx of people to and from the site.	Contractor	Daily Monitoring	• Number of vehicles • Number of workers rejected	Contractors cost
Generation of Solid Waste	• Use of integrated solid waste management system • Disposing waste more responsibly in appropriate designated dumping sites, • Providing waste collection sites and facilities within the site.	Contractor	Daily Inspection	•Presence/ absence of scattered solid wastes at sites •Availability of waste receptors •No. of sensitization meetings held with workers	Contractors Cost
Health and Safety Hazards	• Occupational Health and Safety rules and regulations adherence. • Occupational Safety and Health Training for contractor's staff • Conduct orientation talks and visits • Investigation on the cause of accidents done	Contractor	Daily Monitoring	• Training reports • Training attendance sheets • Orientation report	Contractors cost

CHAPTER 7:CONCLUSIONS AND RECOMMENDATIONS

7.1 Conclusions

The proposed development of Lodony Livestock Sale Yard has raised a number of positive impacts to the environment, social, health and also economic wellbeing through consultation and community awareness and discussion on the impacts at various levels of project implementation. In addition, the proposed project has a number of negative impacts raised which have adverse effects at the three levels of project implementation to the environment, social and economic being of the individual who lives in the surrounding and will depend on the project.

The proposed project ESIA was carried out in line with the national, AfDB guidelines and Africa Development Banks framework, as outlined in the Environmental Management and Co-ordination Act (1999), and the Environmental (Impact Assessment and Audit) Regulations (2003) revised in 2015 and Africa Development Banks safeguard policies. Mitigation measures for the potentially significant and/or adverse environmental and social impacts and safety risks have been provided as an integral part of this ESIA report.

To enable the project to be realised then, specific mitigation measures have been proposed. The following are some of the conclusive remarks on the proposed project based on the impacts and assessment done.

iv. The proposed project is highly welcomed by the community since the livestock production is the main economic activity in the area and the Sale yard will enable the livestock keepers access to a good market.
v. The community has embraced the project and is awaiting its construction.
vi. The EMSP has allocated the responsibility and costs to offset the negative impacts and enhance the positive impacts of the project on the social and environmental conditions of the project area.

7.2 Recommendations

The following are some of the recommendations for the avoidance of negative impacts and mitigation measures for the adverse environmental and social impacts from the proposed construction of the Lodony Livestock Sale Yard in Alale, Pokot North Sub-County.

i. A complete audit be undertaken and submitted to NEMA yearly after the project is commissioned to ensure that all the proposed mitigation measures have been complied with;

ii. Construction works in the proposed Project is carried out in accordance with approved designs, regulations, policies and laws;
iii. Waste disposal mechanisms be put in place and facilities be included in project design and construction
iv. The project coordinator to ensure that proper and timely communication on project activities is affected to guarantee project ownership.
v. The proponent, construction consultant and the contractor should work together to ensure full implementation of the ESMP for proper enhancement and mitigation of impacts emanating from the project

In conclusion, 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 it should be allowed to proceed.

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GoK, Public Health Act, CAP 242, Government Printer, Nairobi.

GoK, Water Act (2016), Government Printer, Nairobi.

Marsabit County (2017), Integrated Development Plan II (2018-2022)

Africa Development Bank, operational safeguards snd policies.

CHAPTER 9:APPENDICES

Appendix i Community Resolution Form
Appendix ii Copies of filled public consultation questionnaires
Appendix iii Minutes of Public Consultation meetings
Appendix iv List of attendants sheet for public consultation
Appendix v NEMA Practicing License (Lead Expert)

9.1 Community Resolution Forms

COMMUNITY RESOLUTION FORMS – DROUGHT RESILIENCE AND SUSTAINABLE LIVELIHOODS PROGRAMME (DRSLP)

Community Resolution on Identification/Selection of structure sites i.e. .....LODONY SHG.....

We, the beneficiaries of ..LODONY..... Have discussed and agreed that .....LODONY.....will be the site for the ..SALE..., ...YARD..... in .POKOT NORTH.Sub county, ...ALALE ..... Ward, ...ALALE.... Location, ...AMAKURIAT Sub-location.

We, on behalf of the beneficiaries (beneficiaries' representatives) confirm the above information be true.

(names of three (NO) Beneficiaries' representatives)

S/NO.	NAME	ID/NO.	SIGNATURE
1	JACOB LORIPO	25111461	[signature]
2.	SIMON PKIROR	13005613	[signature]
3	SAMSON WIMAROK	20093840	[signature]

Witnessed By: ...JULIUS Y. KALIAMOI..... [signature] 0711674952

Chief office (Stamped)

CHIEF'S OFFICE ALALE
P.O. BOX 1-30600
KACHELIBA
DATE.....

NAME	P/NO.	DESIGNATION	SIGNATURE
JACKSON LOKWAKILE	19980122237	CHIEF	[signature]

CDA'S OFFICE (Stamped)

COUNTY DIRECTOR OF AGRICULTURE
WEST POKOT COUNTY
08 SEP 2021
P. O. Box 14 - 30600, KAPENGURIA

NAME	P/NO.	DESIGNATION	SIGNATURE
THOMAS WASIKE	1997031733	CDA	[signature]

County Government (Stamped)

(County Executive for Agriculture and Irrigation)

NAME	ID/NO.	SIGNATURE
GEOFFREY LIPALE	13260612	[signature]

(NB: Please add any other relevant information)

COUNTY EXECUTIVE COMMITEE MEMBER
WEST POKOT COUNTY
08 SEP 2021
MINISTRY OF AGRICULTURE, IRRIGATION, FISHERIES & PASTORAL ECONOMY

9.2 Minutes of Public Consultation meetings

MINUTES OF THE EIA PUBLIC MEETING FOR THE PROPOSED SALES YARD OF LODONY VILLAGE, AMAKURIAT SUB-LOCATION, ALALE LOCATION, ALALE WARD, POKOT NORTH COUNTY

Agenda

1. **Opening remarks**
2. **Team & Project Introduction**
3. **Concerns, comments and questions from community members**

Min 01/09/2021: Opening Remarks

The meeting was called to order by the area Chief at 10:30am and was opened by a word of prayer by one of the villagers. The Chief later introduced the MOA team leader and the EIA team. He later then gave brief introductory comments and later handed the meeting to the EIA Team Leader who then introduced the consultants. The figure below shows a section of members of the public who were in attendance.

Figure 11-1: A public participation baraza chaired by area chief in proposed sale yard site in Alale Village

Min 02/09/2021: Team & Project Introduction

The Lead Expert introduced the project and the ESIA study of the proposed sale yard to the Village members, elaborating its objectives and the role of communities and leaders in the project.

The legal requirement that development projects are subject to Environmental and Social Impact Assessment was outlined sighting different examples for classes of projects with low, medium and high risks. The consultant explained that the proposed project would have both positive and negative impacts on the surroundings and on the community and welcomed them to voice their concerns, comments and questions.

Min 03/09/2021: Concerns, comments and questions from the community members

Project Awareness

The consultant explained to the community where the proposed sale yard will be stationed but it was evident that almost all the residents were familiar with where the proposed sales yard would be put up. Those who were not aware about the project site were given the option of visiting the location with the MOA team and the consultants later after the meeting. After elaboration from the consultant, it was certain that all the members understood what the project was all about.

Anticipated project benefits

The consultant later asked the community to give their positive expectations about the new rehabilitated project. The community appreciated that the project would boost the level of development in the area by ensuring there is adequate availability of market for the livestock in the community and provide will employment opportunities.

The main impact that the community was also aware of is that of availability of market for their livestock. All residents were happy about this new development and promised full support to the project. The positive impacts as discussed during the project meeting included;

- Marketing of livestock and their products
- The project would place Alale on the national map.
- Improvement in livelihoods;
- Value addition to meat products.
- Improved wellbeing of the residents
- Will do away with middlemen who have exploited the ordinary pastoralist
- Will help in destocking especially during drought.

Anticipated negative impacts

Noise resulting from the construction of the sale yard would result into Environmental pollution. Moreover, diseases and injuries would be caused by dusts and bad smell emanating from the project sites during operation phase. Excavation activities would cause open pits that pose a safety hazard especially at night.

Some of the key negative issues and their mitigations discussed included;

Impact	**Mitigation Measures**
•Spread of Covid19	• Adhere to the Public health act; 242 legal notice 54 of April 2020, on COVID 19 regulations thorough provision of social distancing of at least 1m and wearing PPEs.
• Destruction of vegetation during the construction phase	• Plant many trees around the abattoir
• Livestock congestion near the abattoir leading to degradation of the surrounding vegetation;	• Reseeding of pastures in the vicinity of the project site;
• Foul smell from the site during operation phase;;	• Plant trees to buffer the site from direct view;
• Infestation of the area by scavenging birds	• Design the waste water management system properly;
• Lorries degrading roads during rainy seasons	• Road maintenance by the community. • Community to liaise with county government to upgrade and maintain feeder roads.
• Solid waste generation and disposal	• Prepare/segregate a dumping site.
• Air pollution	Fencing the construction site, • Provision of masks to people working there. • Water sprinkling to avoid dusk
• Noise Pollution	• Provision of person protective equipment, • Ensure the machineries don't exceed the acceptable noise limit. • Works done between 8 am and 5 pm

• Child labour	• The contractor to be under strict instructions on labour laws
• Increase in theft issues	• The contractor should employ a security guard and involve the community leaders and local administration.
• Increase resource use conflicts	• Conflict resolution committee already in place.
• Drug and Substance abuse, Corona virus spread and HIV/AIDs, family brake up and early pregnancies.	• Chief's barazas for awareness and sensitization. • MoH corona virus prevention guidelines • Awareness and training for women and children.

Min 04/09/2021: A.O.B

There being no other business the meeting ended at 1:30 pm with a closing prayer from one of the consultants.

9.3 List of attendants sheet for public consultation

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MINISTRY OF AGRICULTURE, LIVESTOCK, FISHERIES AND COOPERATIVES
STATE DEPARTMENT FOR CROP DEVELOPMENT AND AGRICULTURAL RESEARCH
DROUGHT RESILIENCE AND SUSTAINABLE LIVELIHOODS PROGRAMME (DRSLP)

Government of Kenya (GoK)

LIST OF PARTICIPANTS

African Development Bank (AfDB)

ACTIVITY: LODONY (ALALE) SALE YARD

DATE: 06/9/2021

S/NO	NAME	GENDER	ORGANIZATION/DEPLOYMENT	PHONE NO. AND E-MAIL ADDRESS	SIGN
i	SAMSON LIMANUK	M	HOUSING & URBAN DEV	0727 646117	
ii	Julius Kchumi	M	CHIEF	0711674952	
iii	JACOB LOKIPO	M	WARD ADMINISTRATOR	0726562529	
	JACKSON Lokwakha	M	CHIEF	0712733061	
	SIMON PKIRO	M	REVENUE CLERK	0729352055	

MINISTRY OF AGRICULTURE, LIVESTOCK, FISHERIES AND COOPERATIVES
STATE DEPARTMENT FOR CROP DEVELOPMENT AND AGRICULTURAL RESEARCH
DROUGHT RESILIENCE AND SUSTAINABLE LIVELIHOODS PROGRAMME (DRSLP)

Government of Kenya (GoK)

LIST OF PARTICIPANTS

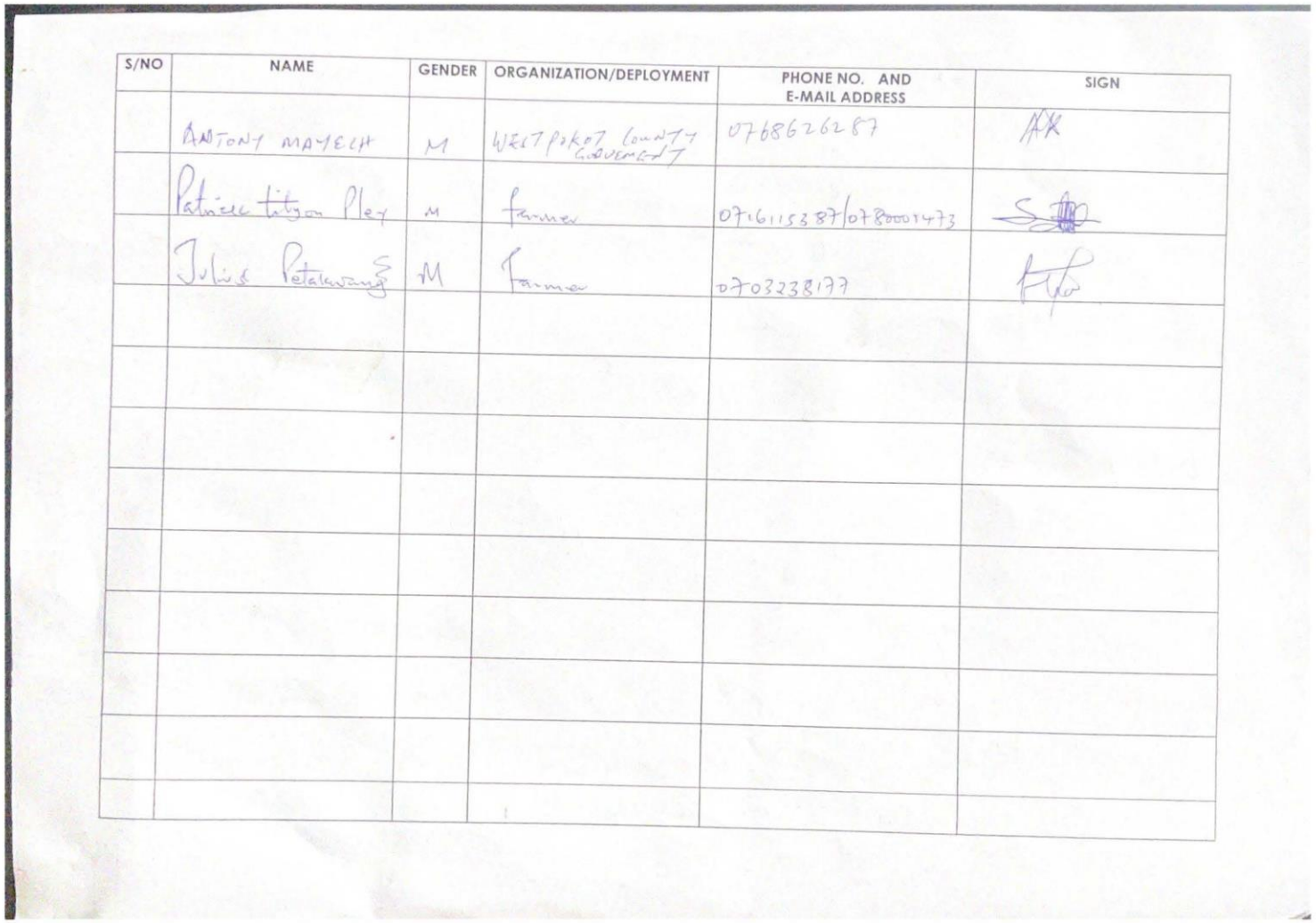
African Development Bank (AfDB)

ACTIVITY: LODONY (ALALE) SALE YARD

DATE: 04/9/2021

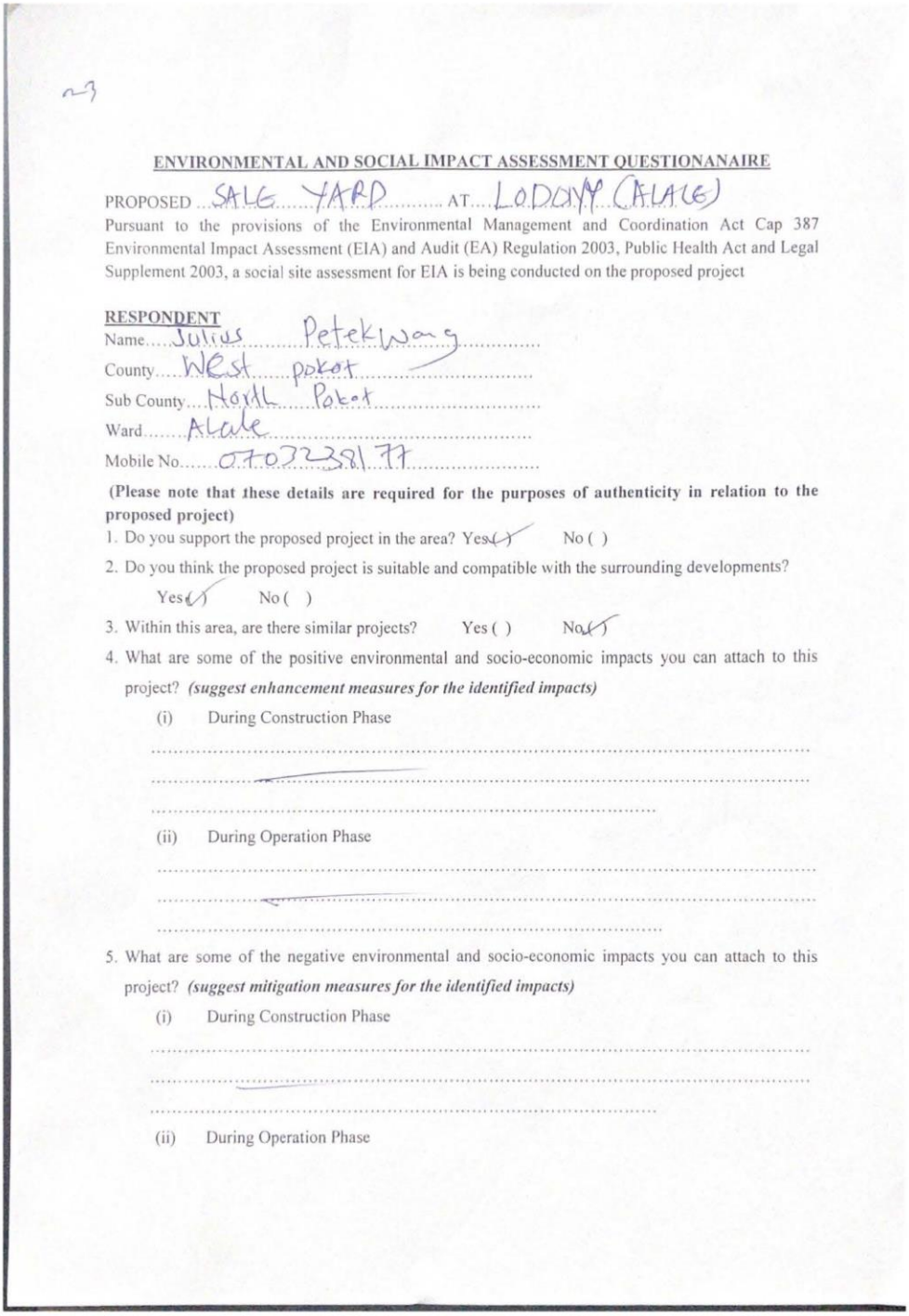
S/NO	NAME	GENDER	ORGANIZATION/DEPLOYMENT	PHONE NO. AND E-MAIL ADDRESS	SIGN
18	LOGWOLE LOMERKOU	M	FARMER		
19	KANGURA LOYOP	M	FARMER	0710476700	
20	JAMES PUSIKWANG	M	BUSINESS MAN	0706920111	
21	LOKEDINGOLE LOTINGOLE	M	FARMER	0708129487	
22	JOHN-K. APKOTIR.	M	FARMER	0700353481	

S/NO	NAME	GENDER	ORGANIZATION/DEPLOYMENT	PHONE NO. AND E-MAIL ADDRESS	SIGN
23	RIONONGOLE LORIKA	M	FARMER	0740560738	
24	LOMOLIMA DOMOKWANG	M	FARMER	0791744486	
25	MICHAEL SIMATIA	M	FARMER	0758772818	
26	DAVID NGIRONYANG	M	BUSINESS	0799332858	
27	NGURATUKEI MOSES	M	FARMER	0758772804	
28	NGORSAKIN LOPUO	M	BUSINESS	0729881960	
29	William Poywapu	M	Asst Chief Korur	0715224333	
30	LOPUSIA LOTOME	M	FARMER		
31	LOTOMON LOPUO	M	FARMER		
32	NAAMAN MASAA	M	BUSINESS	0740323539	
33	SAMUEL LONGOROK	M	FARMER	0790128974	
34	CHEPACHIKWA LOPEYOK	F	FARMER		
35	KORNGIRO	M	FARMER		



S/NO	NAME	GENDER	ORGANIZATION/DEPLOYMENT	PHONE NO. AND E-MAIL ADDRESS	SIGN
	ANTONY MAYECH	M	WEST POKOT COUNTY GOVERNMENT	0768626287	
	Patrick Tityon Pley	M	farmer	0716115387/0780001473	
	Julius Petalewang	M	farmer	0703238177	

9.4 Copies of filled public Consultation questionnaires



ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT QUESTIONANAIRE

PROPOSED SALE YARD AT LODONY (ALALE)

Pursuant to the provisions of the Environmental Management and Coordination Act Cap 387 Environmental Impact Assessment (EIA) and Audit (EA) Regulation 2003, Public Health Act and Legal Supplement 2003, a social site assessment for EIA is being conducted on the proposed project

RESPONDENT

Name: Julius Petekwang

County: West pokot

Sub County: North Pokot

Ward: Alale

Mobile No: 0707238177

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

1. Do you support the proposed project in the area? Yes(✓) No ( )
2. Do you think the proposed project is suitable and compatible with the surrounding developments?
   Yes(✓) No ( )
3. Within this area, are there similar projects? Yes ( ) No(✓)
4. What are some of the positive environmental and socio-economic impacts you can attach to this project? ***(suggest enhancement measures for the identified impacts)***
   (i) During Construction Phase
   .....
   .....
   .....
   (ii) During Operation Phase
   .....
   .....
   .....
5. What are some of the negative environmental and socio-economic impacts you can attach to this project? ***(suggest mitigation measures for the identified impacts)***
   (i) During Construction Phase
   .....
   .....
   .....
   (ii) During Operation Phase

.....

.....

.....

6. In your general opinion should the proposed project be implemented / allowed to proceed? Tick one

Yes (✓) No ( )

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

.....

.....

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

THANK YOU FOR YOUR RESPONSE

23

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT QUESTIONANAIRE

PROPOSED ..... SALE YARD ..... AT ..... LODONY (ALALE)

Pursuant to the provisions of the Environmental Management and Coordination Act Cap 387 Environmental Impact Assessment (EIA) and Audit (EA) Regulation 2003, Public Health Act and Legal Supplement 2003, a social site assessment for EIA is being conducted on the proposed project

RESPONDENT

Name..... SIMON PKIROR

County..... WEST POKOT

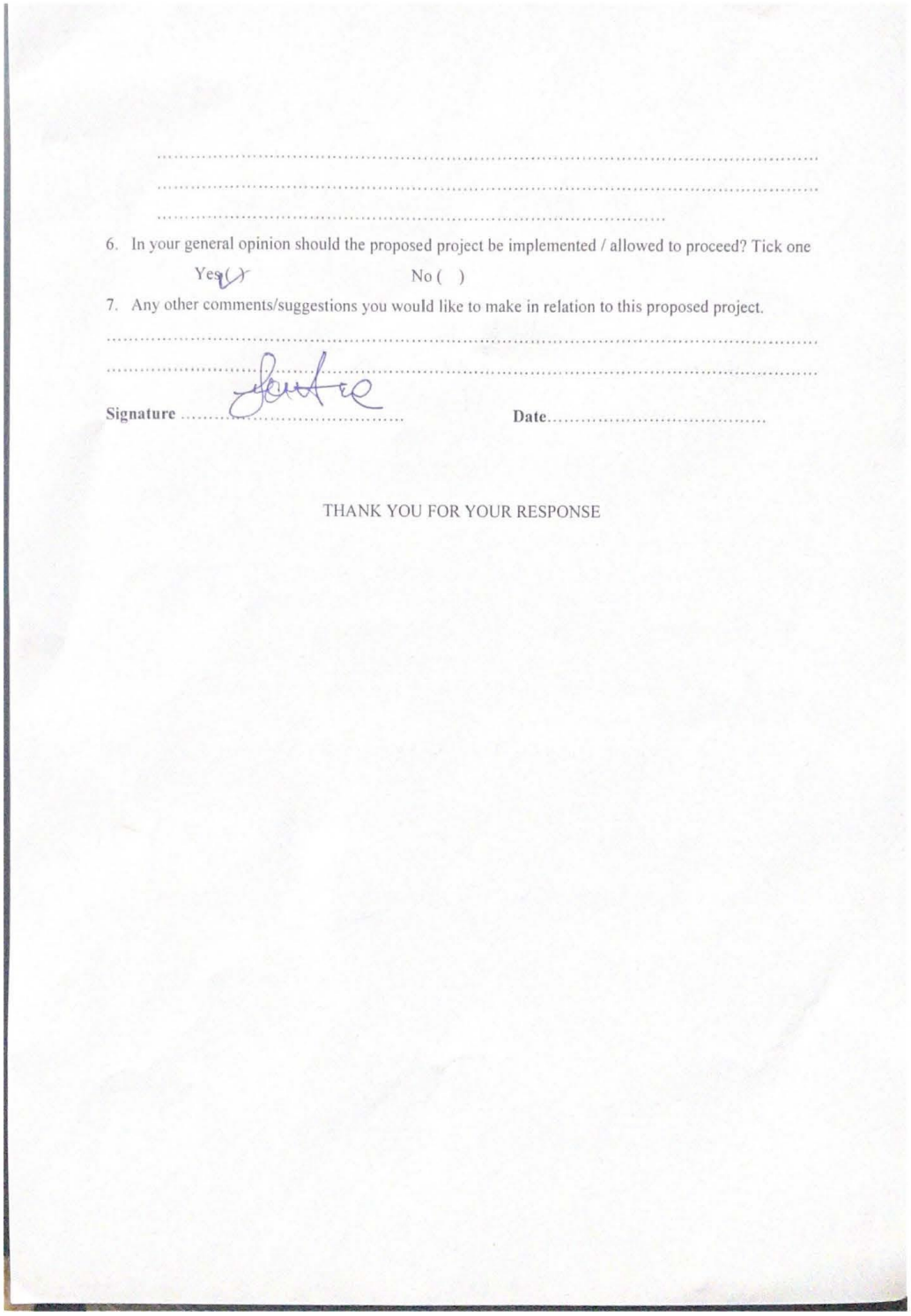
Sub County..... NORTH POKOT

Ward..... ALALE

Mobile No..... 0729352055

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

1. Do you support the proposed project in the area? Yes (✓) No ( )
2. Do you think the proposed project is suitable and compatible with the surrounding developments?
   Yes (✓) No ( )
3. Within this area, are there similar projects? Yes ( ) No (✓)
4. What are some of the positive environmental and socio-economic impacts you can attach to this project? ***(suggest enhancement measures for the identified impacts)***
   (i) During Construction Phase
   ..... Employment Opportunities .....
   (ii) During Operation Phase
   ..... Revenue & Unity .....
5. What are some of the negative environmental and socio-economic impacts you can attach to this project? ***(suggest mitigation measures for the identified impacts)***
   (i) During Construction Phase
   (ii) During Operation Phase



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.....

.....

6. In your general opinion should the proposed project be implemented / allowed to proceed? Tick one

Yes (✓) No ( )

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

.....

.....

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

THANK YOU FOR YOUR RESPONSE

9.5 Lead Expert's EIA License

FORM 7 (r.15(2))

nema
mazingira yetu | uhai wetu | wajibu wetu

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/15065

Application Reference No: NEMA/EIA/EL/19719

M/S **Boaz Kipruto Bett**
(individual or firm) of address

P.O. Box 20171-00100 Uasin Gishu

is licensed to practice in the

capacity of a (Lead Expert/Associate Expert/Firm of Experts) **Lead Expert**
registration number **6994**

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

DRSLP WEST POKOT PHASE II

Issued Date: **5/17/2021** Expiry Date: **12/31/2021**

Signature…..

(Seal)
Director General
The National Environment Management Authority

P.T.O.

ISO 9001: 2015 Certified