WATER AND SANITATION DEVELOPMENT PROGRAM

ENVIRONMENTAL & SOCIAL IMPACT ASSESSMENT PROJECT REPORT

PROPOSED CONSTRUCTION OF A BIOSAFETY LEVEL 1 LABORATORY AND ANCILLARY FACILITIES IN DADAAB MUNICIPALITY

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PROPOSED CONSTRUCTION OF A BIOSAFETY LEVEL 1 LABORATORY AND ANCILLARY FACILITIES IN DADAAB GARISSA COUNTY

ESIA COMPREHENSIVE PROJECT REPORT

CLIENT

GARISSA WATER AND SEWERAGE COMPANY - GAWASCO

DOCUMENT TITLE:
COMPREHENSIVE PROJECT REPORT
RECORDS FOR REVISION

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01	May, 2024	ESIA CPR	Losai Management Limited	Losai Management Limited	

DETAILS OF PROPONENT AND EXPERT

This report is prepared for and on behalf of:

LEAD EXPERT/FIRM OF EXPERT-11481	PROPONENT
LOSAI MANAGEMENT LTD P.O BOX 30337-00100 Nairobi Kenya FAX : +254.20.263.2996 TEL : +254.788.352.533, + 254.20.263.2996, +254.718.875.310 Email : info@losaimanagement.com **Name :** Dr Stephen C. Wairuri. **Designation: …Lead Exprt….** **Date: ……1/8/2024.** **Signed** 	The Managing Director Garissa Water and Sewerage Company Ltd P.O Box 1088 – 70100 Garissa Tel: +254-046-2103330 **Name:** Mohamed Dolal **Designation:** Managing Director **Signed:**  **Date:** 08.08.2024

DISCLAIMER:

This Environmental Impact Assessment Comprehensive Project Report is based on literature review and findings from field assessment. It is however, subject to conditions in the Environmental Management and Coordination Act 2015 Environmental Impact Assessment and Audit Regulations, 2019 and World Bank Environmental and Social Safeguards. This report is not intended to relieve the Establishment from their contractual obligations. It reflects our findings at the time and place of assessment and is issued under the General Conditions of Service.

ABBREVIATIONS

BSL	Biosafety Level
^{0}C	Degrees Celsius
EIA	Environmental Impact Assessment
EMCA	Environmental Management Coordination Act
EMP	Environmental Management Plan
GAWASCO	Garissa Water and Sanitation Company
HWM	Household Waste Management
ITK	Indigenous Technical Knowledge
KM	Kilometres
KWS	Kenya Wildlife Services
LPG	Liquefied Petroleum Gas
MOU	Memorandum of Understanding
NEC	National Environment Council
NEMA	National Environment Management Authority
NGOs	Non-Governmental Organizations
NPEP	National Poverty Eradication Plan
OHSO	Occupational Health and Safety Office
SWM	Solid Waste Management
TOR	Terms of Reference
UNEP	United Nations Environmental Programme
VAT	Value Added Tax
WASSIP	Water and Sanitation Service Improvement Project
WRA	Water Resources Authority
WSDP	Water and Sanitation Development Project

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EXECUTIVE SUMMARY

E.1 Project Background

The World Bank conceived and has financed the project of intervention into the water supply to the host communities under the Water and Sanitation Development Program (WSDP). The development objective of Water and Sanitation Development Project is to improve water supply and sanitation services in select coastal and north-eastern regions in Kenya. This project has four components.

1. **The first component, Rehabilitation and expansion of urban water supply and sanitation services in the coastal region.** It has the following subcomponents:
    I. Support to coastal counties; and
    II. Support to the coast bulk water services provider.
2. **The second component is Expansion of water supply and sanitation services in underserved north-eastern counties**. It aims to finance a program of activities designed to improve water supply and sanitation services in the north-eastern counties, such as Wajir town in Wajir County and the Dadaab refugee camp host communities in Garissa County.
3. **The third component, National performance-based financing.** It includes the following two subcomponents:
    I. Support for water and sanitation infrastructure investments and services; and
    II. Technical assistance for national performance-based financing.
4. **The fourth component, Project management, finance a program of activities designed to strengthen the capacity of the Recipient for project management, implementation and coordination, and Monitoring and Evaluation (M and E).**

The Environmental Management and Coordination (Impact Assessment and Audit) Regulations, 2019 stipulates that either Comprehensive or Summary Environmental and social Impact Assessment (ESIA) Project Reports should be prepared for low and medium risk projects listed in the Second Schedule. The construction of the laboratory in Dadaab falls in the Category II of medium Risk Projects under the Environmental Management and Coordination Act (Amendment), 2019. In addition, as a World Bank funded project, OP 4.01 was considered where the project falls under Category B (Impacts are less adverse than Category A). In view of this, a Comprehensive Project Report for the proposed construction of a laboratory and ancillary facilities has been prepared.

This Project Report gives the findings of the Environmental and Social Impact Assessment Study (ESIAs) undertaken as an integral part of the design process. The Project highlights salient social and environmental issues associated with the design, construction, and operational aspects of the

construction of a laboratory and administration block project. The World Bank through the Water and Sanitation Development Project (WSDP) in Garissa County will fund the project.

E.2 Project Description

The project is focused on the construction of a Biosafety Level 1 (BSL 1) Laboratory. The actual design components of the laboratory shall have the following minimum standards: -

- The floors and the walls of the building shall be constructed from materials that are easy to clean, impervious and resistant to corrosion by chemicals.
- Sample collection and diagnostic equipment and facilities.
- Provide personnel with protective clothing and equipment for use only within the laboratory.
- Competent staff in specialization.
- Provide warning notices for containment area indicating the type of hazard, the name and telephone number(s) of the person(s) responsible.
- Have laboratory alarm system, emergency lighting, firefighting equipment and first aid kit.
- Post emergency protocols within the laboratory advising personnel on procedures to follow in case of emergencies.
- Display standard operating procedures for the laboratory.

E.3 Objectives of the Project Report

The purpose of the Study is to identify environmental and social impacts associated with the proposed Laboratory Project, evaluate the possible positive and negative impacts related to the interventions and propose sustainable mitigation measures. Furthermore, the study aims to implement an appropriate Environmental and Social Monitoring and Management Plan (ESMMP) for the project sustainable development.

E.4 Project Cost

The total project cost under the WSDP program for the proposed Dadaab Laboratory is **KES 59,273,810.25.** The proposed BSL 1 Laboratory in Dadaab construction works will cost **KES 3,276,754.31.**

PROPOSED GAWASCO OFFICE BLOCK AND DADAAB ADMINISTRATION BLOCK & LABORATORY		
		AMOUNT IN KES
PRELIMINARIES		2,170,000.00
BUILDERS WORK FOR GARISSA OFFICE BLOCK		21,680,557.84
ELECTRICAL WORKS FOR GARISSA OFFICE BLOCK		2,352,977.20
MECHANICAL WORKS FOR GARISSA OFFICE BLOCK		1,727,540.00
DADAAB LABORATORY & ADMINISTRATION BUILDING		3,276,754.31
PROVISIONAL SUMS		**15,245,000.00**
BILL TOTAL EXCLUSIVE OF VAT (SUB-TOTAL 1)		**46,452,829.35**

ADD 10% OF SUB-TOTAL 1 FOR CONTIGENCY		**4,645,282.94**
BILL TOTAL INCLUDING CONTINGENCIES (SUB-TOTAL 2)		**51,098,112.29**
ADD 16% VAT (16%* SUB-TOTAL 2)		8,175,697.97
GRAND TOTAL INCLUSIVE OF VAT CARRIED TO FORM OF TENDER		**59,273,810.25**

E.5 Scope of the Project Report

The Project Report has been prepared in line with the Environmental and Social Impact Assessment (ESIA) Regulation, as described under the Legal Notice 101 of June 2003, the Environmental Management and Coordination Act (EMCA), revised in 2015 and with the World Bank Safeguard Policies that are funding the project. The Study Process leading to this Project Report was further designed to address client expectations as stipulated in the Terms of Reference (ToR).

E.6 Study Approach and Methodology

Quantitative and qualitative methodologies were applied in the collection of data both at the office and in the field. Desk-top review of the project documents such as the Design of Dadaab Host Community Water Masterplan Report, Feasibility Report, field visit reports, and project concepts prepared by the proponent was done. A screening and scoping exercise was done in the field, physical inspection of the proposed site and the surrounding areas, interviews to key informants, questionnaires administration to community members which yielded primary data for preparation of the report. The Environmental and Social Monitoring and Management Plan (ESMMP) comprising the impacts mitigation plan is then developed in this report to guide environmental management during all phases of project development.

E.7 Policy, Legal and Regulatory Framework:

This Project Report has been developed to ensure that the proposed laboratory project conforms to national policy aspirations towards securing sustainable development. Specifically, this Report is written in compliance with requirements of the Environmental Management and Coordination Act (EMCA), 2015 and the National Constitution. Section 58 of EMCA requires that all development proposed in Kenya are subjected to environmental assessment in line with the Second Schedule (of EMCA) and the Legal Notice 101 (Regulations for Environmental Assessment and Audit) of June 2003. The entire Study process has been designed to conform to the regulatory framework stipulated by the National Environmental Management Authority (NEMA) that will review and grant the environmental license to the development of this report. The project is further guided by the World Bank Environmental and Social Safeguard Policies such as Operational Policy (OP) 4.01: Environmental Assessment, 2001, The World Bank Operational Policy/Bank Procedures Indigenous Peoples (OP/BP 4.10), Physical Cultural Resources (OP 4.11), 2006, as well World Bank Policy on Access to Information, 2015.

E.8 Project Justification and Rationale

The proposed development will involve construction and equipping a Biosafety Level 1 Laboratory in Dadaab with requisite infrastructure. The Garissa Water and Sewerage Company (GAWASCO) abstracts

water form Tana River and boreholes and treats the water for supplying to the residents of Garissa County. Water from these sources is generally unsafe and as such it is treated by GAWASCO and at the household level by use of aqua tabs, water guard and other chlorine-based purifiers supplied by the relevant government departments. Dadaab Municipality source their water from the Merti Aquifer the only permanent water resource within the region. For the supply of the water, the community and other stakeholders have drilled boreholes, shallow wells, water pans that majority of the community use as their main sources of water. Other areas of the municipality rely on shallow wells, boreholes, and water pans. The consumption of untreated water from the water source is likely to cause water related illnesses, as such, the proposed laboratory is a support for water and sanitation infrastructure investments and services in the County. The laboratory is a serious necessity to the Dadaab Municipality and Garissa County at large for testing the presence of disease-causing organisms in the GAWASCO Water Supply System. The proposed laboratory is also a support for water and sanitation infrastructure investments and services in the County. In addition, like in any project financed by, or with financial participation of, the World Bank, the environmental and social safeguards as defined in the Bank's Operational Procedures (OPs) will be respected for the purposes of this project implementation which includes environmental assessment.

E.9 Stakeholder Engagement

Listening to stakeholder concerns and feedback is a valuable source of information that can improve project design and outcomes and help in identifying any impacts.

An initial consultation meeting was held in the month of September 2020 at Dadaab Chief's Camp. Residents were notified regarding the meeting by the local administration in collaboration with the county representatives. Another stakeholder meeting was held on May 17, 2024, at Dadaab Municipality Offices where the following participants were present

Table E9.1: Public participation meetings

Meeting – September 2020 Venue- Dadaab Chief's Camp	
List of participants	**Number**
Male	70
Female	20
Total participants	90
Meeting – May 17,2024 Venue- Dadaab Chief's Camp	
List of participants	**Number**
Male	16
Female	2
Total participants	**18**
Age of the participants- Meeting – May 17,2024 Venue- Dadaab Chief's Camp	

Age	Number
18-35	3
36-50	6
51-64	7
65 and above	2
Total	**18**

E.10 Impacts and Mitigation Measures

The impacts assessed cover the direct effects and any indirect, positive, and negative effects of the development during construction, operation and in some cases possible decommissioning. The likely significance of the impact is based in the identification and prediction of the magnitude of any impact caused by the project on (i) a receptor (e.g. human beings, community facilities, etc.), or (ii) an environmental resource (elements of the existing natural or built environment), or on (iii) any process which is essential, or of value, to the functioning of human or natural systems, and (iv) the identification of the importance (and/or sensitivity) of that receptor/environmental resource/process. For all impacts, appropriate mitigation measures have been provided for, and contractors will be required to enforce them. All potential impacts in the environment have been carefully studied, no matter if they present positive or negative impact to the environment. Activities of the project are divided into the following phases.

- *Pre-construction phase:* During this phase, environmental impacts may be mainly concentrated in the working area and might be a result of preparation works (like removal of topsoil, some tree species will be cut and minor earthworks). These activities might cause a limited local air pollution and small pollution of the soil. In this regard certain measures will be proposed to reduce this pollution.
- *Construction phase:* There are also in this phase certain environmental effects that are strictly concentrated with working area. Construction phase may result in land degradation, creation of waste leftover from construction materials, local air pollution, leakages of polluted waters because of certain processes, as well as with requirements toward safety at work, etc. For prevention of all these effects, a set of measures will be proposed.
- *Operation phase:* Operation phase is the one when more effects on the environment are to be expected. Key aspect during the most sensitive phase of operation is the generation of hazardous waste, pollution of water discharged the potential for air pollution and risk of transmission of infections. For all these issues mitigation measures will be proposed to minimize these effects.

E.11 Environmental and Social Management and Monitoring Plan (ESMMP)

An Environmental and Social Management and Monitoring Plan (ESMMP) has been developed whose pursuit can greatly improve the overall net effect of the project. This Report observes that the bulk of

adverse impacts will manifest at the Construction stage in which case, the core effort in mitigation will be concentrated in the contract for construction. The contract for construction should bear clauses binding the contractor to implement impact mitigation as part of the civil works.

E.12 Conclusion

In conclusion, the proposed Biosafety Level 1 Laboratory project is likely to have both positive and negative impacts. Negative impacts can be mitigated during project construction and operation by strict adherence to Environmental Health and Safety (EHS) and Environmental and Social Management Monitoring Plan (ESMMP).

The findings of the Environmental and Social Impact Assessment (ESIA) establishes that:

- The proposed project will elicit positive impacts on the socio-economic environment of the area.
- The project activities are likely to cause risks that have low-medium environmental and social impacts. The risks identified include but not limited to risk of accidents, waste generation, emission of dust, and increase in noise, social impacts such as GBV, and labour influxes amongst others. However, mitigation measures have been proposed in this ESIA report.
- The study has proposed several measures to reduce negative impacts including amelioration of social negative impacts, noise abatement, waste management, reduction of visual intrusion, reduction of soil erosion, prevention of accidents and health hazards.
- Monitoring has been identified as an important process in the protection of environment of the project area since it will reveal changes and trends brought about mainly by construction activities.

E.13 Recommendation

- Necessary permits should be issued by the licensing authority so that the work can commence.
- The proponent needs to support the implementation of environmental management (including mitigation plan and monitoring) to protect the environment of the project area from the negative impacts of the implementation.
- The Client and Contractor should rehabilitate all sites that are used for construction activities such as sites for storage of materials and any access that may be established during the construction phase.
- Clearance and disturbance of vegetation should be restricted within the defined road reserve.
- Environmental, Social, Health and Safety requirements should be included in the bidding documents.
- The Contractor will be required to prepare a Construction Environment & Social Management Plan (CESMP) which shall be approved by the proponent before the beginning of works. Within the C-ESMP suite, the following instruments should be prepared:

i. Health and Safety Management Plan.
ii. Labour, Influx and Local Recruitment Management Plan.
iii. Spoil Management Plan.
iv. Emergency Response Plan.
v. A Gender Responsive Grievance Redress Management Plan for Internal and external grievances.
vi. Child Protection Strategy.
vii. Waste Management Plan.

- The proponent should develop a waste management plan during the operation of the facility.
- The proponent needs to support the implementation of environmental management (including mitigation plan and monitoring) to project the environment of the project area from the negative impacts of the implementation.

Based on the above and taking cognizance of the fact that the proponent has proved financially and environmentally credible, it is our recommendation that the project be allowed to go on provided the mitigation measures outlined in this report are adhered to and the Environmental and Social Management Plan (ESMP) is implemented to the letter.

CHAPTER 1: INTRODUCTION

1.1. Project Background

The World Bank conceived and has financed the project of intervention into the water supply to the host communities under the Water and Sanitation Development Program (WSDP). The development objective of Water and Sanitation Development Project is to improve water supply and sanitation services in select coastal and north-eastern regions in Kenya.

This project has four components.

1. **The first component, Rehabilitation and expansion of urban water supply and sanitation services in the coastal region.** It has the following subcomponents:
   I. Support to coastal counties; and
   II. Support to the coast bulk water services provider.
2. **The second component is Expansion of water supply and sanitation services in underserved north-eastern counties**. It aims to finance a program of activities designed to improve water supply and sanitation services in the north-eastern counties, such as Wajir town in Wajir County and the Dadaab refugee camp host communities in Garissa County.
3. **The third component, national performance-based financing.** It includes the following two subcomponents:
   I. Support for water and sanitation infrastructure investments and services; and
   II. Technical assistance for national performance-based financing.

Figure 1-1: Garissa Location

4. **The fourth component, Project management, finance a program of activities designed to strengthen the capacity of the Recipient for project management, implementation and coordination, and Monitoring and Evaluation (M and E).**

The Environmental Management and Coordination (Impact Assessment and Audit) Regulations, 2019 stipulates that either Comprehensive or Summary Environmental and social Impact Assessment (ESIA) Project Reports should be prepared for low and medium risk projects listed in the Second Schedule. The construction of the laboratory in Dadaab falls in the Category II of Medium Risk Projects under the Environmental Management and Coordination Act (Amendment), 2019. In addition, as a World Bank funded project, OP 4.01 was considered where the project falls under Category B (Impacts are less

adverse than Category A). In view of this, a Comprehensive Project Report for the proposed construction of a laboratory and ancillary facilities has been prepared.

This Project Report gives the findings of the Environmental and Social Impact Assessment Study (ESIAs) undertaken as an integral part of the design process. The Project highlights salient social and environmental issues associated with the design, construction, and operational aspects of the construction of a laboratory and administration block project. The World Bank through the Water and Sanitation Development Project (WSDP) in Garissa County will fund the project. The infrastructural support by the Water and Sanitation Development Program was formulated to address the damages and losses sustained by the population, especially the poor and vulnerable communities of the arid and semi-arid lands (ASALs).

1.2. Project Rationale

The proposed development will involve construction and equipping a Biosafety Level 1 Laboratory in Dadaab with requisite infrastructure. The Garissa Water and Sewerage Company (GAWASCO) abstracts water form Tana River and boreholes and treats the water for supplying to the residents of Garissa County. Water from these sources is generally unsafe and as such it is treated by GAWASCO and at the household level by use of aqua tabs, water guard and other chlorine-based purifiers supplied by the relevant government departments. Dadaab Municipality source their water from the Merti Aquifer the only permanent water resource within the region. For the supply of the water, the community and other stakeholders have drilled boreholes, shallow wells, water pans that majority of the community use as their main sources of water. Other areas of the municipality rely on shallow wells, boreholes, and water pans. The consumption of untreated water from the water source is likely to cause water related illnesses, as such, the proposed laboratory is a support for water and sanitation infrastructure investments and services in the County. The laboratory is a serious necessity to the Dadaab Municipality and Garissa County at large for testing the presence of disease-causing organisms in the GAWASCO Water Supply System. The proposed laboratory is also a support for water and sanitation infrastructure investments and services in the County. In addition, like in any project financed by, or with financial participation of, the World Bank, the environmental and social safeguards as defined in the Bank's Operational Procedures (OPs) will be respected for the purposes of this project implementation which includes environmental assessment.

1.3. Objectives of the Environmental Social Impact Assessment (ESIA)

1.3.1 General Objective

The main legislation that governs environmental management in Kenya is the Environmental Management & Coordination (Amended) Act of 2015 typically referred to as EMCA. EMCA calls for Environmental Impact Assessment (EIA) (under Section 58) to guide the implementation of environmentally sound decisions and empowers stakeholders to participate in the sustainable management of natural resources. Part V from Sections 42 – 57 deals with Protection and Conservation

of the Environment while Part VI deals with Integrated Environmental Impact Assessment. Projects likely to cause environmental impacts require an environmental and social impact assessment study to be carried out.

The proposed interventions require preparation of a comprehensive environmental and social impact assessment report. The key purpose of the ESIA report is to ensure that the key environmental and social issues associated with the project are identified early enough so that the necessary mitigation measures are noted and integrated in the final project design. This CPR is part of the NEMA requirement and is expected to assist NEMA in decision making concerning the project licensing.

1.3.2 Specific Objectives of ESIA Investigations

This Environmental & Social Impact Assessment (ESIA) is expected to achieve the following objectives:

i. To present existing environmental, social, and cultural setting of the target project area.

ii. To identify potential environmental and social impacts (direct and indirect), including opportunities for enhancement; this includes the cumulative impact of the proposed project and other developments which are anticipated.

iii. To generate feasible alternative investments, sites, technologies, and designs.

iv. To provide preventive, mitigating, and compensatory measures.

v. To provide detailed results of the public consultation.

vi. To prepare an Environmental and Social Management and monitoring Plan to mitigate the identified impacts to ensure sustainability of the proposed projects; and

vii. To recommend cost effective measures to be implemented to mitigate against the expected impacts.

1.4. Scope of the Assessment

The scope of the assessment covered construction works of the proposed Biosafety Level 1 Laboratory development which included ground preparation, masonry, and installation of service lines as well as the utilities required by the client. The output of this work was a comprehensive Environmental and Social Impact Assessment project report for the purposes of applying for an EIA licence. The scope of this Environmental and Social Impact Assessment, therefore, covered:

- The baseline environmental conditions of the area,
- Description of the proposed project,
- Provisions of the relevant environmental laws,
- Identification and discuss of any adverse impacts to the environment anticipated from the proposed project,
- Appropriate mitigation measures,

- Provision of an environmental and social management plan outline.

1.5. Project Objectives

The development objective of Water and Sanitation Development Project is to improve water supply and sanitation services in select coastal and north-eastern regions in Kenya. This project has four components.

1. The first component, Rehabilitation and expansion of urban water supply and sanitation services in the coastal region, has the following subcomponents:
   (i) Support to coastal counties; and
   (ii) Support to the coast bulk water services provider.
2. The second component is Expansion of water supply and sanitation services in underserved north-eastern counties. It aims to finance a program of activities designed to improve water supply and sanitation services in the north-eastern counties, such as Wajir town in Wajir County and the Dadaab refugee camp host communities in Garissa County.
3. The third component, National performance-based financing, has the following two subcomponents:
   (i) Support for water and sanitation infrastructure investments and services; and
   (ii) Technical assistance for national performance-based financing.
4. The fourth component, Project management, finance a program of activities designed to strengthen the capacity of the Recipient for project management, implementation and co-ordination, and Monitoring and Evaluation (M and E).

1.6. ESIA Approach and Methodology

The ESIA was carried out in line with the provisions of the Environmental Management and Coordination 2015 and the Environmental (Impact Assessment and Audit) Regulations 2003 amended in 2019. An Environmental and Social Management Plan comprising of an impact mitigation plan and modalities for monitoring and evaluation was then developed to guide environmental management during all phases of project development. The assessment involved the following:

1.6.1 Literature Review

The Consultant reviewed literature related to the proposed project and the project area. These included project drawings, and other studies on physiography, geology, hydrogeology, water resources, and socioeconomics of the project area. Legislation, policies, and procedures including Constitution of Kenya, World Bank Operation Safeguards, County Integrated Development Plan, Kenya National Bureau

of Statistics (KNBS), such as the Design of Dadaab Host Community Water Masterplan Report, Feasibility Report, field visit reports, and project concepts prepared by the proponent was done.

1.6.2 Environmental and Social Screening

Screening process was undertaken to decide whether the proposed laboratory in Dadaab needed to be subjected to an ESIA study or not. The Environmental Management and Coordination Act (EMCA) 2015 specifies the projects for which should be subjected to an Environmental and Impact Assessment (EIA) before commencement of project activities. In this schedule, the construction of the laboratory is classified under low-risk projects requiring preparation of ESIA Summary Report consisting of the likely environmental effects before implementation.

1.6.3 Environmental and Social Scoping

Scoping process involved the identification of significant environmental and social issues associated with the proposed works. The impacts of the proposed project were assessed through project site visits and the following.

- Evaluation of the location, extent of the water connections and the current land use of the affected area.
- Evaluation of the design and proposed construction activities, materials, and methodology.
- One on one interviews with key stakeholders and proposed project beneficiaries were applied in determining the location of available public land.
- Discussion with the area residents on the potential impacts related to project implementation activities and corresponding mitigation measures.

1.6.4 Baseline Data Collection

Baseline data were collected on the proposed project site and the area residents. The data collected was on aspects such as topography, local flora and fauna, soils and geology, socioeconomics, existing and past activities including human settlements, local surface and groundwater resources, ambient air quality and noise levels (qualitative), waste management practices, and natural resources and cultural heritage aspects of the project areas.

1.6.5 Identification, Prediction and Determination of Environmental Impacts

A systematic approach was used to rank identified impacts according to their significance determined by consideration of project activity **event magnitude** and **receptor sensitivity**. The expected significance of environmental impacts was assessed considering:

- **Extent**: An area of influence covered by the impact. In this sense, if the action produces a much-localized effect within the space, it is considered that the impact is low (1). If, however, the effect does not support a precise location within the project environment, having a pervasive influence beyond the project footprint, the impact shall be at location level (3) or could be County (5).
- **Timing:** Refers to the moment of occurrence, the time lag between the onset of action and effect on the appearance of the corresponding factor. We consider five categories according to this time is zero, up to 1 year (short term), or more than two years, which are called respectively medium term (3), long-term (4), and permanent (5).
- **Intensity:** refers to the degree of impact on the factor, in the specific area in which it operates, ranked from low (1) to high (5).
- **Probability:** Refers to the likelihood of the impact occurring during the project implementation, this is also ranked as Probable (1) to highly probable.

Receptor Sensitivity determined by:

- **Presence** – whether biological species present are unique, threatened, protected or not vulnerable and are present during a period of high sensitivity (e.g. breeding, spawning, or nesting). For human receptors, whether they are permanently present to uncommon in impact and for physical features whether those present are highly valued or of limited or no value. For physical receptors/features, whether they are national or international value (e.g. state protected monument), local or regional value and is sensitive to disturbance or none of the above; and
- **Resilience** – how vulnerable people and/or species and/or features are to the change or disturbance associated with the environmental interaction with reference to existing baseline conditions and trends (such as trends in ecological abundance/diversity/status, ambient air quality etc.) and their capacity to absorb or adapt to the change. For physical receptors/features, highly vulnerable, undergoes moderate but sustainable change which stabilizes under constant presence of impact source or unaffected or marginally affected.

1.7. Public Participation

The WSDP has worked with community stakeholders and appropriate authorities throughout the process of designing the laboratory proposal.

GAWASCO has by consensus agreed that there is need to construct adequate offices and a laboratory in order to realize its full potential. The consultants conducted free, prior informed consultation with all groups within the community. These included the authorities in Garissa County. Diverse approaches were applied in stakeholder engagement as follows: -

1.7.1 Key Informant Interviews

Key informants to the Study especially stakeholders in the project area and County Government were approached and met in respective offices where they were engaged on issues of interest to respective sectors. The aim of the consultation was to inform (disclose) the public or the community about the proposed project, consolidate their views, opinion, worries, values, and aspirations in respect to the project.

1.7.2 Field work approach

The field work carried out was separated into three phases. This was to allow for systematic approach to predict the potential impacts and mitigation measures the phases included:

- Pre survey visit and desktop study.
- Focused group discussions
- Questionnaire administration

Table 1-1: Public participation meetings

Meeting – September 2020 Venue- Dadaab Chief's Camp	
List of participants	**Number**
Male	70
Female	20
Total participants	90
Meeting – May 17,2024 Venue- Dadaab Chief's Camp	
List of participants	**Number**
Male	16
Female	2
Total participants	**18**
Age of the participants- Meeting – May 17,2024 Venue- Dadaab Chief's Camp	
Age	**Number**
18-35	3
36-50	6
51-64	7
65 and above	2
Total	**18**

1.8. Land Ownership

The construction of the proposed laboratory will be carried out in an open public space of land belonging to the County Government of Garissa County. The construction works will be carried out within Dadaab

Municipality office premises. A consent letter from the senior chief was written and has been attached in annex 4 of this report.

CHAPTER 2: DESCRIPTION OF THE PROJECT

2.1 Introduction

GAWASCO mission is to facilitate and improve equitable access to clean water and sustainable management of water resources for County development. Its vision is to be a regional leader in the management and development of sustainable water resource environment in which clean and safe water is adequate, reliable, and accessible by all. The proposed development will involve construction and equipping a Biosafety Level 1 Laboratory in Dadaab with requisite infrastructure. The Garissa Water and Sewerage Company (GAWASCO) abstracts water form Tana River and boreholes and treats the water for supplying to the residents of Garissa County. Water from these sources is generally unsafe and as such it is treated by GAWASCO and at the household level by use of aqua tabs, water guard and other chlorine-based purifiers supplied by the relevant government departments. Dadaab Municipality source their water from the Merti Aquifer the only permanent water resource within the region. For the supply of the water, the community and other stakeholders have drilled boreholes, shallow wells, water pans that majority of the community use as their main sources of water. Other areas of the municipality rely on shallow wells, boreholes, and water pans. The consumption of untreated water from the water source is likely to cause water related illnesses, as such, the proposed laboratory is a support for water and sanitation infrastructure investments and services in the County. The laboratory is a serious necessity to the Dadaab Municipality and Garissa County at large for testing the presence of disease-causing organisms in the GAWASCO Water Supply System.

2.2 Location and Size of the Project

The construction of the proposed laboratory will be carried out in an open public space of land belonging to the County Government of Garissa County. The construction works will be carried out within Dadaab Municipality office premises. A consent letter from the senior chief was written and has been attached in annex 4 of this report.

2.3 Expected Project Output

The main outputs will include the availability of adequate and appropriate infrastructure for GAWASCO to enhance its mission and vision of facilitating and improving equitable access to clean water and sustainable management of water resources for the municipality and County development.

2.4 Construction of the BSL 1 Laboratory

In general, the design of the project will tend to essentially optimise the use of best available technology to prevent or minimize potentially significant environmental impacts associated with the project and to incorporate efficient operational controls together with trained staff, to provide adequate space and ensure high level laboratory technology and environmental performances.

2.4.1 Construction site and area

The construction activities of the BSL 1 laboratory will involve.

- The site will be cleared of grasses, excavate and remove topsoil to a depth of 200 mm;
- Bulk excavation of the site will be carried out according to the engineer's advice.

2.4.2 Facility Description

The project is focused on the construction of a biosafety level 1 laboratory. The laboratory shall have the following minimum standards: -

- The floors and the walls of the building shall be constructed from materials that are easy to clean, impervious and resistant to corrosion by chemicals.
- Sample collection and diagnostic equipment and facilities.
- Provide personnel with protective clothing and equipment for use only within the laboratory.
- Competent staff in specialization.
- Provide warning notices for containment area indicating the type of hazard, the name and telephone number(s) of the person(s) responsible.
- Have laboratory alarm system, emergency lighting, firefighting equipment and first aid kit.
- Post emergency protocols within the laboratory advising personnel on procedures to follow in case of emergencies.
- Display standard operating procedures for the laboratory.
- Bench tops should be impervious to water and resistant to moderate heat, chemicals used, and disinfection solutions. Spaces between benches, cabinets, and equipment would be accessible for cleaning with disinfectants.

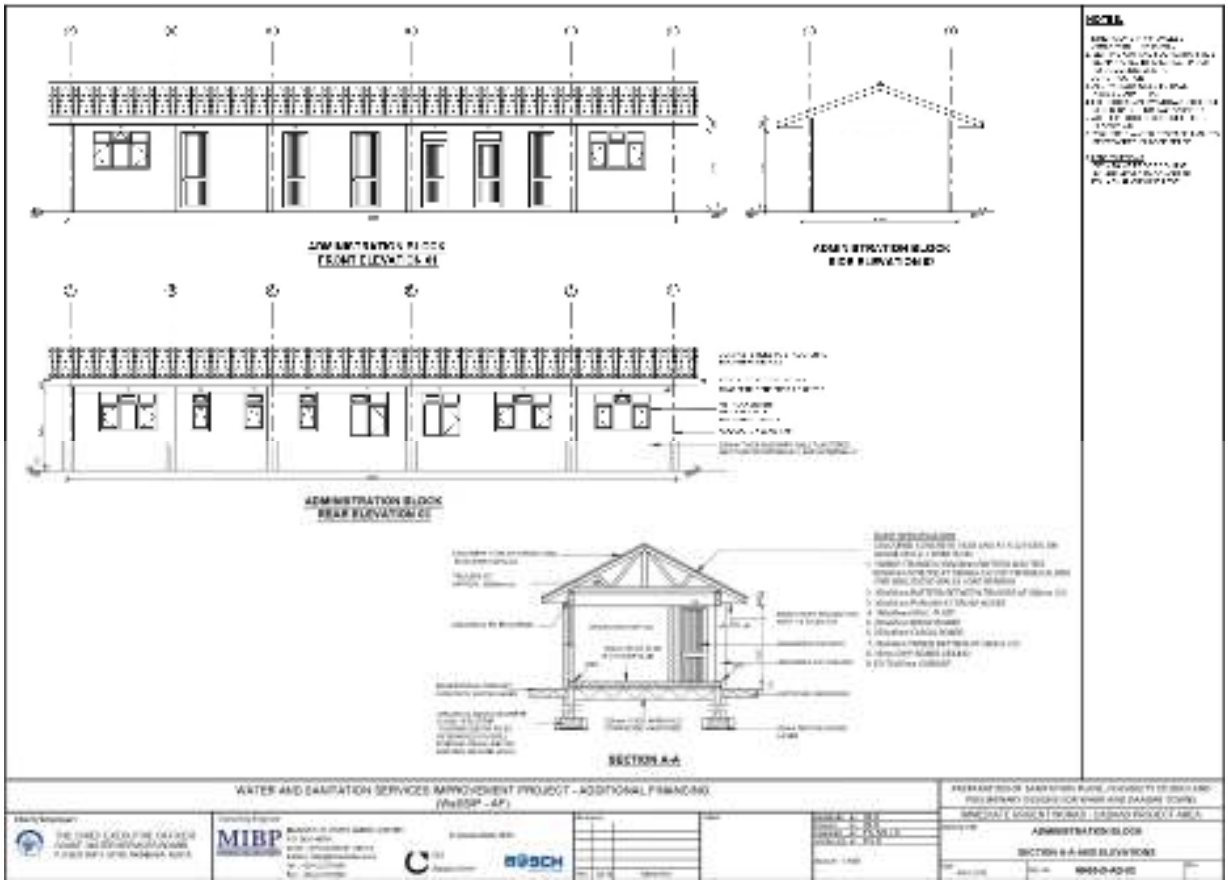


Figure 2-1: View of the Laboratory Layout

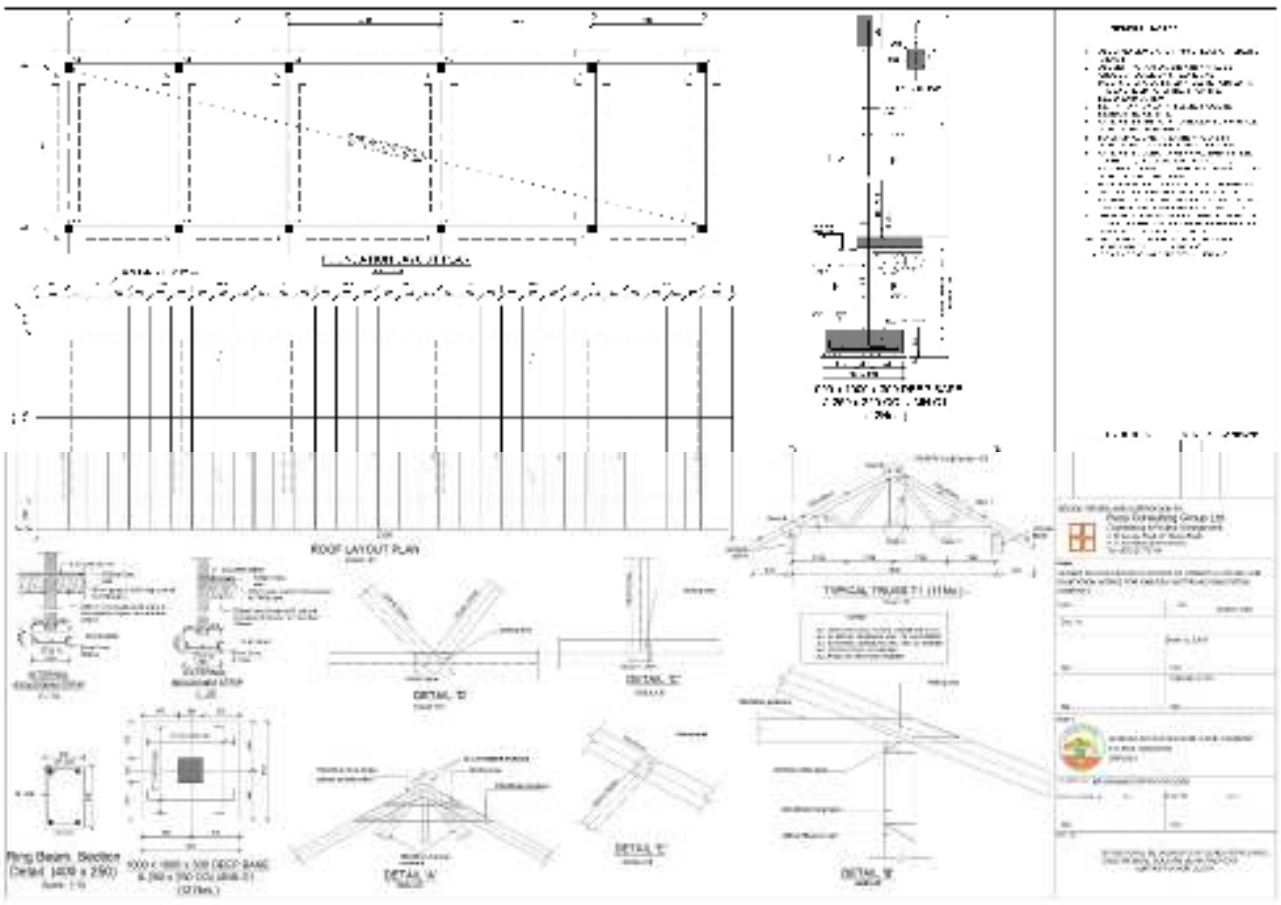


Figure 2-2: Laboratory roof layout.

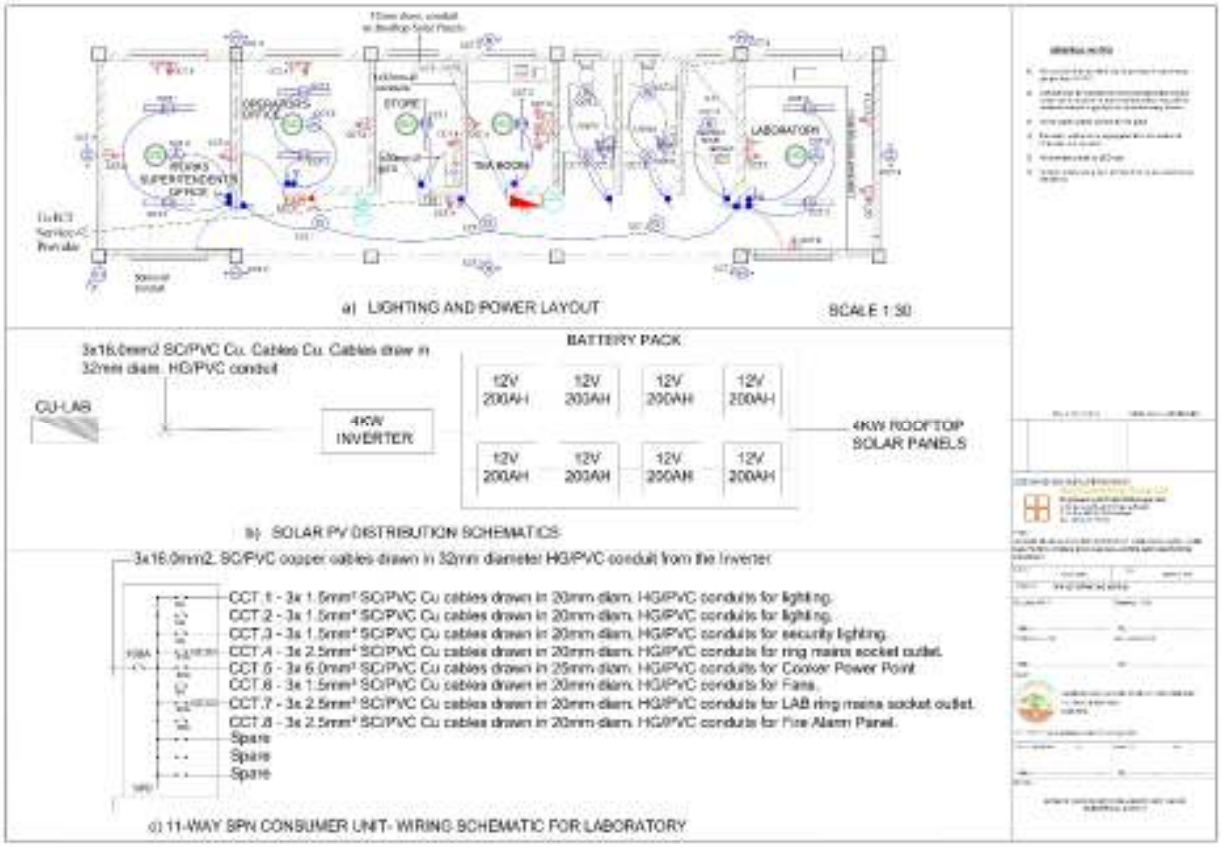


Figure 2-3: Lighting and power layout.

2.5 Description of the project's construction activities

2.5.1 Excavation and foundation works

Excavation will be carried out to prepare the site for construction of foundations, pavements, and drainage systems. This may not involve the use of heavy earthmoving machinery such as tractors and bulldozers as it is a small project. There exist few trees stands of *prosopis juliflora* at site that will be cut before construction can begin. It is advised that the client seek approval from the Kenya Forest Service before the trees are cut. However, the trees to be cut are not listed in the International Union for Conservation of Nature (IUCN) list of endangered tree species.

2.5.2 The Laboratory Building

The description of this project design is based on information obtained from the detailed architectural drawings provided by the Proponent. Among the key features of the site design and layout include: The buildings foundation is to be carried to hard ground bottom. The foundation will be made of 150mm thick concrete floor slab with A142 BRC reinforcement on approved DPM and on a well compacted and consolidated hardcore infill as per structural engineer's details and specifications. Depth of foundation trenches shall be dug to a minimum 600mm below reduced ground level.

2.5.3 Storage of materials

Building materials will be stored on site. Bulky materials such as rough stones, ballast, sand, and steel will be carefully piled on site. To avoid piling large quantities of materials on site, the contractor will order bulky materials such as sand, gravel, and stones in quotas. Materials such as cement, paints and glasses among others will be stored in temporary storage structures built for this purpose.

2.5.4 Masonry, concrete work, and related activities

The construction of the building walls, foundations, floors, pavements, and drainage systems among other components of the project involves a lot of masonry work and related activities. General masonry and related activities include stone shaping, concrete mixing, plastering, slab construction, construction of foundations, and erection of building walls and curing of fresh concrete surfaces. These activities are known to be labour intensive and are supplemented by machinery such as concrete mixers.

2.5.5 Structural steel works

The building will be reinforced with structural steel for stability. Structural steel woks involve steel cutting, welding, and erection.

2.5.6 Roofing works

Roofing activities will include raising the roofing materials such as tiles and structural timber to the roof and fastening the roofing materials to the roof. However, it is recommended that walls should be steel stud framed and the roof construction should consist of metal decking over steel bar joists for ease of decontamination over timber.

2.5.7 Electrical work

Electrical work during construction of the premises will include installation of electrical gadgets and appliances including electrical cables, lighting apparatus, sockets etc. In addition, there will be other activities involving the use of electricity such as welding and metal cutting. In the BoQ, electricals appropriate for laboratory lightings should be considered.

2.5.8 Plumbing

Installation of pipework for water supply and distribution will be carried out within the laboratory and associated facilities. In addition, pipe-work will be done to connect sewage to a septic tank system, and for drainage of storm water from the rooftop into the peripheral storm water drainage system. Plumbing activities will exclusive be PVC plastic cutting, the use of adhesives, metal grinding and wall drilling among others. Location of the eyewash and the sinks should be close to the entrance of the laboratory. Where possible, the taps should be self-closing.

2.6 Description of the Operational Activities

2.6.1. BSL 1 Activities

One distinguishing characteristic of a BSL-3 laboratory, compared to BSL-1 and BSL-2 labs, is the requirement that work with the microorganisms be done within biological safety cabinets or other containment equipment, or by personnel wearing protective clothing (i.e., wrap-around gowns, scrub suits, coveralls, gloves that are changed frequently). Another characteristic is increased restrictions for access to the lab. For example, newer facilities must have double doors, which are sealed around their edges. The first door that connects to the outside of the lab must be fully closed before the door to the BSL-3 lab is opened. Ventilation systems in the BSL-3 lab will be independent from the rest of the building's ventilation system. The air from the laboratory will be exhausted directly to the outside and the exhaust air filtered to remove microorganisms. However, being a BSL 1 laboratory, there will be no special attention to the air flow in the laboratory.

2.6.2. Biosafety Consideration

As mentioned before, biosafety is the application of a combination of administrative controls, containment principles, laboratory practices and procedures, safety equipment, and laboratory facilities to enable laboratory staff to work safely with potentially infectious microorganisms. These will be implemented as follows.

Administrative controls will include:

i. Supervision by an experienced scientist.
ii. Only personnel who are trained, proficient, aware of hazards, follow rules will operate in the Laboratory.
iii. There will be Biosafety and operations manuals.
iv. Emergency plans for spills, accidents, etc.
v. Appropriate facilities and safety equipment

Good Laboratory Practices will entail:

i. Restriction or limited access.
ii. Biohazard warning signs.
iii. Prohibition of eating, drinking, and smoking.
iv. Prohibition of mouth pipetting.
v. Minimization of splashes and aerosols.
vi. Decontamination of work surfaces daily.
vii. Decontamination and disposal of waste appropriately.

2.6.3. Personal Protective Equipment PPEs

The use of laboratory coats, gowns or uniforms with a solid front is required when in the laboratory. Work with certain agents may require that street clothes be removed and dedicated lab clothing be worn. Protective clothing cannot be worn outside of the lab. Splash goggles and face protection must

be used when there is the potential for splashes of microorganisms or other hazardous materials. Personnel who wear contact lenses should always wear safety glasses or other eye protection while in the laboratory. Gloves must be worn as protection from hazardous materials. Two pairs should be worn as appropriate. If latex gloves are used, alternatives should be made available. Gloves must be changed when contaminated, when the integrity has been compromised, or when necessary. Disposable gloves must not be washed or reused. Hands must be washed after removing gloves, and before leaving the laboratory. All protective equipment must be removed before leaving the laboratory. Used disposable PPE should be disposed of with other contaminated waste. Reusable PPE (i.e., goggles) should be appropriately decontaminated before reuse. Reusable laboratory clothing must be decontaminated before being laundered and must be laundered at the University. It must not be taken home. If visibly contaminated, laundry should be placed in a biohazard bag before being placed with other items to go to laundry.

2.6.4. Waste Management

- ***Non-Hazardous Solid waste***

The proponent will provide facilities for handling solid waste generated within the facility. These will include dust bins/skips for temporarily holding waste within the premises before final disposal at the designated dumping site.

- ***Hazardous Solid Wastes***

All wastes generated in the laboratories of the facility (including sample packaging materials, culture materials, petri dishes, PPE, and associated process wastes) would leave the laboratories only after decontamination using the facility's autoclave or after being chemically sterilized.

- ***Liquid Waste***

Sewage generated from the units will be discharged into a dedicated septic tank system, while storm water from the project area will be channelled into the nearest storm water drainage system. Sanitary liquid waste also would be generated from the proposed BSL-1 facility. Sanitary waste would be generated from research activities and from toilets, showers, and sinks in the building bathroom facilities. Sinks in the laboratories would also generate sanitary waste. Soluble or liquid waste materials generated from laboratory operations can be disposed in the laboratory sinks after first being treated by autoclaving or with disinfectants.

Potentially contaminated waste that will be generated at the proposed BSL 1 laboratory include liquid wastes from the laboratory. Domestic wastewater is generated from cooking and cleaning operations and sanitary conveniences and discharged into a soak away system. It is recommended that:

- Laboratory liquid waste substances should not be permitted for drain disposal although for small amounts, professional judgement by technicians is required depending on concentration.

- Larger quantities or highly concentrated substances must not be put down the drain but must be disposed of by an approved route possibly a septic tank as these chemicals affect the finally water quality after treatment in the sewers.
- Containers of solvent residues must not be allowed to accumulate in laboratories and fume cupboards; they must be returned to the designated store at frequent intervals, or as soon as full, for disposal.
- Liquids that have a pH less than or equal to 5 or greater or equal to 9 should not be disposed of down the sewer drain.
- Liquids that could result in an explosion, heat generation, or toxic gas release should not be disposed of down the drain.
- Toxic chemicals that are identified as carcinogenic, mutagenic, or teratogenic should not be disposed of down the sewer.
- Heavy metals should never be disposed of down the drain.
- Biological agents must be inactivated by a validated autoclave or disinfectant process before disposal down the sink.
- The management should apply for an Effluent Discharge License (EDL)

It is important for the management to provide labelled waste receptacles and continually enforce segregation of hazardous and non-hazardous wastes and label the respective receptacles in accordance with the EMC (Waste Management) Regulations, 2006.

2.6.5. Cleaning

The proponent will be responsible for ensuring regular washing and cleaning of the pavements, the laboratory block development. Cleaning operations will involve the use of substantial amounts of water, disinfectants, and detergents.

2.6.6. General repairs and maintenance

The laboratory development and associated facilities will be repaired and maintained regularly during the operational phase of the project. Such activities will include repair of building walls and floors, repair and maintenance of electrical gadgets and equipment, repairs of leaking water pipes, painting and replacement of worn-out materials among others.

2.7 Description of the project's decommissioning activities

2.7.1 Demolition works.

Upon decommissioning, the project components including buildings, pavements, drainage systems, septic tank and perimeter fence will be demolished. This will produce a lot of solid waste, which will be reused for other construction works or if not reusable, disposed of appropriately by a licensed waste disposal company.

2.7.2 Dismantling of equipment and fixtures

All equipment including electrical installations, furniture, finishing fixtures partitions, pipework and sinks among others will be dismantled and removed from the site on decommissioning of the project. Priority will be given to reuse of this equipment in other projects. This will be achieved through resale of the equipment to other building owners or contractors or donation of this equipment to schools, churches and charitable institutions.

2.7.3 Site restoration

Once all the waste resulting from demolition and dismantling works is removed from the site, the site will be restored through replenishment of the topsoil and re-vegetation using indigenous plant species.

2.8 Project Cost

The total project cost under the WSDP program for the proposed Dadaab Laboratory is **KES 59,273,810.25.** The proposed BSL 1 Laboratory in Dadaab construction works will cost **KES 3,276,754.31.**

Table 2-1: Project Cost

PROPOSED GAWASCO OFFICE BLOCK AND DADAAB ADMINISTRATION BLOCK & LABORATORY		
		AMOUNT IN KES
PRELIMINARIES		2,170,000.00
BUILDERS WORK FOR GARISSA OFFICE BLOCK		21,680,557.84
ELECTRICAL WORKS FOR GARISSA OFFICE BLOCK		2,352,977.20
MECHANICAL WORKS FOR GARISSA OFFICE BLOCK		1,727,540.00
DADAAB LABORATORY & ADMINISTRATION BUILDING		3,276,754.31
PROVISIONAL SUMS		**15,245,000.00**
BILL TOTAL EXCLUSIVE OF VAT (SUB-TOTAL 1)		**46,452,829.35**
ADD 10% OF SUB-TOTAL 1 FOR CONTIGENCY		**4,645,282.94**
BILL TOTAL INCLUDING CONTINGENCIES (SUB-TOTAL 2)		**51,098,112.29**
ADD 16% VAT (16%* SUB-TOTAL 2)		8,175,697.97
GRAND TOTAL INCLUSIVE OF VAT CARRIED TO FORM OF TENDER		**59,273,810.25**

CHAPTER 3: ANALYSIS OF PROJECT ALTERNATIVES

This section analyses the project alternatives in terms of technology scale and waste management options.

3.1 No Project alternative

The No Project Alternative option in respect to the proposed project implies that the project achievements be reversed. This alternative would have no BSL-1 laboratory constructed at Dadaab, Municipality premises, implying that the status quo will remain the same. In addition, the anticipated environmental and social impacts resulting from construction, and occupation of the laboratory facility, as proposed, would not occur and be achieved. From the analysis above, it becomes apparent that the No Project alternative is not the best alternative to the local people, GAWASCO, and the Government of Kenya.

3.2 Relocation Alternative

This option is based on the criteria that the proposed development is to be sited in public land. The proposed projects will be implemented on public land at the Dadaab Municipality premises. There are no physical, biological, cultural, and socio-economic features of special concern at the proposed sites. The selected site will lead to the increased environmental, socioeconomic, and cultural development. The selected site also avoid, otherwise minimizes as much as the displacement of people (involuntary resettlement).

If this option is selected the proponent is required to look for an alternative site either within or outside the zone which the proponent doesn't have. The process of looking for alternative sites will also be time consuming and may result in the process of project planning and designing starting again.

3.3 The Proposed Development Alternative

The laboratory will provide easy access to laboratory services in that once samples are collected; the turnaround time will be reduced unlike currently where all samples are not received in due time. The new office block will provide conducive environment for staff working at GAWASCO that has positive impact on their productivity.

3.4 Analysis of Alternative Construction Materials and Technology

The proposed project will be constructed using modern, locally, and internationally accepted materials to achieve public health, safety, security, and environmental aesthetic requirements. Equipment that saves energy and water will be given priority without compromising on cost or availability factors. The concrete pillars and walls will be made using locally sourced stones, cement, sand (washed and clean), metal bars and fittings that meet the Kenya Bureau of Standards requirements. Heavy use of timber during construction is discouraged because of destruction of forests. The exotic species would be preferred to indigenous species in the construction where need will arise.

CHAPTER 4: BASELINE INFORMATION

4.1 Introduction

Baseline conditions entail the sum-total of all biophysical, socio-economic, cultural, and geo-physical conditions of the project area. Gathering of baseline data is necessary to meet the following objectives:

- To understand key social, cultural, economic, and political conditions in areas potentially affected by the proposed project.
- To provide data to predict, explain and substantiate possible impacts.
- To understand the expectations and concerns of a range of stakeholders on the proposed development.
- To inform the development of mitigation measures; and
- To benchmark future socio-economic changes/impacts and assess the effectiveness of mitigation measures.

4.2 Overview of Garissa County

Garissa County is one of the 47 counties in Kenya. The County has ten sub-counties namely: Garissa Township, Ijara, Lagdera, Balambala, Bura East, Fafi, Hulugho, Bothai, Liboi and Dadaab. However, three other Sub Counties have been Gazzetted but not operationalized (Shanta Abaq, Sankuri and Benane). The County Headquarter is at Garissa Township. The County is a member of Frontier Counties Development Council (FCDC) block which have been established through mutual understanding between the various counties with historical, political, and economic similarities. Garissa County is cosmopolitan with ethnic Somalis; Authaq, Awlyahan and Samawadal (Abdalla and Rer Mohamed) as the dominant clan; Maqabul, Mohamed Zubeir, Gare, Arabs, Borana and communities from the other parts of the country form the minority. The marginalized communities at the county are the Boni and wailwana. The County also hosts hundreds of thousands of Somali refugees in its five refugees' camps namely IFO, IFO 2, Dagahaley, Kambios and Hagadera camp.

Garissa County is one of the three counties in the North-Eastern region of Kenya. It covers an area of 44,753 Km and lies between latitude 0.1112120 S and longitude 40.3142430E. The county borders the Republic of Somalia to the East, Lamu County to the South, Tana River County to the West, Isiolo County to the Northwest and Wajir County to the North.

Figure 4-1: Garissa Sub-counties

4.3 Description of the Project Area Dadaab

The project is in Bulla/Village DaiDai, Dadaab Sub-location, Dadaab Location, in Garissa County. The proposed laboratory construction is within the Dadaab Municipality premises and is defined by the GPS Coordinates at UTM 37N 645585E 4299N/ Deg Min Secs 0°2'20.015''N 40°18'29.628''E. Access to the site is through the Municipality existing offices.

Figure 4-2: Project Location

4.4 Environmental Characteristics of the Project Area

4.4.1 Climate

Rainfall in the area is limited and is characterized by large temporal and spatial variability. Most of the rainfall occurs in two rainy seasons during October-November and February-March. The potential evaporation in the area is large, up to 2600 mm a year, and surpasses the rainfall most months of the year. However, rainfall events in the area are known to have a strong convective character, resulting in very local rainfall with a high intensity. As such, runoff may occur depending on the antecedent state of the system.

Although perennial (permanent) surface water is important for the water supply in the study area, it is outweighed by ephemeral (seasonal) sources. There are two perennial water courses in the area underlain by the aquifer: the Rivers Tana and Ewaso Ng'iro. The Ewaso Ng'iro is relevant for the groundwater system underlying Habaswein and the surrounding areas. The Ewaso Ng'iro River drains the northern and western slopes of Mount Kenya and the NE slopes of the Aberdares. At Archer's Post (north of Isiolo). After the Ewaso Ng'iro River becomes ephemeral, it is referred to as the Lagh Dera. The ephemeral river floods irregularly. In the 1950's the Lagh Dera was known to flood the Lorian Swamps near Habaswein regularly. However, increased water subtractions and changes in climate have caused a now irregular and less frequent flooding of this area. Currently, the swamps have retreated many kilometers upstream, decreasing the perennial swamp size from 150km2 to 39km2. These flood-areas

are commonly referred to as the Lorian Swamps, even though the location has shifted. In most years, the perennial Ewaso Ng'iro becomes ephemeral near the town of Merti. When the rains are poor, the cessation of flow occurs even further upstream. This leaves the downstream inhabitants and livestock largely dependent on groundwater, (Arjen Oord (Msc), 2014).

4.4.2 Climate Change Profile for Garissa County

Garissa County has a relatively hot and dry climate throughout the year. The average temperature is greater than 27°C throughout most of the county. There is a strong south to north gradient of decreasing precipitation some southern parts of the county receiving greater than 1000 mm of precipitation per year, the central part of the county receiving around 500 mm, and the north/western parts of the country consistently receiving less than 250-500 mm. A small pocket of the northwestern part of the county receives less than 250 mm precipitation per year. As such, heat stress, dry spells, and drought are hazards that strongly contribute to agricultural risk in the county, especially in the more northern parts of the county.

The Tana River runs along south-western boarder of the county where flooding along riparian areas is also a risk, especially due to periods of rain upstream in the Tana River. The most extreme weather conditions tend to occur during July-December (second wet season). Historic records of temperature and precipitation in Garissa County indicate increasing variability in heavy precipitations in the second season (particularly in November), compared to the first season (particularly April) since the 1981.

This intense precipitation within Garissa River County can directly contribute to flooding, especially along smaller rivers, and streams, it should be noted that extreme precipitation events in upstream parts of the Tana River outside of the county are more important in causing flooding along the main stem riparian areas of the Tana River (e.g. Muranga County). Moisture stress and dry spells also occur more prominently during the second wet season (approx. 93 days of consecutive moisture stress), being about 20 days longer than in the first we season (approximately 65 consecutive days with moisture stress). However, there has been an increasing trend in moisture stress in the first wet season since 1981, which has not occurred during the second wet season. Climate has already been observed to change slightly in the county. Since 1981, the first wet season has experienced a high (1.5ºC) increase in mean temperature and associated reduction in crop cycle, and a strong tendency for decreasing precipitation on average (on the order of 25% reduction). The combination of increased temperatures and decreased precipitation make for an increase in drought risk. The second wet season experienced a very mild (~0.2°C) increase in temperature, and no change in precipitation. Looking to the future in the years of 2021-2065, both extreme precipitation and prolonged moisture stress are projected to occur, but the changes are different during different seasons. Within 30 years (by the early 2040's) temperature is projected to increase by 1.0ºC, with the first wet season projected to experience even greater changes. And by this time, precipitation is projected to increase by 9% in the first wet season, and 22% in the second wet season. Increased extreme precipitation is projected to occur during the

second season, with the highest single day of precipitation increasing on the order of 25%. The first wet season is projected to experience no change or even a slight decrease in the single day greatest precipitation. The changes are the opposite for future drought stress. The first wet season is projected to experience 15-20 additional consecutive days with moisture stress, whereas the second wet season is projected to experience a decrease of approximately 15 days. Whereas historically the second wet season experienced 25 days longer of consecutive moisture stress, in the future this is projected to be the opposite with the first wet season experiencing longer periods of consecutive dry periods than the first. These projections of future climate change under the two climate scenarios8 —RCP 2.6 and RCP 8.5— show some difference, with the climate change patterns described above being slightly greater with higher greenhouse gas concentrations.

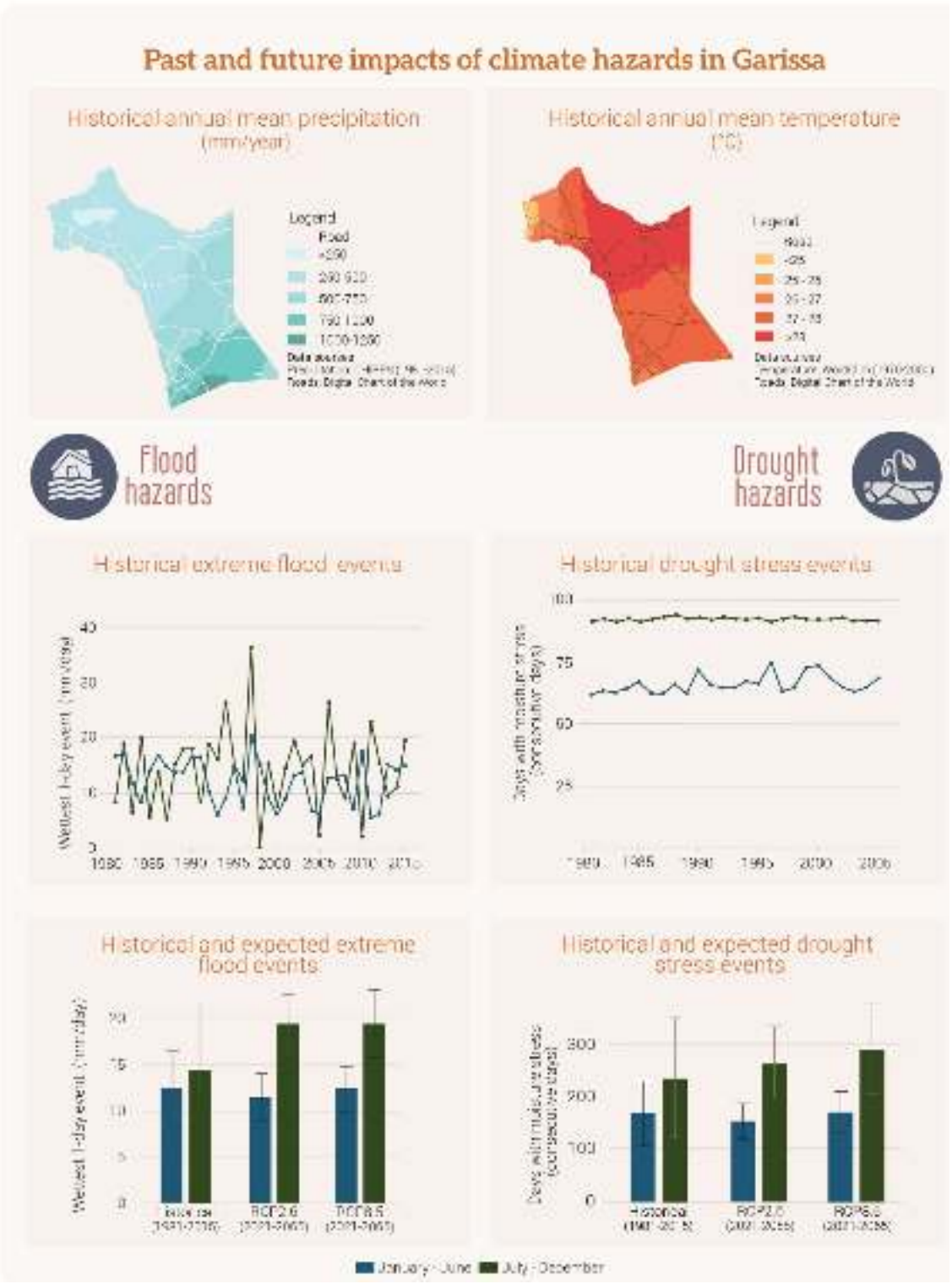


Figure 4-3: historic and future trends of climate change

4.4.3 Soils and Geology

Well-drained sandy soils ranging in color from white to red and silty and clayey, poorly drainable soils which are gray to black in color. At places some of these soils are saline. The gray and black (gray-cotton, black- cotton) soils, where they are not saline, are the most fertile soils in the Sub- County and support the best stands of grass.

Figure 4-4: Type of soil within project area.

4.4.4 Topography

The characteristically flat topography in the area around Dadaab coupled with its location in a flood plain, as well as the relatively low infiltration rate of soils in the area, puts it at major flood risk both in the normal rainy seasons and during particularly heavy downpours.

4.4.5 Flora and Fauna

The proposed laboratory is not expected to interfere with the flora and fauna as the disturbance will be localized to an area that is largely bare of much vegetation save for the few stands of *prosospis juliflora* species. However, some trees may be cut to allow access by the machinery and to create a working space. The contractor is urged to minimize cutting of trees to the extent feasible as they form habitat of both flora and fauna. The area is majorly covered by shrubs and woodland vegetation of Acacia species.

Figure 4-5: Type of vegetation within project area.

4.4.6 Water

The area underlain by the Merti Aquifer comprises a thick and complex sequence of Mesozoic to Quarternary sediments, which overlie metamorphic rocks of the Precambrian Basement System. The aquifer is situated in the Anza Rift, which was formed in the Jurassic period of the Mesozoic era. It runs inland from the coast in north-western direction and links the Lamu embayment of southern Kenya with the South Sudan rifts. This geological setting shapes the hydrogeology in the study area. Groundwater resources Dadaab sub-county include pans, shallow wells, and boreholes. Groundwater occurs in shallow aquifers as well as in deep aquifers in the area. Shallow aquifer can be found in the alluvium beneath and along (ephemeral) riverbeds, where they occur as shallow groundwater bodies. Boreholes that tap into the deeper aquifers have variable yields and water quality (salinity). A large freshwater body is present in what is regarded in most studies as the Merti aquifer, which is one of the largest known aquifers in the region.

4.4.7 Land Use and Land Cover

The communities in Northern Kenya are nomadic livestock keepers with livestock population being in many cases more than the human population. The livestock are free range due to scarce water and grass. Apart from animal husbandry and very minimal farming there is limited/ no other land use. The area also comprises of residential houses and businesses.

4.5 Socio- Economic Characteristics

4.5.1 Culture and Ethnicity

The residents of within the project area are predominantly the Somali tribe specifically the Auliyhan Somalis. The Somali are a Cushitic speaking people. They speak the Somali language and Islam that is the predominant religion in the district largely influences their culture.

4.5.2 Economic Activities

The main economic activity of the residents of the area is livestock rearing. Nomadic pastoralism is the way of life for most members of this community. The main types of livestock kept are: Boran cattle,

Maasai sheep and goats. Trading is also picking up as an economic activity in the area. Nomadic pastoralism has significantly.

4.5.3 Road Infrastructure

The sub-county has an articulate earth murram road surface and sections of gravel surface. The roads are in poor condition and most of them are rendered impassable during rainy season thus curtailing all movement by road in the county. Public transport is very poor, having a few matatus taxis [four-wheel drive-based vehicles] and occasionally buses ply the route.

The roads in Daadab area and its environs are easily accessible during the dry season; much of the roads are gravel roads having a well-articulated road reserve. There is an airstrip in Dadaab Centre managed by the UNHCR. The proposed and now under construction the Lamu port- South Sudan Ethiopia transport (LAPSETT) road corridor project will have the greatest impact on the economic growth of the Northern region with the now ascertained connective northern frontier counties to South Sudan, Ethiopia, Uganda and Lamu inland port. This will trigger huge economic growth in the region.

4.5.4 Other Infrastructure

The telecommunication network for Dadaab town is very good as the key mobile operators [Airtel, Safaricom] are available. The Government through its implementing agency the Rural Electrification Authority has been implementing various rural electrification projects in Northern Kenya this has improved the power distribution in Dadaab Town. However, the interior centres in Dadaab sub-county areas have no power. Such areas use diesel as a source of power for water pump generators.

CHAPTER 5: POLICY, LEGAL AND ADMINISTRATIVE FRAMEWORK

This chapter outlines the policy, legal, regulatory, and institutional framework in Kenya particularly for environmental management, protection, and assessment applicable to the proposed BSL 1 Laboratory. The Project will be subject to laws, regulations, guidelines and standards of the Government of Kenya and international institutions (IFC/World Bank). Note that wherever any of the laws contradict each other, the Environmental Management and Coordination Act (EMCA) prevails.

5.1 Environmental Policy Framework

5.1.1 The Kenya Vision 2030

Kenya Vision 2030 is the country's development programme from 2008 to 2030. It was launched on 10 June 2008 with the aim to help transform Kenya into a newly industrializing, middle-income country with a consistent annual growth of 10 % by 2030. Developed through an all-inclusive and participatory stakeholder consultative process, involving Kenyans from all parts of the country, the Vision is based on three "pillars": Economic, Social, and Political. The 2030 goal for urban areas, to reach “a well-housed population living in an environmentally secure urban environment, will be achieved by bringing basic infrastructure and services namely roads, streetlights, water and sanitation facilities, storm water drains, footpaths, and others. It is likewise important the promotion of environmental conservation and pollution and waste management, through the application of the right economic incentives in development initiatives.

By promoting investment in the priority sectors identified under the Economic Pillar2, Vision 2030 seeks to achieve and sustain annual GDP growth rate at 10% up to 2030 and thereby generating resources required to address other SDGs. This creates the urgent need of investing in both Flagship Projects and requisite infrastructure. The realization of the project is a step towards realizing the Vision 2030.

5.1.2 The National Environment Action Plan (NEAP)

The National Environmental Action Plan (NEAP) is one of the anchor policies that support environmental protection and relevant to this project. The NEAP was a deliberate policy effort to integrate environmental considerations into the Country’s economic and social development. The integration process was to be achieved through a multi-sectoral approach to develop a comprehensive framework to ensure that environmental Management and conservation of natural resources are an integral part of societal decision-making.

Relevance to the proposed project.

The NEAP has indicated how resources within sections of the country should be managed to ensure their sustainable utilization. The project should be implemented and operated based on these guidelines.

5.1.3 National Land Policy

Chapter 2 of the policy is linked to constitutional reforms; regulation of property rights is vested in the government by the Constitution with powers to regulate how private land is used to protect the public interest. The Government exercises these powers through compulsory acquisition and development control. Compulsory acquisition is the power of the State to take over land owned privately for a public purpose. However, the Government must make prompt payment of compensation.

Chapter 4 of the land policy under Environmental Management Principles, the policy provides actions for addressing the environmental problems such as the degradation of natural resources, soil erosion, and pollution. For the management of the urban environment, it provides guidelines to prohibit the discharge of untreated waste into water sources by industries and local authorities; it also recommends for appropriate waste management systems and procedures, including waste and wastewater treatment, reuse, and recycling.

The policy goes further to advocate for environmental assessment and audit as a land management tool to ensure environmental impact assessments and audits are carried out on all land developments that may degrade the environment and take appropriate actions to correct the situation. Public participation has been indicated as key in the monitoring and protection of the environment. Chapter 4 further advocates for the Implementation of the polluter pays principle which ensures that polluters meet the cost of cleaning up the pollution they cause and encourage industries to use cleaner production technologies.

Relevance

The project proponent shall implement the ESMP to ensure that the environment within project area and adjacent areas is not polluted by the subsequent activities during construction and operational phases.

5.1.4 National Gender and Development Policy

The National Gender and Development Policy provide a framework for advancement of women and an approach that would lead to greater efficiency in resource allocation and utilization to ensure empowerment of women. The National Policy on Gender and Development is consistent with the Government's efforts of spurring economic growth and thereby reducing poverty and unemployment, by considering the needs and aspirations of all Kenyan men, women, boys, and girls across economic, social, and cultural lines. The policy is also consistent with the Government's commitment to implementing the National Plan of Action based on the Beijing Platform for Action (PFA). The overall objective of the Gender and Development Policy is to facilitate the mainstreaming of the needs and concerns of men and women in all areas in the development process in the country.

Relevance

This law will be of relevance to the Contractor in ensuring that all genders are given an equal opportunity during recruitment during the construction phase and operation phase of the project.

5.1.5 The National HIV/AIDS Policy

Ensuring that new development projects encourage preventive and responsible behaviour both for the workers involved in such projects and the local people within which projects are taking place as a goal towards curtailing the spread of the disease.

Relevance

The proponent is advised to put in place adequate measures to ensure that implementation of the proposed projects does not heighten the spreads of HIV and AIDS

5.1.6 National Sustainable Waste Management Policy

The National Sustainable Waste Management Policy outlines the benefits of managing waste as a resource in Kenya, including economic, social, and environmental advantages. The policy recognizes that sustainable waste management is critical to delivering on Kenya's constitutional right to a clean and healthy environment, achieving sustainable development goals, and realizing the nation's leadership in the blue economy. The policy aims to establish an enabling regulatory environment that prioritizes waste minimization and contributes to a circular economy. It also supports county governments' mandate to provide sustainable waste management services and provides the framework for coordinated action at the national level. The policy proposes a waste hierarchy that includes reducing waste generation, reusing materials, effective and affordable waste collection, and proper treatment and disposal of residual waste in well-engineered and regulated landfills. The policy also advocates for the creation of green jobs and the formalization of the waste picker sector to improve livelihoods.

5.1.7 National Environment Policy, 2013

Kenya has a National Environment Policy prepared and approved in 2013 by the Ministry of Environment, Water and Natural Resources. Its overall goal is to provide better quality of life in Kenya for present and future generations through sustainable management and use of the environment and natural resources. The policy has nine chapters which provide information on how this goal will be achieved through promoting Environmental Quality Health whereby the most pressing problems include but not limited to water supply and sanitation. The relevant policy statements under this section are three.

i. Improve the management and conservation of water supply sources,

ii. Promote technologies for efficient and safe water use, especially in respect to wastewater use and recycling and

iii. Provide incentives for private sector investment and development of appropriate water and sanitation technologies and infrastructure for waste management.

Relevance

The Project shall implement the Environmental and Social Management and Monitoring Plan (ESMMP) to mitigate the impacts of the resulting impacts during the construction and operational phases of the Project; this will ensure that the sensitive ecosystems are not destabilized by the subsequent Project activities.

5.1.8 National Water Policy

The overall goal of the policy is to guide the achievement of sustainable management, development, and use of water resources in the country. The overall objective of the policy is to provide a framework that is dynamic, innovative, and effective for re-engineering the water sector.

It builds on the successes, challenges, and lessons learnt from the previous policies of 1999, 2012, and the provisions of the Kenya Vision 2030 on water conservation and management. The water policy proposes to mitigate the challenges and threats facing the water sector by ensuring that coordination and accelerated partnerships are mainstreamed in the management and provision of water resources. It also sets the goal of enhancing protection of watersheds and other catchment areas in the country.

The specific objectives related to water provision are:

- To accelerate the delivery of water supply services through progressive realization of the human right to water towards universal access,
- To promote the development of water harvesting and storage infrastructure,
- To strengthen sustainable water resource management in the country, and
- To mainstream climate change considerations and disaster risk reduction through the water sector.

5.1.9 The National Poverty Eradication Plan (NPEP)

The objective of NPEP is to alleviate poverty in rural and urban areas by 50 percent by the year 2015 as well as the capabilities of the poor and vulnerable groups to earn income. It also aims to narrow gender and geographical disparities and a healthy, better educated and more productive population. This plan has been prepared in line with the goals and commitments of the World Summit for the Sustainable Development (WSSD) of 1995.

Relevance to the proposed project.

Since unemployment is among the indicators of poor societies, pursuits to address it build individuals capacity to relieve poverty. The job opportunities anticipated during the project cycle will aid in improving livelihoods for the beneficiaries.

5.1.10 National Sustainable Waste Management Policy

The National Sustainable Waste Management Policy outlines the benefits of managing waste as a resource in Kenya, including economic, social, and environmental advantages. The policy recognizes that sustainable waste management is critical to delivering on Kenya's constitutional right to a clean and healthy environment, achieving sustainable development goals, and realizing the nation's leadership in the blue economy. The policy aims to establish an enabling regulatory environment that prioritizes waste minimization and contributes to a circular economy. It also supports county governments' mandate to provide sustainable waste management services and provides the framework for coordinated action at the national level. The policy proposes a waste hierarchy that includes reducing waste generation, reusing materials, effective and affordable waste collection, and proper treatment and disposal of residual waste in well-engineered and regulated landfills. The policy also advocates for the creation of green jobs and the formalization of the waste picker sector to improve livelihoods.

5.2 Legal and Regulatory Framework for Environment

5.2.1 The Constitution of Kenya 2010

The Constitution of Kenya, promulgated into law on 27 September 2010, is the supreme law of the Republic: It provides the broad framework regulating present and future development aspects of Kenya and along which all national and sectoral legislative documents are drawn. About environment, Section 42 inside the Bill of Rights of the Constitution, states that: every person has the right to a clean and healthy environment, which includes the right to have the environment protected for the benefit of present and future generations through legislative and other measures; particularly those contemplated in Article 69; and to have obligations relating to the environment fulfilled under Article 70.

- Ensure sustainable exploitation, utilisation, management and conservation of the environment and natural resources, and ensure the equitable sharing of the accruing benefits.
- Work to achieve and maintain a tree cover of at least ten percent of the land area of Kenya.
- Protect and enhance intellectual property in, and indigenous knowledge of, biodiversity and the genetic resources of the communities.
- Encourage public participation in the management, protection, and conservation of the environment.
- Protect genetic resources and biological diversity.

- Establish systems on environmental impact assessment, environmental audit, and monitoring of the environment.
- Eliminate processes and activities that are likely to endanger the environment; and,
- Utilise the environment and natural resources for the benefit of the people of Kenya.

There are further provisions on enforcement of environmental rights as well as establishment of legislation relating to the environment in accordance with the guidelines provided in this Chapter.

In conformity with the Constitution of Kenya 2010, every activity or project undertaken within the Republic of Kenya must be in tandem with the state's vision for the national environment as well as adherence to the right of every individual to a clean and healthy environment.

Essentially, the New Constitution has embraced and provided further anchorage to the spirit and letter of the Environmental Management and Co-ordination Act (EMCA), 1999, whose requirements for environmental protection and management have largely informed Sections 69 through to 71 of the Document. In Section 72 however, the new constitution allows for enactment of laws towards enforcement of any new provisions of the Supreme Law. The Office Block and Lab Project complies with the Constitution by proposing a framework in its ESIA on Social, Health, safety, and environmental protection.

5.2.2 The Urban Areas and Cities Act 2011

This law passed in 2011 provides legal basis for classification of urban areas (City) when the population exceeds 500,000; a municipality when it exceeds 250,000; and a town when it exceeds 10,000) and requires the city and municipality to formulate County Integrated Development Plan (Article 36 of the Act). Under Article 36, the integrated development plan so developed is required to be the central pillar in public administration of the city or municipality this forming the basis for:

- the preparation of environmental management; preparation of valuation rolls for property taxation plans.
- provision of physical and social infrastructure and transportation.
- preparation of annual strategic plans for a city or municipality.
- disaster preparedness and response;
- overall delivery of service including provision of water, electricity, health, telecommunications, and solid waste management; and
- The preparation of a geographic information system for a city or municipality.

5.2.3 The County Government Act, 2012.

The County Government Act of 2012, which has been adapted to the Constitution's State and County structure in relation to devolution, declares the County Integrated Plan to be central to the County's administration and prohibits any public spending outside of the plan. The Act clarifies that the County

Integrated Plan to be broken down into the economic plan, physical plan, social environmental plan, and spatial plan. Also, the Act states that the County Plan commands,

- County integrated development plan
- County Sectoral plans
- County spatial plan
- Cities and urban areas plan as stipulated by Urban Areas and Cities Act

The act also stipulates that the County Government will be –responsible for functions stipulated in article 186 and assigned in the Fourth Schedule of the Constitution which includes control of air pollution, noise pollution, other public nuisances, and outdoor advertising. The Proponent will ensure the project will be compliant with County Government Act 2012 by controlling all forms of pollution. Additionally, an Environmental and Social Management/monitoring plan has been provided in this report with measures for mitigating potential environmental pollution anticipated from the development of the project.

Part VIII and PART IX of the act highlights on citizen participation and public communication and access to information respectively. The act provides for the involvement of the public and the public should have reasonable access to the process of formulating and implementing policies, laws, and regulations, including the approval of development proposals, projects and budgets, the granting of permits and the establishment of specific performance standards. The act also reserves the right for every Kenyan citizen to request access to information held by any county government or any unit or department thereof or any other State organ in accordance with Article 35 of the Constitution.

5.2.4 HIV/AIDS Prevention and Control Act (Act No. 14 of 2006)

Part 11, Section 7 of the Act requires that HIV and AIDs education be carried out at the workplace. The government is expected to ensure the provision of basic information and instruction on HIV and Aids prevention and control to: -

- Employees of all government ministries, departments, Authorities, and other agencies and employees of private and informal sectors.
- The information on HIV/AIDS is expected to be treated with confidentiality at the workplace and positive attitude towards infected employees.

In allocating contractors to the Office and Lab Project, the proponent should ensure that the contractor offers such training to the worker as provided by law in addition to providing cautionary signage in areas such as campsite and the project site.

5.2.5 The Environment Management and Coordination Act No 8, 1999 and the Relative Amendment Act No 5, 2015

The Environment Management and Co-ordination (Amendment) Act 2015 No 5 of 2015 was effective on the 17th of June 2015 to amend the Environmental Management and Co-ordination Act 1999. The Act has aligned EMCA Act 1999 with the Constitution of Kenya (2010) to include new structures that the Constitution of Kenya 2012 created particularly entrenchment of county government in environment and natural resource management. The EMCA is an act of Parliament that provides for the establishment of an appropriate legal and institutional framework for the management of the environment and for matters connected therewith and incidental thereto.

The Act further aims to improve the legal and administrative co-ordination of the diverse sectoral initiatives in the field of environment to enhance the national capacity for its effective management. In addition, Act seeks to harmonize all the 77-sector specific legislation touching on the environment in a manner designed to ensure protection of the environment. As the principal environmental legislation in Kenya, EMCA sets the legal framework for environmental management basically as follows: -

Part II of the Act states that every person in Kenya is entitled to a clean and healthy environment and has the duty to safeguard and enhance the environment. To ensure the achievement, part VI of the same Act directs that any proponent of a new project, activity or operation should undertake an Environmental Impact Assessment (ESIA) and a report prepared for submission to the National Environmental Management Authority (NEMA), who in turn may issue a license as appropriate, while projects already in place will undertake annual Environmental Audits (EA).

Under EMCA, NEMA has gazetted legal tools that govern conduct of ESIAs and general environmental protection. The Proposed project falls under the requirement of this Act and has been screened against these tools with results that (table below) five of the tools will be triggered.

Table 5-1: Analysis of the Project triggers to the EMCA and its tools.

Legal Tool	Status	Trigger mechanism
EIA and Audit regulations	Applicable	EIA Study must conform to these rules
Waste Management Rules	Applicable	Construction likely to generate solid waste while operation of the lab will generate liquid waste
Water Quality rules	Applicable	Water for construction will be drawn from GAWASCO mains and have to adhere to ensuring water quality is observed

Legal Tool	Status	Trigger mechanism
Conservation of Biodiversity regulations	Not Applicable	These regulations focus more on benefit sharing in biodiversity conservation.
National Sand Harvesting Rules	Applicable	Construction works will require concrete mixture which shall include sand
Environmental Management and Coordination (Noise and Excessive Vibration Pollution) (Control) Regulations, 2009 Legal Notice No. 61:	Applicable	Both construction activities and construction equipment likely to generate noise
Air Quality Regulation (2014)	Applicable	Both construction activities and construction equipment likely to generate air pollution

Specifications of these guidelines would require to be captured in the Contracts for Construction to ensure that contractors are legally bound to undertake mitigation alongside general construction work. The EMCA Tools likely to be triggered by the proposed construction of the Office Block and Laboratory are briefly reviewed below.

5.2.6 Environmental (Impact Assessment and Audit) Regulations, 2003 and Environmental (Impact Assessment and Audit) (Amendment) Regulations, 2016

Environmental Impact Assessment (EIA) is a tool for environmental conservation and has been identified as a key component in new project implementation. At the national level, Kenya has put into place necessary legislation that requires EIA be carried out on every new project, activity, or programme (EMCA), and a report submitted to the National Environmental Management Authority (NEMA) for approval and issuance of relevant certificates. These Regulations provide procedures for conducting an EIA study and detail the parameters to be evaluated during the study. It also provides guidelines on the payment of the EIA license fees, conducting environmental audits and development of project monitoring plans.

Specifications of these guidelines indicate that no proponent should implement a project which can have a negative environmental impact. This ESIA report has been undertaken in accordance with the Environment (Impact Assessment and Audit) regulation 2003, which operationalizes the Environment Management & Coordination Act (EMCA) 1999 and its subsequent amendment, the Environmental Management and Coordination Act (Amendment), 2015. The report is prepared in conformity with the requirements stipulated in the Act and its amendment and the Environmental Impact Assessment and Audit regulations 2003 regulation7 (1) and the second schedule.

5.2.7 Environmental Management and Coordination Act (Waste Management) Regulations, 2006

The regulations provide details on management (handling, storage, transportation, treatment, and disposal) of various waste streams including:

- Domestic waste
- Industrial waste,
- Hazardous and toxic waste
- Pesticides and toxic substances
- Biomedical wastes
- Radioactive waste

Regulation No.4 (1) makes it an offence for any person to dispose of any waste on a public highway, street, road, recreational area or in any public place except in a designated waste receptacle.

Regulation 5 (1) provides categories of cleaner production methods that should be adopted by waste generators to minimize the amount of waste generated and they include:

i) Improvement of production process through:

- Conserving raw materials and energy
- Eliminating the use of toxic raw materials and waste
- Reducing toxic emissions and wastes

ii) Monitoring the product cycle from beginning to end by:

- Identifying and eliminating potential negative impacts of the product
- Enabling the recovery and re-use of the product where possible
- Reclamation and recycling

iii) Incorporating environmental concerns in the design and disposal of a product.

The Proponent shall ensure that the main contractor adopts and implements all possible cleaner production methods during the construction phase of the project.

Regulation 6 requires waste generators to segregate waste by separating hazardous waste from non-hazardous waste for appropriate disposal.

Regulation 14 (1) requires every trade or industrial undertaking to install at its premises anti-pollution equipment for the treatment of waste emanating from such trade or industrial undertaking.

Regulation 15 prohibits any industry from discharging or disposing of any untreated waste in any state into the environment.

Regulation 17 (1) makes it an offence for any person to engage in any activity likely to generate any hazardous waste without a valid Environmental Impact Assessment license issued by NEMA.

Regulation 18 requires all generators of hazardous waste to ensure that every container or package for storing such waste is fixed with a label containing the following information:

- The identity of the hazardous waste
- The name and address of the generator of waste
- The net contents
- The normal storage stability and methods of storage
- The name and percentage of weight of active ingredients and names and percentages of weights of other ingredients or half-life of radioactive material
- Warning or caution statements which may include any of the following as appropriate.
  - the words "WARNING" or "CAUTION".
  - the word "POISON" (marked indelibly in red on a contrasting background.
  - The words "DANGER! KEEP AWAY / NO ENTRY FOR UNAUTHORIZED PERSONS".
  - A pictogram of skull and crossbones.

Regulation 19 (1) requires every person who generates toxic or hazardous waste to treat or cause to be treated such hazardous waste.

During the construction phase of the project, the Proponent shall ensure that the main contractor implements the above-mentioned measures as necessary to enhance sound environmental management of waste.

5.2.8 Environmental Management and Coordination Act (water quality) Regulation 2006

The Regulations provides for sustainable management of water resources including prevention of water pollution and protection of water sources (lakes, rivers, streams,' springs, wells, and other water sources). It is an offence under Regulation No.4 (2), for any person to throw or cause to flow into or near a water resource any liquid, solid or gaseous substance or deposit any such substance in or near it, as to cause pollution. Regulation No. 11 further makes it an offence for any person to discharge or apply any poison, toxic, noxious or obstructing matter, radioactive waste or other pollutants or permit the dumping or discharge of such matter into the aquatic environment unless such discharge, poison, toxic, noxious or obstructing matter, radioactive waste or pollutant complies with the standards for effluent discharge into the environment.

Regulation No. 14 (1) requires every licensed person generating and discharging effluent into the environment to carry out daily effluent discharge quality and quantity monitoring and to submit quarterly records of such monitoring to the Authority or its designated representatives.

Relevance

The proponent will have to ensure that appropriate measures to prevent pollution of underground and surface water sources are implemented throughout the project cycle.

The waste generated from the laboratory should be channelled to a dedicated conservancy tank for primary treatment of the effluent before discharging to the sewer.

5.2.9 Air Quality Regulation, 2014

This regulation is referred to as "The Environmental Management and Coordination (Air Quality) Regulations, 2014". The objective is to provide for prevention, control, and abatement of air pollution to ensure clean and healthy ambient air.

It provides for the establishment of emission standards for various sources, including as mobile sources (e.g. motor vehicles) and stationary sources (e.g. industries) as outlined in the Environmental Management and Coordination Act, 1999. It also covers any other air pollution source as may be determined by the Minister in consultation with the Authority. Emission limits for various areas and facilities have been set.

The Regulations prohibits the Proponent from:

- ✓ Acting in a way that directly or indirectly cause or may cause air pollution to exceed levels set out in the second Schedule to the Regulations
- ✓ Allowing particulates emissions into the atmosphere from any source not listed in the six schedules of the Regulations.
- ✓ Causing ambient air quality in controlled areas (listed in Schedule Thirteen) to exceed those stipulated under second Schedule.
- ✓ Allowing (during construction and demolition) emission of particulate matter above the limits stipulated in second Schedule.
- ✓ Causing or allowing stockpiling or storage of material in a manner likely to cause air pollution.
- ✓ Causing or allowing emissions of oxides of nitrogen more than those stipulated in the eleventh Schedule of the Regulation

Relevance

- The Proponent shall observe policy and regulatory requirements and implement the mitigation measures proposed in this document to comply with the provisions of these Regulations on abatement of air pollution.

5.2.10 Environmental Management and Coordination Act (Noise and Excessive Vibrations Pollution Control) Regulations, 2009

The regulations define noise as any undesirable sound that is intrinsically objectionable or that may cause adverse effects on human health or the environment. The regulations prohibit any person from making or causing to be made any loud, unreasonable, unnecessary, or unusual noise which annoys, disturbs, injures or endangers the comfort, repose, health or safety of others and the environment.

Article 13 2(d) of the regulations allows for construction work at night for public utility construction, construction of public works, projects exclusively relating to roads, bridges, airports, public schools, and sidewalks, provided noise generated is not caused within a residential building or across a residential real property boundary where such noise interferes with the comfort, repose, or safety of the members of the public. The second Schedule of the Regulations provides for the maximum permissible level of noise at construction sites.

Table 5-2: Maximum permissible noise levels for construction sites

Facility		Maximum Noise level permitted (leq) in dB (A)	
		Day (6.01am-6.00pm)	Night (6.01 pm-6.00am)
(i)	Health facilities, educational institutions, homes for disabled and residential areas	60	35
(ii)	Residential	60	35
(iii)	Areas other than those prescribed in (i) and (ii)	75	65

(Measurement taken within the facility)

Under section 15, the Regulations require the Proponent during EIA studies to:

- Identify natural resources, land uses or activities which may be affected by noise or excessive vibrations from construction or demolition.
- Determine the measures which are needed in the plans and specifications to minimize or eliminate adverse construction or demolition noise or vibration impacts.
- Incorporate the needed abatement measures in the plans and specifications.

Relevance

It is anticipated that the proposed project will generate noise and/or vibration during the construction phase, that will originate from the construction equipment, vehicles and the worker since the project is within the institution and it is therefore recommended that the construction team develops mitigations to reduce noise propagation in the project area.

The provisions of this Act will be applied by the Proponent in the management of the project where the contractor will be required to adhere to the provisions of this regulations.

5.2.11 National Sand Harvesting Guidelines, 2007

These Guidelines apply to all sand harvesting activities in Kenya to ensure sustainable utilization of the sand resource and proper management of the environment. Among key features, the guidelines

empower respective DECs to regulate sand harvesting within areas of jurisdiction implying that, sand should only be sourced from approved sites and by approved dealers.

Relevance

The project will commit to the fulfilment of the guidelines.

5.2.12 The Water Act No 43 of 2016

The Act vests the water in the State and gives the provisions for the water management, including irrigation water, pollution, drainage, flood control and abstraction. It is the main legislation governing the use of water.

The proposed project shall require some quantities of water during the construction phase and generation of equally large volumes of surface run-off during operations. The water supplied by the local water provider and local rivers might be the sources of water for construction.

Every person abstracting ground water by means of a well shall, to prevent contamination or pollution of the water-

i. Effectively seal off to a sufficient depth any contaminated or polluted surface or shallow water in rock openings or soft broken ground.
ii. Effectively seal the top of the well between the surface casing and the internal pump column, and the suction or discharge pipe.
iii. Dispose of all return or wastewater by means other than by return to the well.
iv. Extend the well casing to a point not less than twenty centimetres above the elevation of the finished pump house or pump pit floor.
v. Use either welded or screw type well joints on the casing if made of metal.
vi. Dispose of effluents or drainage from any household. Stable factory, trade premises or other premises in such a manner as will prevent any such effluent or drainage from reaching such seal or ground water; and

Relevance

The Contractor shall ensure that there will be no pollution to the nearby rivers and streams and will seek the necessary permits to abstract the water from the rivers, or any other sources, and shall abide by the conditions attached to the permit(s).

5.2.13 Occupational Safety and Health Act OSHA, 2007

The Occupational Safety and Health Act, 2007, is an Act of Parliament to provide for the safety, health and welfare of all workers and all persons lawfully present at workplaces, to provide for the establishment of the National Council for Occupational Safety and Health and for connected purposes. The Act applies to all workplaces and workers associated with it; whether temporary or permanent. The

main aim of the Act is to safeguard the safety, health and welfare of workers and non-workers. Part 9 states that the occupier or employer shall establish a health and safety committee where twenty or more people are employed, and such an employee shall prepare a written statement of his general policy with respect to the safety and health at the workplace. Further, the occupier shall prepare annual safety and health audits by a qualified person.

It is thus recommended that all Sections of the Act related to this project, such as observing safety guidelines, provision of protective clothing, clean water, and insurance cover are observed to protect all from work related injuries or other health hazards.

5.2.14 The Public Health Act (Cap. 242)

The Public Health Act provides for the protection of human health through prevention and guarding against introduction of infectious diseases into Kenya from outside, to promote public health and the prevention, limitation or suppression of infectious, communicable or preventable diseases within Kenya, to advice and direct local authorities in regard to matters affecting the public health to promote or carry out research and investigations in connection with the prevention or treatment of human diseases. This Act provides the impetus for a healthy environment and gives regulations to waste management, pollution, and human health.

Part IX section 115 states that no person shall cause nuisance or condition liable to be injurious or dangerous to human health. Section 116 requires Local Authorities to take all lawful, necessary, and reasonably practicable measures to maintain their jurisdiction clean and sanitary to prevent occurrence of nuisance or condition liable for injurious or dangerous to human health. Such nuisance or conditions are defined under section 118 waste pipes, sewers, drains or refuse pits in such a state, situated, or constructed as in the opinion of the medical officer of health to be offensive or injurious to health. Any noxious matter or wastewater flowing or discharged from any premises into Public Street or into the gutter or side channel or watercourse, irrigation channel or bed not approved for discharge is also deemed as a nuisance. Other nuisances are accumulation of materials or refuse which in the opinion of the medical officer of health is likely to harbour rats or other vermin.

The operations and activities of the proposed project can be detrimental to human and environmental health and safety in the absence of appropriate measures. For example, waste, dust, noise and air emission generated from activities and process of the proposed project can directly or indirectly have adverse impacts on human and environment. The Act prohibits the Proponent from engaging in activities that cause environmental nuisance or those that cause danger, discomfort or annoyance to inhabitants or is hazardous to human and environmental health and safety.

Relevance

The proponent will therefore observe the public Health act to mitigate on the negative environmental health and safety to the public.

5.2.15 The Physical and Land Use Planning Act ,2019.

The Physical and Land Use Planning Act, 2019 is an act of Parliament to make provision for the planning, use, regulation, and development of land and for connected purposes. The Act provides a vital link with the Environment Management and Co-ordination Act. For example, Section 36 of the Act states that "In connection with a development application a local authority is of the opinion that proposals for industrial location, dumping sites, sewerage treatment, quarries or any other development activity will have injurious impact on the environment, the applicant will be required to submit together with the application an environmental impact assessment report". This reinforces EIA requirements under EMCA 2015.

Relevance

The Act directs, regulates, and harmonizes development and use of land over the Country. The large part of the project is designed to utilize public land. This was to avoid cases of acquisition of private property and resettlement complications. The County Government of Garissa will need to provide necessary approvals such as approvals for Contractor's temporary facilities.

5.2.16 The Children Act, 2001

This Act protects the welfare of children within the Country. The Act identifies Children as a person below the age of 18 years old and protects them from exploitation. Of importance to this project, is section 10, which protects the child from:

- Economic exploitation.
- Any work that interferes with his/ her education, or is harmful to the child's health or physical, mental, spiritual, moral, or social development.

Relevance

It is thus expected that during construction, the contractor will not engage underage/minors in the construction works. All persons seeking employment will be required to produce their National Identification Cards during recruitment.

5.2.17 The Sexual Offences Act, 2006

This Act protects minors, people and employees from any unwanted sexual attention or advances by staff members. This act ensures the safety of women, children and men from any sexual offences which include rape, defilement, indecent acts. This law will govern the code of conduct of the Contractor's staff and provide repercussions of any wrongdoing during both the construction and operation phase of the project.

5.2.18 Employment Act, 2007

The Act declares and defines the fundamental rights of employees, to provide basic conditions of employment of employees, to regulate employment of children, and to provide for matters connected with the foregoing. The act provides the basic minimum conditions for employment to include hours of work, water (for use at the place of work), food (employee properly fed) and medical attention. At construction stage, the project contractor will hire both full-time and casual staff and the prevailing basic minimum conditions of employment will have to be observed.

5.3 World Bank Environmental and Social Policy Safeguards

5.3.1 Operational Policy (OP) 4.01: Environmental Assessment, 2001

This policy helps to ensure the environmental and social soundness and sustainability of investment projects so as to ensure it doesn't affect the environment negatively. It also supports integration of environmental and social aspects of projects in the decision-making process. The policy requires public consultation and disclosure for Category "A" and B projects which include multiple dwelling units. In our case the case project is a category B project as the project impacts are anticipated to be specific to the project site and reversible with implementation of the proposed mitigation measures.

According to the policy, objectives of disclosure & consultation include:

- To enable affected groups and interested parties (emphasis on NGOs) to understand likely implications of project.
- To enable affected groups and interested parties have input into project design.
- Public consultations in this case were done in form of structured questionnaires and stakeholder engagement.

The proponent helps meetings with the interested parties in efforts to comply with the environmental assessment safeguards.

5.3.2 The World Bank Operational Policy/Bank Procedures Indigenous Peoples (OP/BP 4.10).

The operational policy requires that World Bank financed projects are designed not only to avoid adverse impacts but equally important to recognize that "the distinct identities and cultures of VMGs remained inextricably linked to the lands they inhabited and the natural resources they depended upon to survive". The policy provides processing requirements for VMGs that include: (i) screening, (ii) social assessment, in consultations with communities involved, (iii) preparation of Vulnerable and Marginalized Groups Plans (VMGPs) or Vulnerable and Marginalized Groups Framework (VMGF) and, (iv Disclosure. It also requires the borrower to seek broad community support of VMGs through a process of free, prior, and informed consultation (FPIC) before deciding to develop any project that targets or affects VMGs. The OP 4.10 is applicable as there are IPs/VMGs as the Somalis communities

(Auliyhan Somalis are specifically found in the area) are considered as marginalized communities are found within the project area. The project will positively benefit the communities within the project area.

5.3.3 Operational Policy (OP/BP) 4.11: Physical Cultural Resources, 2006

This policy advocates for the preservation and protection of national heritages and the physical cultural resources against destruction or damage. Physical Cultural Resources (PCR) are defined as movable or immovable objects, sites, structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious (including graveyards and burial sites), aesthetic, or other cultural significance. Kenya is rich in its antiquities, monuments and cultural and natural sites which are spread all over the country. PCR may be in urban or rural settings, and may be above ground, underground, or under water. The National Museums is the custodian of the country's cultural heritage. The cultural interest may be at the local, provincial, or national level, or within the international community. This policy applies to all projects requiring a category A or B environmental assessment, project located in, or in the vicinity of recognized cultural heritage sites. Physical cultural resources are important as sources of valuable scientific and historical information, as assets for economic and social development, and as integral parts of a people's cultural identity and practices. The proposed laboratory project s does not activate the OP 4.11 as there are no physical cultural resources affected by the project implementation and operation. The proposed site is largely a bare land. A "Chance Find Procedure" has been developed in case physical cultural resources are identified during project implementation.

5.3.4 World Bank Directive on Vulnerable Groups

They are considered as marginalized and vulnerable. The term "vulnerability" refers to those individuals or groups who, by virtue of, for example, their age, gender, ethnicity, religion, physical, mental or other disability, social, civic or health status, sexual orientation, gender identity, economic disadvantages or indigenous status, and/or dependence on unique natural resources, may be more likely to be adversely affected by the project impacts and/or more limited than others in their ability to take advantage of project benefits

Such an individual/group is also more likely to be excluded from/unable to participate fully in the mainstream consultation process and as such may require specific measures and/or assistance to do so. This will consider considerations relating to age, including the elderly and minors, and including in circumstances where they may be separated from their family, the community, or other individuals upon whom they depend.

This ESIA Study has considered the vulnerable community members along the project area, engage them in various consultations to include them and their various vulnerabilities in the ESIA with a means of adequately providing mitigation measures to their various disadvantages for all phases of the project.

5.3.5 World Bank Policy on Access to Information, 2015

The World Bank policy on access to information sets out the policy on public access to information in its possession. This Policy supersedes the World Bank Policy on Disclosure of Information and took effect on July 1, 2010.

This Policy is based on five principles:

- Maximizing access to information.
- Setting out a clear list of exceptions.
- Safeguarding the deliberative process.
- Providing clear procedures for making information available.
- Recognizing requesters' right to an appeals process.

In disclosing information related to member countries/borrower in the case of documents prepared or commissioned by a member country/borrower (in this instance, safeguards assessments and plans related to environment, resettlement, and indigenous peoples, OP/BP 4.01, Environmental Assessments, OP/BP 4.10 and OP/BP 4.12 Involuntary Resettlement); the bank takes the approach that the country/borrower provides such documents to the Bank with the understanding that the Bank will make them available to the public.

5.4 Guidelines

5.4.1 Wastewater guidelines

Part of the study involves a review of the environmental standards that provides a basis for monitoring and future audits. The table below presents recommended guidelines on wastewater quality for discharge into the public sewers and open water bodies.

Table 5-3: Kenya Discharge Guidelines for Waste water

Parameter	Discharge in public sewers (mg/l)	Discharge into water bodies (mg/l) – Assuming 10% dilution
PH	6.0 – 9.0	6.0 – 9.0
BOD5 (20oC)	500	20
COD	1000	50
Suspended Solids	500	30
Detergents	30	Nil
Heavy metals (combined)	1	0.1
Oils/Grease	50	Nil
Nitrates (TN)	20	10
Phosphates (TP)	30	5
Conductivity	-	1500 uS/cm

4hr PV Value	No limits	20
Faecal Coliforms	No limits	1000/100ml for large water bodies, otherwise <10/ml)
Sulphates	-	500
Dissolved Oxygen	No limits	2
Phenols	-	2
Cyanides	-	0.1
Chlorides	-	1000
PCB	-	0.003
Colour	No limits	5 Hazen Units
Odour	No limits	Not objectionable

Sources: Department of Water Development

5.4.2 Noise Guidelines

The following guidelines will be used to monitor noise levels, especially during the construction stage of the project.

Table 5-4: Comparison between WHO and NEMA Noise Guidelines

Specific Environment	Critical Health Effects	LAeq dB(A) WHO	Time base (hours)	LAeq dB(A) NEMA	Time base (hours)
Outdoor living area	Serious annoyance Moderate annoyance	55 50	16 16	45 35	14 14
Indoor dwelling Inside bedroom	Speech interference Sleep disturbance	35 30	16 8	-	-
Outdoor bedroom	Sleep disturbance	45	8	35	-
School classroom Indoor	Speech and communication	35	During class time	Day 60 Night 35	14 14
School playground outdoor	Annoyance External	55	During play	45	Day
Hospital, treatment room indoor	nighttime daytime	30 30	8 16	-	-
Industrial, Commercial and traffic areas	Hearing impairment	70	24	60	12
Ceremonies, festivals entertainment events	Hearing impairment	100	4	-	-

The provisions of this Act will be applied by the Proponent in the management of the project where the contractor will be required to adhere to the guidelines to reduce the possibility of adverse noise and

vibration impacts to human health. The regulation stipulates that the acceptable standard day and night noise levels should not exceed 65dBa and 45 dBa respectively.

5.5 Institutional Structure

There are various national institutions that are important in civil and road project works related to environmental management in Kenya. These are described in the subsection below.

5.5.1 Ministry of Environment, Climate Change and Forestry

The Ministry of Environment and Natural Resource is mandated to monitor, protect, conserve, and manage the environment and natural resources of the country. The Ministry is required to achieve this monumental task through sustainable exploitation of natural resources for socio-economic development geared towards eradication of poverty, improving living standards and maintaining a clean environment for present and future generations.

5.5.2 National Environment Management Authority (NEMA)

The government established the National Environmental Management Authority (NEMA) as the supreme regulatory and advisory bodies on environmental management in Kenya under EMCA 2015. NEMA is charged with the responsibility of coordinating and supervising the various environmental management activities being undertaken by other statutory organs. NEMA also ensures that environmental management is integrated into development policies, programs, plans, and projects.

5.5.3 Water Resources Authority (WRA)

The authority is responsible for sustainable management of the Nations Water Resources:

- Implementation of policies and strategies relating to management of water resources,
- Develop principles, guidelines, and procedures for the allocation of water,
- Development of catchments level management strategies including appointment of catchments area advisory committees,
- Regulate and protect water resources quality from adverse impact, and
- Classify, monitor, and allocate water resources.

5.5.4 Water Services Regulatory Board (WASREB)

The regulatory Board is responsible for the regulation of the water and sewerage services in partnership with the people of Kenya. The mandate of the regulator covers the following key areas:

- Regulating the provision of water and sewerage services including licensing, quality assurance, and issuance of guidelines for tariffs, prices, and disputes resolution,
- Overseeing the implementation of policies and strategies relating to provision of water services licensing of Water Services Boards and approving their appointed Water Services Providers,
- Monitoring the performance of the Water Services Boards and Water Services Providers,

- Establish the procedure of customer complaints,
- Inform the public on the sector performance, and
- Gives advice to the Minister in charge of water affairs.

5.5.5 Directorate of Occupational Safety and Health Services (DOSH)

DOSH plays a crucial role in promoting and maintaining safe working conditions for employees across various sectors. By enforcing International Labour Standards related to occupational safety and health, DOSH aims to protect workers from hazards and ensure their well-being on the job. During project implementation the Contractor shall have to engage DOSH to:

- Provides OSH permits for workplaces of the project including the campsite and
- Conduct inspections to ensure conformance to OSHA.

5.5.6 Garissa Water and Sewerage Company (GAWASCO)

Garissa Water and Sewerage Company (GAWASCO) is the project proponent and shall support implementation of the proposed interventions and ensure compliance of the Environmental Management and Monitoring Plan (EMMP).

5.5.7 The Contractor

The Contractor shall be required to establish an environmental office to continuously advise on environmental components of the project implementation. Elements in the environmental and social management plan are expected to be integrated in the project with appropriate consultations with GAWASCO. The environmental and social expert officer of the Contractor is also expected to fully understand the engineering and management aspects of the project for effective coordination of relevant issues.

CHAPTER 6: PUBLIC PARTICIPATION

6.1. Background to Public Consultation in ESIA

Community consultation and participation ensures 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 shall acquire high level of acceptance, identify possible conflicts areas early, and accrue benefits to a wider section of the society.

Through public participation, it is possible to enhance project designs and ensure sustainability of the projects. The proposed project has incorporated public consultations to understand the local impacts, needs and thoughts and eventually incorporate them into the final designs and operations of the project.

6.2. Aims and Objectives of Stakeholders Consultation and Public Participation (CPP)

The aims and objectives of public involvement and consultation include:

- Informing stakeholders and members of public
- Gaining their views, concerns, and values
- Taking account of public inputs in decision making
- Influencing project design
- Obtaining local knowledge
- Increasing public confidence
- Improving transparency and accountability in decision making
- Reducing conflict

6.3. Stakeholder Consultation

The process of stakeholder engagement involved the following:

i. Stakeholder identification.
ii. Stakeholder consultation activities
   - ➢ Planning how the engagement will take place.
   - ➢ Disclosure of information.
   - ➢ Consultation with stakeholders.
   - ➢ Addressing and responding to grievances; and
   - ➢ Reporting to stakeholders.

6.3.1. Stakeholder Mapping

The identification of stakeholders for this Project followed the procedures outlined in the Environmental Management and Coordination (Amendment) Act 2015, Environmental (Impact

Assessment and Audit) (Amendment) Regulations, 2019 Guidelines, the Constitution of Kenya 2010, World Bank Operation Policy of Environment Assessment and Land Acquisition and Involuntary Resettlement guidelines. The guidelines require Stakeholder Engagement through consultation with the affected people and/or their community representatives and Non-Governmental Organizations (NGOs).

The key stakeholder groups identified, consulted, and informed about the project are presented in **Table 6-1**.

Table 6-1: Stakeholder Inventory

No	Name	Category
1.	Deputy County Commissioner/Assistant County Commissioner	National Government
2.	Physical planning – Urban Developer	County Government
3.	Public Works Officer	County Government
4.	Ward Administrator	County Government
5.	Chief	National Government Administration
6.	Water Users Authority (WUA)	County Government
7.	Residents inclusive of the vulnerable and marginalized groups	Community members

6.3.2. Stakeholder Consultation Activities

Public consultation is useful for gathering environmental data, understanding likely impacts, determining community and individual preferences, selecting project alternatives, and designing viable and sustainable mitigation and compensation plans.

The consultations will take place throughout the planning phase and continue during the construction and operational phases of the project.

Table 6-2 presents an overview of the stakeholder activities that were /will be undertaken during the stakeholder engagement.

Table 6-2: Stakeholder Consultation Activities

Phase	Activities
Phase 1: Stakeholder identification and preliminary consultation/scoping	• Stakeholder identification and categorization during the Project inception exercise • Preliminary consultation: liaison with National, County, and Local Institutions

Phase	Activities
	• Identification of key Project constraints
Phase 2: Information distribution and introductory Meetings	• Distribution of specialists and technical Information to the County Government of Garissa, County administration, and other relevant stakeholders • Introductory meetings with local administration, Sub-Counties administrators and ward administrators, and relevant authorities.
Phase 3: Impact Identification and Development of Mitigation Measures	• Meetings with Local Administration in affected locations • Meetings and conducting Key Informant Interviews with members of sub-county and Ward administrators within the settlement. • Conducting interviews and household interviews with the community members • Dialogue and meetings with the above-identified stakeholders
Phase 4: Disclosure of the draft EIA	• Submission of ESIA Project Report to National Environment and Management Authority (NEMA) and world bank • Circulation of Project Report by NEMA to relevant Lead Agencies • Review and Incorporation of Lead Agencies' comments and revisions to ESIA. • Collection and incorporation of comments and feedback. • Issuance of license
Phase 6: consultation during construction and operation	• Throughout the Project

6.4. Stakeholder Consultation

Listening to stakeholder concerns and feedback is a valuable source of information that can improve project design and outcomes and help in identifying any impacts.

An initial consultation meeting was held in the month of September 2020 at Dadaab Chief's Camp. Residents were notified regarding the meeting by the local administration in collaboration with the

county representatives. Another stakeholder meeting was held on May 17, 2024, at Dadaab Municipality Offices where the following participants were present

The following stakeholders were present.

- Area chief
- Village elders
- Ward administrator
- Area Residents
- Youth
- Assistant County Water Officer

Table 6-3: Number of participants

Meeting – September 2020 Venue- Dadaab Chief's Camp	
List of participants	**Number**
Male	70
Female	20
Total participants	90
Meeting – May 17,2024 Venue- Dadaab Chief's Camp	
List of participants	**Number**
Male	16
Female	2
Total participants	**18**
Age of the participants- Meeting – May 17,2024 Venue- Dadaab Chief's Camp	
Age	**Number**
18-35	3
36-50	6
51-64	7
65 and above	2
Total	**18**

Gathering the residents to the meeting venue was undertaken through the close coordination of GAWASCO, Sub- County water officer together with the local administrator (chief and ward administrator).

The discussion including project information was discussed in Somali and Kiswahili languages to ensure the community understood the project scope, objectives and anticipated impacts in all project phases.

6.4.1. Outcomes of the meeting

Table 6-4: Meeting dates

No	Date	Location	Comment from the community	Response
1.	September 2020	Dadaab	The project will affect neighbours due to noise pollution	The Contractor will adhere to EMCA (Noise and Excessive Vibrations) Regulations of 2009
			The project will result in positive impacts such as: • Creation of employment • Development of the area • Easy access to the laboratory for the area hence supply of clean water	
2.	16.05.2024	Dadaab	What caused the stoppage of construction woks	There was need to prepare two separate EIA reports for the proposed office block in Garissa and the proposed laboratory in Dadaab. The two separate reports will clearly highlight specific impacts for the two project and mitigation measures developed.
			When shall the construction works resume	The Consultant explained that the project will resume after approval of the environmental Impact Assessment Report and all the necessary project reports required by the financier World Bank
			The project should ensure once the project resumes the construction works should not stop and should be fast tracked.	The Consultant assured the residents once all the documentations and technical aspects are resolved, the proposed project will proceed as intended and completed to

No	Date	Location	Comment from the community	Response
				ensure it benefits the community
			Job opportunities should be given to the local people	The Consultant stated priority in the recruitment of job opportunities will be given to the local people
			The community acknowledge the support of the project. They highlighted they will benefit from clean and reliable water	

6.4.2. Outcomes of the questionnaires

A structured questionnaire was also administered to the members of public to solicit views regarding the project as well as its design. The questionnaire initially gave introduction and created awareness to the respondents regarding the project. Afterwards, questionnaire enquired on acceptance of the project, rating of the current infrastructures, anticipated project impacts, suggested mitigation measures as well as any suggestions and recommendations. A summary of concerns and suggestions raised by the community are presented below.

a) Occupation

Majority of the respondents (40%) engage in various activities to earn a living such as pastoralism, small businesses. Twenty seven percent (27%) are casual labourers, thirteen percent (13%) are self-employed, seven percent (7%) are farmers, and seven percent (7%) are traders, and another seven percent (7%) are unemployed.

Table 6-5 : Occupation

Occupation	Number of respondents %
Farmer	7%
Casual labour	27%
Self employed	13%
Trader	7%
Unemployed	7%
Others	40%

b) Knowledge and Viability of the Project

All the respondents highlighted they were aware about the project and the project was viable and should be implemented within the project area.

c) Waste Generation

The residents were asked whether the proposed project is likely to generate any waste. Eighty three percent (83%) of the respondents stated the project will not result in generation of waste while seventeen percent (17%) stated there will be generation of waste. The residents recommended proper disposal of waste and recycling of the construction waste.

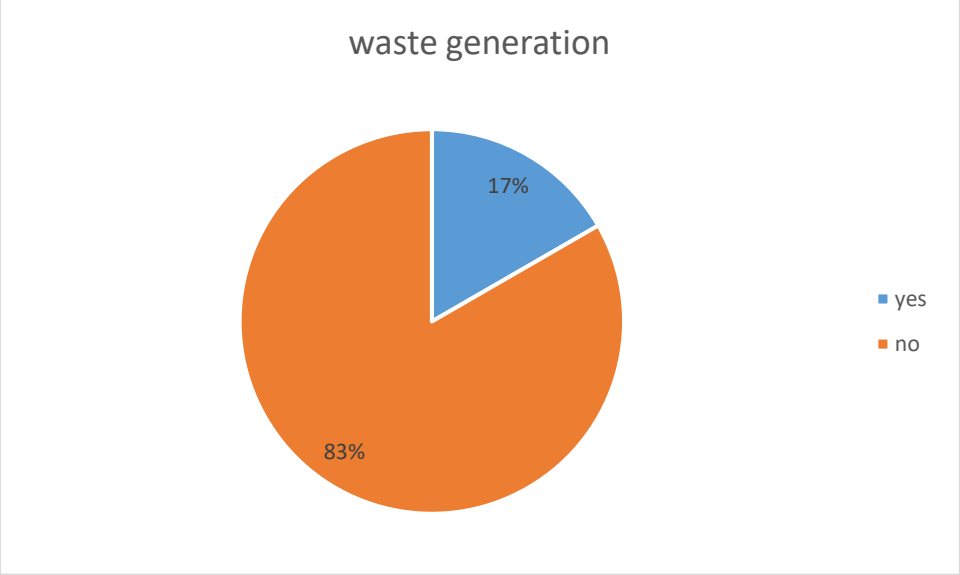


Figure 6-1: Waste generation.

d) Safety Concerns

The residents were asked whether the proposed project will result in any safety concerns. Eighty three percent of the residents highlighted they did not anticipate safety concerns regarding the project while seventeen percent stated they anticipated security concerns regarding the project. Some of the safety concerns anticipated were accidents and injuries during construction.

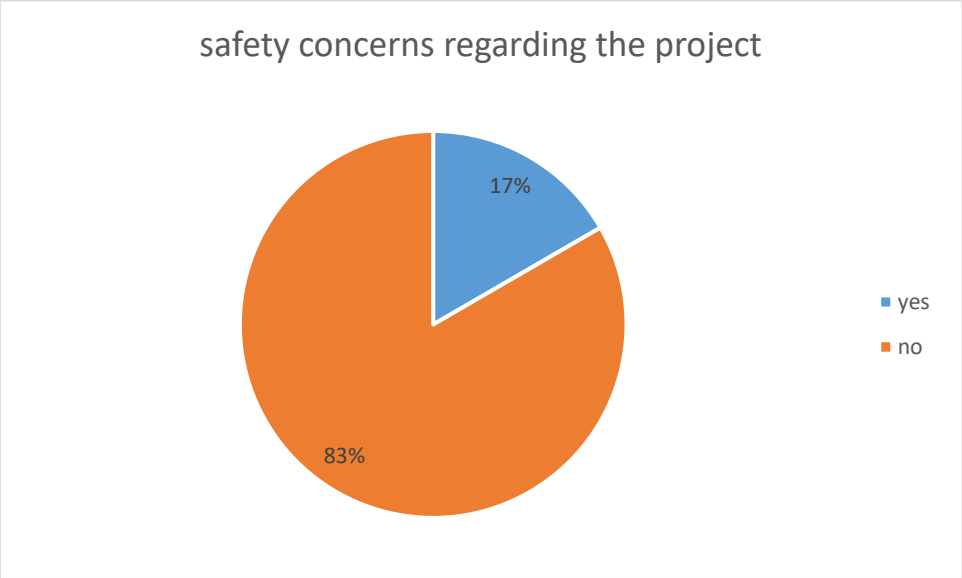


Figure 6-2: Safety concerns.

e) Anticipated positive impacts.

- Creation of job opportunities
- Improved health due to supply of clean water
- Reduced cases of water borne diseases
- The project will improve the economy of the area through purchase of locally available materials and employment of the local people.

f) Anticipated Negative Impacts and Mitigation Measures

- Generation of construction waste
  - ❖ Mitigation measure - the Contractor to develop a waste management plan and contract a licensed waste handler to dispose-off waste at the designated places.
  - ❖ Recycling of construction waste should be adopted during project implementation.
- Labour Influx
  - ❖ Priority during labour recruit for both skilled and non-skilled workers will be for the local communities.
- Delayed completion of works
  - ❖ The Client and Contractor will ensure the works are completed on time once all the required and necessary documentations are completed.

g) Concerns and Suggestions

- Public participation should be conducted to educate the community about the project.

- The project should be fast racked to ensure the Laboratory is established. This will ensure testing and purification of water hence supply of clean water for the residents. This will reduce waterborne diseases within the region.

h) Support of the project

All the respondents interviewed were in support of the project.

6.5. Key Informant Interviews

The key informants targeted in the consultations were from Government institutions and administration authorities operating within the project area.

A structured questionnaire was administered to the key stakeholders on May 16, 2024-May 17, 2024, to solicit views regarding the project as well as its design. The interview was conducted face to face with the key stakeholders and in their respective offices. The analysis of the output from the questionnaires is discussed below:

Table 6-6: Summary of the Key Stakeholder Interviews and engagement

Name	Designation	Comments	Response
Eng. Edward Ndinya	Department of Public Works - Acting Director	The project is viable and should be implemented within the project area	
		The project may result in generation of waste. Proper waste management should be adopted during construction and operation period	The Contractor will develop a waste management plan and contract a licensed waste handler. During the operation period, GAWASCO will ensure waste from the lab is stored in conservancy tanks and disposed-off by licensed waste handler and in designated places

Name	Designation	Comments	Response
		The project will result in positive impacts which include but not limited to: • Improved and clean water that will result in better health for the community. • Improved quality of life	
Joseph Oluoch	Assistant County Commissioner	The project will result in generation of waste. The project should use environmentally friendly equipment and materials.	
		The construction works will result in disruption of existing facilities.	The project will be implemented in an enclosed environment. Existing facilities within the premises will be identified before construction works.
		The project will result in the following positive impacts which include but not limited to: • Improved clean water supply for the residents	
Abdinasir S. Yussuf	Urban development-Director of administration	The project is likely to result in the generation of waste	The Contractor will develop a waste management plan and contract a licensed waste handler During the operation period, GAWASCO will ensure waste from the lab is stored in conservancy tanks and

Name	Designation	Comments	Response
			disposed-off by licensed waste handler and in designated places
		The project will result in positive impacts which include but are not limited to: • Supply of clean water to the community members • The project will benefit GAWASCO as it will increase its customer base in turn increase their revenue.	
		Recommendation Priority during labour recruitment should be given to the local communities.	Priority on job opportunities for both skilled and non-skilled workers will be given to the local people
Hussein Duale	WUA Dadaab	The project is viable and should be implemented within the project area	
		The project will result in positive impacts which include but not limited to: • Supply of clean and treated water for the community	
		The project will result in negative impacts such as include: • Labour influx	The Contractor will ensure first priority on job opportunities for both skilled and non-skilled workers will be given to the local people. The community and all stakeholders will be

Name	Designation	Comments	Response
		• Lack of community engagement that may result in conflicts	involved all stages of the project.
		Recommendations • All stakeholders should be engaged in all project phases. • Priority during labour recruitment should be given to the local people	All the recommendation presented will be considered during project implementation.
Abdikadir Abdi	Senior Chief	The project is viable and should be implemented	
		The project will result in the generation of construction waste	The Contractor will develop a waste management plan and contract a licensed waste handler. During the operation period, GAWASCO will ensure waste from the lab is stored in conservancy tanks and disposed-off by licensed waste handler and in designated places.
		The project will result in improved clean water supply	
Diriye Billow	County Affairs Department- ward admin	The project is viable and should be implemented	
		Positive impacts of the project include but not limited to: Clean water supply that will result in improved health for the community.	

CHAPTER 7: IMPACTS IDENTIFICATION AND MITIGATION MEASURES

7.1 Introduction

The impacts assessed cover the direct effects and any indirect, positive, and negative effects of the development during construction, operation and in many cases possible decommissioning. The likely significance of the impact is based in the identification and prediction of the magnitude of any impact caused by the project on (i) a receptor (e.g. human beings, community facilities, etc.), or (ii) an environmental resource (elements of the existing natural or built environment), or on (iii) any process which is essential, or of value, to the functioning of human or natural systems, and (iv) the identification of the importance (and/or sensitivity) of that receptor/environmental resource/process. For all impacts, appropriate mitigation measures have been provided for, and contractors will be required to enforce them. All potential impacts in the environment have been carefully studied, no matter if they present positive or negative impact to the environment. Activities of the project are divided into the following phases.

7.2 Pre-Construction Phase Positive Impacts

7.2.1 Documentation and Publicity

The project area will benefit significantly in terms of the intensive information gathering during the pre-project feasibility study and the pre-project EIA which will generate useful reports that will create important reference points for the area both for scientific research and planning activities.

7.2.2 Employment

Employment opportunities will be created during construction of campsite for the contractor staff and storage of materials.

7.3 Pre-Construction Negative impacts

7.3.1 Influx of workers from other areas

The project area might experience an influx of workers from other areas.

Mitigation Measures:

- Effective community engagement and strong grievance mechanisms on matters related to labour.
- Effective contractual obligations for the contractor to adhere to the mitigation of risks against labour influx.
- Proper records of labour force on site while avoiding child and forced labour.
- Fair treatment, non-discrimination, and equal opportunity of workers.
- Comply with provisions of Labour Relations Act 2012 and Workplace Injuries and Benefits Act (WIBA 2007).

- The Contractor shall require his employees, sub-contractors, sub consultants, and any personnel thereof engaged in construction works to individually sign and comply with a Code of Conduct
- The Contactor will need to prepare a project specific labour management plan.

7.4 Construction Phase Positive Impacts

7.4.1 Employment Opportunities

One of the main positive impacts during projects construction phase is the availability of employment opportunities especially to casual workers and several other specialised workers. Employment opportunities are of benefit both economically and in a social sense. In the economic sense it means abundant unskilled labour will be used in construction hence economic production. Several workers including casual labourers, masons, carpenters, joiners, electricians, and plumbers are expected to work on the site from start to the end. Apart from casual labour, semi-skilled and unskilled labour and formal employees are also expected to obtain gainful employment during the period of construction.

7.4.2 Improving Growth of the Economy

Using locally available materials during the construction phase of the project including cement, concrete and ceramic tiles, timber, sand, ballast electrical cables etc., the project will contribute towards growth of the economy by contributing to the gross domestic product. The consumption of these materials, fuel oil and others will attract taxes including VAT which will be payable to the government hence increasing government revenue while the cost of these raw materials will be payable directly to the producers.

7.4.3 Boosting of the Informal Sector

There are usually several informal businesses which come up during the construction periods of such projects. These include activities such as food vending who benefit directly from the construction staff members who buy food and other commodities from them. This will promote the informal sector in securing some temporary revenue and hence livelihood.

7.4.4 Reduced Cases of Water Related Diseases

Availability of the laboratory will ensure water is tested and treated before supply of water to people. This will ensure the people in Dadaab consume clean water and hence reduce water-borne diseases.

7.4.5 Gains in the Local and National Economy

Through the provision of employment to the locals, income from the salaries and wages will improve the economy of the town centres and the county at large. The Contractor is also expected

to purchase most of his materials from the project area as such contribute positively to the local and national economy. The materials for construction will also be sourced out from other areas within the nation hence positively affecting the national economy.

7.5 Construction Phase Negative impacts

The following are the negative impacts during construction phase of the proposed Project:

7.5.1 Impacts on Vegetation Cover

Human settlement and anthropogenic activities have resulted to the areas being cleared of natural vegetation; clearance is done to provide land for development of houses and land for cultivation. However, less significant impact to vegetation is expected in terms of:

- Loss of vegetation cover along the road routes and reserves
- Economic loss tree to destruction of trees
- Less significant terrestrial habitat disruption

The risk of destruction of vegetation in the project areas is low and will be further minimized by limiting Site Clearance and Construction activities to the road routes within the Project area.

Mitigation measure

- Reinstatement of the project sites to their original after completion of civil works
- All hedges damaged during construction to be reinstated after completion of the Works.
- The contractor to adhere to the delineated construction work area.
- Planting of grass along the way leave after construction.

7.5.2 Impacts on Soils

The Project activities are likely to have minor impacts on soils, these impacts include:

i. Soil Erosion
ii. Soil de-stabilization
iii. Soil pollution.

The impact if not mitigated could result to:

i. Sediment transfer.
ii. Reduced rainfall infiltration
iii. Riverbank damage
iv. Alteration of the biophysical and chemical component of the soil reducing soil productivity.

Mitigation measures (Soil Erosion)

- The contractor to adhere to the proposed soil conservation practices.
- Proper and compacted back filling.
- The contractor to stick to clear delineation of the construction to avoid unnecessary vegetation loss.
- Planting of vegetation cover along the project site.

Mitigation measures (Soil de-stabilization)

- Split compacted area to reduce runoff & re-vegetate where necessary.
- Vehicles to be kept in designated access roads.
- Minimize compaction during stockpiling by placing soil in dry state.

Mitigation measures (Soil Pollution)

- Any polluted soil should be handled with care for proper disposal.
- Concrete mixing shall be done on concrete slabs or a large metal sheet or mortar boards.
- Maintenance of vehicles to be done strictly at designated place/Drip trays to be used to avoid oil spills.
- Excavation materials to be stockpiled at the demarcated location.
- Rehabilitation of the site after construction

7.5.3 Project Impact on Water

The project is likely to have less significant impacts to water in terms of:

i. Increased Water demand
ii. Management of Wastewater.

This impact if not mitigated could result to

i. Reduced water quality
ii. Siltation
iii. Increased water demand
iv. Increased toxic levels in soil and water.

Project Impacts on Water Resources can be mitigated as follows.

Mitigation measures (Reduced Water Quality)

- Storing of fuels, oils, and chemicals on impermeable surfaces away from surface drains.
- The machines to be properly serviced offsite and maintained to avoid spillage of oil into the water bodies.

Mitigation measures (Siltation, Obstruction and Water Demand)

- Use of soil erosion control measures e.g., construction of gabions, vegetating the site after construction works.
- Ensure prompt reinstatement of drainage channels following trenching and backfilling and providing for temporary drains.

Mitigation measure (Wastewater Management)

- Grey water to be contained and properly channelled.
- Onsite treatment of grey water by the facility approved by the resident engineer.
- Water containing pollutants should be kept in a conservancy tank for removal to prevent pollution of the surface water and surface water bodies.

- Prompt action to be taken by the contractor in case of any pollution incident. Spill kits should be maintained at areas where potential pollutants are stored.

7.5.4 Solid Wastes Generation from Construction activities

Construction activities at the work sites and Contractor's Camps will generate some spoil material, solid wastes such as plastic containers, used tyres, metal parts, plastics, and cables. Such material if not mitigated could be washed away to drainage channels and rivers eventually clogging the drainage channels and increasing river sedimentation.

Mitigation measure (Solid Waste Mitigation Measures)

- Maximum reuse of excavated material.
- Implementation of Soil erosion management in the spoil locations
- Construction wastes (residual earth, debris, and scrap materials) to be collected at designated points and Contractor to dispose to appropriately.
- Contractor's Camps and Construction Sites to have designated waste collection points,
- Contractor shall engage a licensed waster transported to regularly transport accumulated wastes for final disposal at an approved dumping site.
- Environmental Management, Health, and Safety Training Programmes to be conducted for Contractor's Staff to create awareness on proper solid wastes management.
- Contractor to provide different bins for segregation of non-hazardous and hazardous wastes for appropriate disposal.
- Tracking of waste to be undertaken to ensure disposal to designated dumping sites.

7.5.5 Accidental Oil and fuel Spills and Leaks

The Project will involve use of plant and equipment diesel oils. If these oils accidentally leak into the environ, they could result to significant contamination of soil, surface, and underground water resources.

Oils Spills can be mitigated as follows.

- Checking and regular servicing of Equipment.
- Re-fuelling at safe designated locations,
- Storage areas to be purpose-built with secondary containment.
- Use of spill kits and applications of emergency spill procedures.
- Provision of a 20cm layer of sand and ballast at the machinery storage area and diesel tank section, this layer act as sink to potential oil spills and will be replaced when saturated.
- Vehicle maintenance to be done in impervious concrete platforms and grease and oil traps to be used.
- Safe disposal of used oil through licensed hazardous waste handler

7.5.6 Impact on cultural Heritage

Although the ESIA or RAP screening did not identify any cultural sites, the project is located within a culture rich area, which the project may uncover unknown cultural resources. These sites may be of importance to the local community. These sites may include and not limited to, archaeological sites, historical sites, remains and objects, including graveyards and/or individual graves during excavation or construction.

Mitigation Measures for cultural heritage

- Use of "Chance finds" procedures by the contractor.

7.5.7 Air Pollution and Dust Generation

Air Pollution can be caused by emissions from Construction Plant and Equipment and Vehicles. Dust can be generated by vehicles travelling on unpaved roads and tracks, and dust from exposed, non-vegetated surfaces. Some dust will also be generated during excavation works, by blowing from dump truck loads, and possibly from project borrow pits and quarries.

Mitigation Measures (Air pollution)

- The contractor to comply the provisions of EMCA (Air Quality Regulations) 2014, to be enforced by the Supervising Engineer.
- Workers shall be trained on management of air pollution from vehicles and machinery.
- All construction machinery shall be maintained and serviced in accordance with the manufacturers' specifications.
- The removal of vegetation shall be avoided until such time as clearance is required and exposed surfaces shall be re-vegetated or stabilized as soon as practically possible.
- The contractor shall not carry out dust generating activities (excavation, handling, and transport of soils) during times of strong winds.
- Vehicles delivering construction materials and vehicles hauling excavated materials shall be covered to reduce spills and windblown dust.
- Water sprays shall be used on all earthwork's areas within 200 metres of human settlement especially during the dry season.

7.5.8 Noise and Excessive Vibrations

Noise and Excessive Vibrations are caused by operation of construction plant and equipment and activities such as excavation and rock breaking. This impact poses a health and safety risk to both the communities living in the project area and construction workers.

Mitigation Measures for exposure to Noise and Excessive Vibrations

- Contractor will comply with provisions of EMCA (Noise and Excessive Vibrations) Regulations of 2009

- The Contractor shall keep noise level within acceptable limits (60dBA for sensitive locations (residential, educational, health institutions etc.) and 75 dBA for other areas during the day Decibels during the night) and construction activities shall, where possible, be confined to normal working hours in the residential areas.
- Hospitals and other noise sensitive areas such as schools shall be notified by the Contractor at least 5 days before construction is due to commence in their vicinity.
- Effective use of appropriate PPE (ear plugs or muffs) by exposed workers and Proper maintenance of machines.
- Any complaints received by the Contractor regarding noise will be recorded and communicated to the Supervising Engineer for appropriate action.

7.5.9 Risk of Accidents at Work Sites

Accidents during construction activities may occur due to failure to use Personal Protective Equipment (PPE) by workers on site and members of the public illegally accessing the work sites, traffic accidents involving construction vehicles, electrical safety risks. Accidents may result in injuries or even death of workers or members of the public.

Mitigation Measures for Accidents at Work sites

- Contractor to provide a Healthy and Safety Plan prior to the commencement of works to be approved by the Supervising Engineer. The plan shall comprehensively analyse all potential safety and health risks and provide corresponding prevention measures, including emergency response plan.
- All workers to be inducted and trained on specific safety measures regularly throughout the construction period.
- As applicable, works including operating equipment and electromechanical installations will be performed only by duly qualified personnel.
- Construction Workers and the Supervising Team to be provided with Personal Protective Equipment including gloves, gumboots, overalls, and helmets. Use of PPE to be enforced by the Supervising Engineer.
- Fully stocked First Aid Kits to be provided within the Sites, Camps and in all Project Vehicles. Trained first aiders to be available on site at any time works are ongoing. The ratio of first aiders to workers on site shall be in line with the OSHA First Aid Rules
- Isolate the site for access by the local communities during the construction for their safety and health. Camps and Work Sites to be fenced off/barricaded and Security Guards provided to restrict access to members of the public.
- Strict use of warning signages and tapes where the trenches are open and at other active construction sites.

- Contractor to Employ and train Road Safety Marshalls who will be responsible for management of traffic on site.
- Contractor to provide a Traffic Management Plan during construction to be approved by the Supervising Engineer
- Contractor to have designated personnel among the employees to oversee implementation of safety measures at the work sites.
- The Contractor to ensure dust suppression is carried out especially during road construction.
- Contractor's trenching method statement shall specifically incorporate measures that ensure trenching and pipe laying is safely conducted.
- Limit lengths of open trenches to what can be backfilled within a shortest period feasible
- Contractor will ensure all open trenches are kept drained.
- Provide and maintain serviceable and appropriate firefighting equipment at the work sites, including fuel storage areas, garages, and offices. Workers will also be drilled on emergency fire response in line with the OSHA 2007 requirements.
- Maintain incident register and undertake investigations on any major incidents and accidents to inform further preventive actions as necessary.

7.5.10 Labour influx and Sexual Offences to Minors

The project at construction phase has the potential of attracting workers from various regions to the project area and their surrounding environs where the project will be implemented. Labour influx has potential of triggering the following impacts.

i. Increased HIV/AIDS
ii. Early Child pregnancies
iii. School dropout
iv. Sexual offences
v. Gender based violence.

Mitigation measures (Labour Influx)

- Effective community engagement and strong grievance mechanisms on matters related to labour.
- Effective contractual obligations for the contractor to adhere to the mitigation of risks against labour influx.
- Proper records of labour force on site while avoiding child and forced labour.
- Fair treatment, non-discrimination, and equal opportunity of workers.
- Comply to provisions of WIBA 2007 and IFC PS 2 on labour and Working Conditions, and ILO Conventions 87, 98, 29,105,138,182,100,111.
- Develop and implement a children Protection Strategy.

7.5.11 Human Rights Principles and Gender Inclusivity

The possibility of the works contractor not adhering to requirements of Human Rights Principles and Gender Inclusivity could trigger resistance from Civil Society Organization (CSO) through demonstrations. This could lead to delay substantial delay in Project implementation.

Mitigation measures to non-adherence to Human Rights Principles and Gender inclusivity

- Mainstream Gender Inclusivity in hiring of workers and entire Project Management as required by Gender Policy 2011 and 2/3 gender rule.
- Comply to provisions of guidelines on incorporating Human Rights Standards and Principles, including Gender inclusivity.
- Protecting human risk areas associated with, Disadvantaged Groups, Interfering with Participation Rights, and interfering with Labour Rights.

7.5.12 Increased Transmission of HIV/AIDS

The project will attract new people to the project area seeking employment during the construction period and this can lead to increased transmission of HIV/AIDS and or the other sexually transmitted diseases (STDs). This may result from increased incomes of workers whereby some may try to seek for sexual favours using their incomes. The fact that some the contractors and workers will be away from their homes may lead them seeking sexual satisfaction from the area residents.

Mitigation Measures for Increased HIV transmission

- Offer HIV/AIDS sensitization to workers in collaboration with the local health facilities.
- Offer VCT services to the community members with the help of the local Health facilities.
- Contractor to provide standard quality condoms to personnel on site.

7.5.13 Increased Crime and Insecurity

Influx of persons to the project area may lead to increased insecurity and incidences of crime. This impact applies to all the project areas under this assessment.

Mitigation Measures for increased Crime and Insecurity

- Contractor and Supervision Team to liaise regularly with the Local Administration and Police Service to address any insecurity and crime arising during project implementation.
- Contractor to provide 24 hours' security to Workforce Camps, Yards, Stores and to the Supervising Team's Offices.

7.5.14 Gender Based Violence

GBV constitutes acts of gross misconduct and are therefore grounds for sanctions, penalties and/or termination of employment. All forms of GBV including grooming are unacceptable be it on the work site, the work site surroundings, or at workers' camps. Prosecution of those who commit to be pursued.

This impact is triggered during Project Construction Phase is likely to occur. Therefore, below listed provisions are provided to mitigate against such GBV and SH related Project induced impacts.

Mitigation measures for GBV

- The contractor will mainstream Gender Inclusivity in hiring of workers and entire Project Management as required by Gender Policy 2011 and 2/3 Gender Rule.
- The existing community structures headed by location chiefs should be involved in local labour hire, emphasize the requirement of hiring women, youth, and people with disability and VMGs.
- Protecting Human Risk Areas Associated with, Disadvantaged Groups, Interfering with Participation Rights and interfering with Labour Rights:
- Treat women and children (persons under the age of 18) with respect regardless of race, colour, language, religion, political or other opinion, national, ethnic, or social origin, property, disability, birth, or other status.
- Do not use language or behaviour towards women or children that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.
- Sexual activity with children under 18—including through digital media is prohibited. Mistaken belief regarding the age of a child and consent from the child is not a defence.
- Exchange of money, employment, goods, or services for sex, including sexual favours or other forms of humiliating, degrading or exploitative behaviour is prohibited.
- Sexual interactions between contractor's and consultant's employees at any level and member of the communities surrounding the workplaces that are not agreed to with full consent by all parties involved in the sexual act are prohibited. This includes relationships involving the withholding, promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex – such sexual activity is considered "non-consensual" within the scope of this Code.
- Where an employee develops concerns or suspicions regarding acts of GBV by a fellow worker, whether in the same contracting firm or not, he or she must report such concerns in accordance with Standard Reporting Procedures.
- All employees are required to attend an induction-training course prior to commencing work on site to ensure they are familiar with the GBV Code of Conduct and sign it.
- All employees must attend a mandatory training course once a month for the duration of the contract starting from the first induction training prior to commencement of work to reinforce the understanding of the institutional GBV Code of Conduct.
- Effective and strong referral mechanisms should be established to assisting in helping the GBV survivors.

7.5.15 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.

Mitigation Measures

- 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-centred 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 Sexual Exploitation and Abuse (SEA) awareness-raising in all community engagement activities; community-level IEC materials; regular community outreach to women and girls about social risks and their SEA-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.

7.5.16 Child labour and Protection

The possibility of contractor children abuse is through hiring of child labour, also labour force on site might abuse children within the Project area through sexual advance that could lead to early pregnancies and school dropout including exposure to communicable diseases such as HIV and AIDS. The contractor will undertake the below listed mitigation measures.

Mitigation Measures

- The contractor will develop and implement a Children Protection Strategy that will ensure minors are protected against negative impacts associated by the Project including SEA.
- All staff of the contractor must sign COC, committing themselves towards protecting children, which clearly defines what is and is not acceptable behaviour.
- Children under the age of 18 years should be hired on site as provided by Child Rights Act (Amendment Bill) 2014.
- Wherever possible, ensure that another adult is present when working in the proximity of children.
- Not invite unaccompanied children to workers home unless they are at immediate risk of injury or in physical danger.
- Refrain from physical punishment or discipline of children.
- Refrain from hiring children for domestic or other labour, which is inappropriate given their age, or developmental stage, which interferes with their time available for education and recreational activities, or which places them at significant risk of injury.
- Comply with all relevant local legislation, including labour laws in relation to child labour specifically provisions of Kenya's Employment Act Cap 226 of 2007 Part VII on protection of children against exploitation.

7.6. Operation phase Positive Impacts

7.6.1. Improved access to water testing services

The office block and laboratory will provide easy access to laboratory services in that once samples are collected; the turnaround time will be reduced unlike currently where analysis at times the results are not received in due time. This will in effect enhance the health and sanitation condition of the residents of Garissa.

7.6.2. Improvement in infrastructure

The BSL 1 Laboratory Project would also improve the infrastructure quality for the client as the development would come with improved utilities such as stores, guard house and washrooms thereby improving sanitation.

7.6.3. Incorporation of collective waste management

The project is designed such that there will be provision of a designated spot for holding of hazardous wastes awaiting collection by a licensed waste handler. This waste will thus be collected from the site in bulk and as one unit such that the careless disposal and hence proliferation of wastes within the surrounding areas will be curbed. It will also have a dedicated septic tank for disposal of potentially contaminated wastewater.

7.7. Operation Phase Negative impacts

7.7.1. Air Quality

Based on the nature of studies that shall take place in this laboratory, air is the first entity that shall be subject to possible pollution. In this regard, there is the need for undertaking all measures that ensure implementation of set operating procedures and instructions related to the BSL - 1 laboratory, e.g. OIE and World Health Organization (WHO) standards. According to OIE and WHO, pathogens that might cause serious illness amongst human and animals and are easy transferable, directly, or indirectly, presenting a risk for the individual or community, are categorized as infectious microorganisms – group III and above.

Kenya has domesticated global conventions that call for drastic reduction in the use of ozone depleting substances. The BSL 1 will be equipped with various refrigerants, air conditioners and freezers and it is important for proponent to consider installing newer air conditioning models designed with R-410A as opposed to R-22. R-22 is a hydro-chlorofluorocarbon (HCFC) which contributes to ozone depletion while R-410A is a hydrofluorocarbon (HFC) which does not contribute to ozone depletion. R-410A also offers greater efficiency, saving energy costs, and is much better for the environment. This is in line with the Montreal Protocol on Substances that Deplete the Ozone Layer that was designed to reduce the production and consumption of ozone depleting substances to reduce their abundance in the atmosphere, and thereby protect the earth's fragile ozone Layer. Developing countries have up to 2020 to stop the use of ozone depleting chlorofluorocarbons (CFCs) such as R-22 while signatories agreed to phase out R-22 by 2030.

7.7.2. Waste Generation

As a result of the operation of this laboratory, it is expected that some waste will be generated. There will be waste of following types:

- *Household waste:* As a result of activities in the laboratory, household waste shall be created, and these shall be stored properly in containers. This household waste should under no circumstance be mixed with other waste created in the laboratory.
- *Hazardous waste:* The laboratory activities will involve certain use of chemicals that may be hazardous.

All wastes generated in the laboratories of the facility (including sample packaging materials, culture materials, petri dishes, PPE, and associated process wastes) would leave the laboratories only after decontamination using the facility's autoclave or after being chemically sterilized.

Mitigation Measures

- Ensure that the hazardous solid waste generated at the BSL 1 Lab is regularly disposed of appropriately at authorised dumping sites by registered waste handlers.

- Ensure that occupants of the laboratory manage their waste efficiently through recycling, reuse, and proper disposal procedures.
- Provide labelled and covered solid waste handling facilities such as waste bins and skips within the BSL 1 Lab
- Donate redundant but serviceable equipment to charities and institutions

Mitigation Measures Sewage disposal

- Conduct regular inspections for sewage pipe blockages or damages and fix appropriately.
- Ensure regular monitoring of the sewage discharged from the laboratory to ensure that the stipulated sewage/effluent discharge rules and standards are not violated.

Mitigation Measures Lab Waste

- Containers of solvent residues must not be allowed to accumulate in laboratories and fume cupboards; they must be returned to the designated store at frequent intervals, or as soon as full, for disposal.
- Liquids that could result in an explosion, heat generation, or toxic gas release should not be disposed of down the drain.
- A conservancy tank for liquid waste should be provided and well labelled before been disposed by licensed waste handlers.
- Toxic chemicals that are identified as carcinogenic, mutagenic, or teratogenic should not be disposed of down the sewer.
- Heavy metals should never be disposed of down the drain.
- Biological agents must be inactivated by a validated autoclave or disinfectant process before disposal down the sink.
- The management should engage licensed waste handler to dispose-off the laboratory waste.
- The management should apply for an Effluent Discharge License (EDL).

7.7.3. Visual and Landscape Impact Management

The project activities may interfere with the landscape of the site making it unattractive.

Mitigation Measures

- Elaborate landscaping and maintenance of these sites can limit the viewpoints to the facilities and thus reduce their visual impact.

7.7.4. Increased Energy Consumption

The operation of the lab will require running of equipment that use electricity. The lab will also require proper lighting to enable the workers to carry out their day-to-day activities. This will and may result in a lot of energy consumption during the operation period.

Mitigation Measures

- Ensure electrical equipment, appliances and lights are switched off when not being used.
- Install energy saving fluorescent tubes at all lighting points instead of bulbs which consume higher electric energy.
- Switch off electrical equipment, appliances and lights when not being used.
- Install occupation sensing lighting at various locations such as storage areas which are not in use all the time.
- Install energy saving fluorescent tubes at all lighting points within the laboratory instead of bulbs which consume higher electric energy.
- Monitor energy use during the operation of the project and set targets for efficient energy use.
- Sensitise apartment occupants to use energy efficiently.
- Use of renewable sources of energy such as solar power.

7.7.5. Increase Water Consumption

A lot of water will be consumed during mixing of reagents, cleaning of lab apparatus and the lab itself.

Mitigation Measures

- Promptly detect and repair water pipe and tank leaks.
- Occupants to conserve water e.g. by avoiding unnecessary toilet flushing.
- Ensure taps are not running when not in use.
- Install water conserving taps that turn-off automatically when water is not being used.
- Install a discharge meter at water outlets to determine and monitor total water usage.

7.7.6. Labour Issues

Skilled workers and non-skilled workers will be required to operate the laboratory. People seeking employment from other areas may conflict and result in completion with the local communities.

Mitigation Measures

- Trained and skilled employees should first be sought within the project area.
- Fair chances should be given to all during labour recruitment.

7.7.7. Theft and Insecurity at the Premises

The laboratory will contain expensive equipment and people may be tempted to steal and sell the equipment to earn money.

Mitigation Measures

- Always ensure the general safety and security by providing day and night security guards.
- Adequate lighting within and around the premises.

7.7.8. Health and Safety Risks

Workers may be exposed to harmful chemical that may result in health problems. Accidents such as slips and falls, cuts may occur during the operation of the lab.

Mitigation Measures

- Implement all necessary measures to ensure health and safety of the client and the public during operation of the Laboratory Development project as stipulated in OSHA 2007

7.8. Decommissioning Phase Positive Impacts

The following are the positive impacts during decommissioning phase of the proposed Project:

7.8.1. Employment Opportunities

Temporary employment opportunities will be created for the demolition of laid and constructed structures during the decommissioning works.

7.8.2. Environmental Rehabilitation

Rehabilitation of site to ensure the site is left as natural as possible close or better than before

7.9. Decommissioning Phase Negative Impacts

7.9.1. Loss of jobs and income

The people that will be employed to operate and maintain infrastructures will lose their jobs immediately after the closure of the project. The loss of jobs will have far-reaching impacts as it will lead to loss of income and social stress.

Mitigation measures

- Notify the employees in advance on the project closure date and adequately compensate them.
- Dismissal procedures to be compliant with Employment Act, 2007.
- Provide counselling and alternative skills for alternative activities.

7.9.2. Noise Pollution

Activities likely to produce noise during decommissioning include demolition of structures as well as any staff offices and quarters built on site.

Mitigation measures:

- Schedule noisy activities during the daytime period.
- Prepare a decommissioning plan to guide activities.
- Monitor noise levels as per the NEMA Environmental Management and Coordination (Noise and Excessive Vibration Pollution) (Control) Regulations, 2009 & OSHA, 2007.
- The noise emission characteristics should be considered during selection and mobilization of decommissioning equipment; and.
- Sensitize staff to switch off machinery and vehicles when not in use.

7.9.3. Solid Waste Material

It is expected that large amounts of solid waste material arising during decommissioning will include steel pipes, glass panels, stones, pipes, wood, metal, paper, plastic, equipment, vegetation, etc. The proper disposal of these materials is critical. Although demolition waste is generally considered as less harmful to the environment since they are composed of inert materials,

there is growing evidence that large quantities of such waste may lead to release of certain hazardous chemicals into the environment.

Mitigation measures:

- Disposal of solid waste in compliance with EMCA 2006 Waste Management Regulations.
- Segregation of waste to encourage reuse and recycling.
- Where recycling/reuse of the removed materials and other demolition waste is not possible; the materials should be taken to a licensed waste disposal site, or arrangements made with the County Government.
- Ensuring that the contracted waste collector is registered with NEMA to collect and dispose wastes.
- Donate reusable demolition waste to charitable organizations, individuals, and institutions.

7.9.4. Occupational health and safety

If not handled with care the demolition may lead to exposure of hazardous chemicals to workers and surrounding communities which poses as health risks to them. Machinery and equipment used for the same also possess as danger to the workers if not handled well and with the correct PPE.

Mitigation measures:

- Provide the correct PPE for the workers when conducting the demolition activities.
- Conduct training on health and safety procedures to the workers prior to commencement of demolition.
- Proper plans should be made prior to demolition to contain the raw sewage and other wastewater that poses as health risk to human beings and the environment, to prevent the workers and surrounding communities from getting into contact with it.

CHAPTER 8: ENVIRONMENTAL AND SOCIAL MANAGEMENT AND MONITORING PLAN

8.1 Introduction

An environmental management plan has been developed to assist the Proponent in mitigating and managing environmental impacts associated with the life cycle of the project. The ESMMP has been developed to provide a basis for an Environmental Management System (EMS; ISO 14001 principles) for 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 ESMMP. As such, the ESMMP will be subject to a regular regime of periodic review.

The ESMMP identifies management actions that need to be implemented in various phases of the proposed project life cycle as follows:

8.1.1 Planning and design phase

Refers to the stage when the feasibility studies are being undertaken, the project description is being developed and the proposed project is being designed. During this phase, the ESIA is completed, and the license is applied for.

8.1.2 Construction phase

This shall commence after the proposed project license has been issued and GAWASCO has taken the decision to implement the project. The construction phase involves the development and construction of the project infrastructure.

8.1.3 Operations

This is the phase during which the proposed project shall be in operation and the targeted beneficiaries of Dadaab shall commence benefiting from the project.

8.1.4 Decommissioning Phase

The decommissioning phase of a project includes restoring the environment to its original form once all the operational activities of the project have ceased.

The de-commissioning of the Project is not envisaged. However, some aspects of the project will require decommissioning including the Contractor's camp.

Before decommissioning, the Contractor will prepare a decommissioning plan for the elements that will require decommissioning.

Table 8-1: Decommissioning Flow Chart

	Action	Actor
Step 1	**Initiation** • Development of an Objective Worksheet and checklist incorporating references, legal, stakeholder engagement and policies • Undertake decommissioning audit	**Proponent**
Step 2	**Prepare Road Map for Decommissioning Design** • Conduct design review to validate elements of the design and ensure design features are incorporated in the decommissioning design. • Public consultations	**Proponent**
Step 3	**Prepare and Award Contract** • Prepare a contract that incorporates validated project information and award to a contractor as per the Procurement rules.	**Proponent**
Step 4	**Execute Decommission Works** • Implement design elements and criteria on the Project in accordance with specifications and drawings. • Inspect during decommissioning and at Project completion to ensure that all design elements are implemented according to design specifications.	**Contractor**
Step 5	**Non-Conformance, Corrective/Preventive Action** • Determine root cause. • Propose corrective measures. • Propose future preventive measures	**Proponent**

8.2 Objective of the ESMMP

The objectives of the ESMMP include:

- To monitor the implementation of mitigation measures against potential adverse impacts of construction and operation phases of the project to ensure that they conform and comply with relevant environmental and social policies, guidelines, and legislation.
- To assess emerging non-anticipated adverse environmental and social impacts and implement relevant mitigation measures to maintain them within acceptable levels.
- To maintain best practice in environmental, social health and safety during project construction and operation

8.3 Auditing of ESMMP

The contractor and the supervising consultant shall conduct regular audits to the ESMMP to ensure that the system for implementation of the ESMMP is operating effectively. The audit shall check that a procedure is in place to ensure that:

- The ESMMP being used is the up to date version;
- Variations to the ESMMP and non-compliance and corrective action are documented.
- Appropriate environmental training of personnel is undertaken.
- Emergency procedures are in place and effectively communicated to personnel.
- A register of major incidents (spills, injuries, complaints) is in place and other documentation related to the ESMMP; and
- Ensure that appropriate corrective and preventive action is taken by the Contractor once instructions have been issued.

8.4 Management Responsibility of ESMMP

To ensure the sound development and effective implementation of the ESMMP, it will be necessary to identify and define the responsibilities and authority of the various persons and Organizations which will be involved in the project. The following entities should be involved in the implementation of this ESMMP:

a) Garissa Water and Sewerage Company (GAWASCO)

They will be charged with the responsibility of ensuring that the proposed development has been put up in an environmentally sound manner. They have a safety team consisting of environmentalist, sociologists, and project engineers. This can be enhanced by inclusion of environmental specifications in the tender specifications, selection of renowned environmentally conscious contractors and supervision to ensure that the objectives of this ESMMP are met.

b) National Environment Management Authority (NEMA)

The responsibility of NEMA is to exercise general supervision and co-ordination over all matters relating to the environment and to be the principal instrument of Government of Kenya in the implementation of all policies relating to the environment.

c) The Contractor

The persons/firms contracted to put up the proposed water supply project will be required to comply with the requirements of the ESMMP within this report. To ensure strict compliance, environmental specifications of this ESMMP shall form part of the contract documents. The contractor will prepare the specific ESMP.

d) Consultant

The sourced consultant will have to ensure that the proposed ESMMP is up to date and is being used by the contractor. Periodic audits of the ESMMP will have to be done to ensure that its performance is as expected.

There are various national institutions that are important in civil works related to environmental management in Kenya. These are described in the subsection below:

Name of Institution	Role of Institution
County Government of Garissa	▪ Review and approve construction drawings. ▪ Responsible for providing land for the project as per the integrated spatial plans. ▪ Inspection and issuance of Certificate of Occupancy once the Office Block is completed. ▪ Fire inspection and issuance of fire certificate ▪ Issue business permit for GAWASCO. ▪ Issue business permit for the Contractor undertaking the works
Directorate of Occupational Health and Safety Services (DOSHS)	• Issue Certificate for Registration of Workplace of the Contractors Camp. • Inspection of machines and equipment used for the works. • Ensure Compliance with safety and health law. • Investigation of occupational accidents and diseases and aiming to prevent recurrence
National Construction Authority	• Project Registration and authorise the Site. • Confirm the Contractor awarded is qualified to undertake the works. • Registration of Contractors. • Accreditation of Construction Workers. • Renewal of construction License.

8.5 Environmental Social Management and Monitoring Plan

The necessary objectives, activities, mitigation measures, and allocation of costs and responsibilities pertaining to prevention, minimization and monitoring of significant negative impacts and maximization of positive impacts for the proposed construction of a BSL Level 1 Laboratory in Dadaab is provided below for the.

(i) Pre-construction Stage

(ii) Construction stage,

(iii) Operational stage, and

(iv) Decommissioning stage.

Table 8-2: Pre-Construction Phase ESMMP

Associated Impacts	Management Actions	Monitoring Indicator	Monitoring frequency	Responsibilities	Cost in KES
		Social impact			
Labour influx	• Effective community engagement and strong grievance mechanisms on matters related to labour	• Number of grievances logged on site. • Records of local and non-local workers	Daily	Contractor	Contractor to cover in his costs

Table 8-3: Construction Phase ESMMP

Associated Impacts	Management Actions	Monitoring Indicator	Monitoring frequency	Responsibilities	Cost in KES
Environmental					
• Noise and excessive vibrations	• Contractor shall comply with provisions of EMCA (Noise and Excessive Vibrations) Regulations of 2009. • The Contractor shall keep noise level within acceptable limits (60dBA for sensitive locations (residential, educational, health institutions etc.) and 75 dBA for other areas during the day Decibels during the night) and construction activities shall, where possible, be confined to normal working hours in the residential areas. • Hospitals and other noise sensitive areas such as schools and residential shall be notified by the Contractor at least 5 days before construction is due	• Number of complaints received from neighbouring residents	Daily	Contractor	KES 10,000

Associated Impacts	Management Actions	Monitoring Indicator	Monitoring frequency	Responsibilities	Cost in KES
	to commence in their vicinity; • Undertake Noise and Vibration Assessments;				
• Air pollution and dust generation	• The contractor to comply the provisions of EMCA (Air Quality Regulations) 2014, to be enforced by the Supervising Engineer. • Workers shall be trained on management of air pollution from vehicles and machinery. • All construction machinery shall be maintained and serviced in accordance with the manufacturers' specifications. • The removal of vegetation shall be avoided until such time as clearance is required and exposed surfaces shall be re-vegetated or stabilized	• Cases of respiratory complication at nearby health centre. • Visible dust in project site.	Daily	Contractor	KES 10,000.00

Associated Impacts	Management Actions	Monitoring Indicator	Monitoring frequency	Responsibilities	Cost in KES
	as soon as practically possible. • The contractor shall not carry out dust generating activities (excavation, handling, and transport of soils) during times of strong winds. • Vehicles delivering construction materials and vehicles hauling excavated materials shall be covered to reduce spills and windblown dust;				
• Vegetation Cover destruction	• Reinstatement of the project sites to their original after completion of civil and road works • All hedges damaged during construction to be reinstated after completion of the Works. • The contractor to adhere to the delineated construction work area.	• Number of trees cut. • Number of hedges affected.	Weekly	Contractor	KES 10,000

Associated Impacts	Management Actions	Monitoring Indicator	Monitoring frequency	Responsibilities	Cost in KES
	• Planting of grass on project site				
• Generation of Solid waste	• Maximum reuse of excavated material. • Implementation of Soil erosion management in the spoil locations • Construction wastes (residual earth, debris and scrap materials) to be collected at designated points and Contractor to dispose to appropriately. • Contractor's Camps and Construction Sites to have designated waste collection points.	• Waste tracking documentation. • Number of complaints from community not happy with waste management of spoil material	Daily	Contractor	KES 50,000
• Impacts on soil / Vegetation Cover	• The contractor to adhere to the proposed soil conservation practices. • Proper and compacted back filling. • The contractor to stick to clear delineation of the construction to avoid vegetation loss.	• Presence of pollutants in soil. • Visible oil spillage on soil.	Daily	Contractor	Contractor to cover in his cost

Associated Impacts	Management Actions	Monitoring Indicator	Monitoring frequency	Responsibilities	Cost in KES
	• Planting of vegetation cover on project site • Split compacted area to reduce runoff & re-vegetate where necessary. • Vehicles to be kept in designated access roads. • Minimize compaction during stockpiling by placing soil in dry state. • Any polluted soil should be handled with care for proper disposal. • Concrete mixing shall be done on concrete slabs or a large metal sheet or mortar boards. • Maintenance of vehicles to be done strictly at designated place/Drip trays to be used to avoid oil spills. • Excavation materials to be stockpiled at the demarcated location.				

Associated Impacts	Management Actions	Monitoring Indicator	Monitoring frequency	Responsibilities	Cost in KES
	• Rehabilitation of the site after construction.				
• Impact on water	• Storing of fuels, oils, and chemicals beneath impermeable away from surface drains. • The machines to be properly serviced offsite and maintained to avoid spillage of effluents into the water bodies. • Water containing pollutants should be kept in a conservancy tank for removal to prevent pollution of the surface water and surface water bodies. • Prompt action to be taken by the contractor in case of any pollution incident.	• Levels of effluents in water bodies • No of complaints received regarding water pollution and reduced water supply.	Monthly	Contractor	Contractor to cover in his cost

Associated Impacts	Management Actions	Monitoring Indicator	Monitoring frequency	Responsibilities	Cost in KES
	• Grey water to be contained and properly channelled. • Onsite treatment of grey water by the facility approved by the resident engineer.				
• Accidental Oil and fuel Spills and Leaks	• Checking and regular servicing of Equipment. • Re-fuelling at safe locations. • Use of spill kits and applications of emergency spill procedures. • Provision of a 20cm layer of sand and ballast at the machinery storage area and diesel tank section, this layer act as sink to potential oil spills and shall be replaced when saturated. • Vehicle maintenance to be done in impervious concrete platforms and	• Presence of oil spillages	• Daily	• Contractor	• Contractor to cover in his cost

Associated Impacts	Management Actions	Monitoring Indicator	Monitoring frequency	Responsibilities	Cost in KES
	grease and oil traps to be used.				
• Increased energy consumption	• Switch off electrical equipment, appliances and lights when not being used. • Install occupation sensing lighting at various locations such as storage areas which are not in use all the time. • Install energy saving fluorescent tubes at all lighting points instead of bulbs which consume higher electric energy. • Monitor energy use and set targets for efficient energy use. • Sensitise workers to use energy efficiently.	• Number of electrical devices in use • Presence of energy saving lighting equipment	• Frequently	• Contractor • Supervising engineer	• Contractor to cover in his cost
Social Impacts					
• Labour influx and sexual offences to minors	• Effective community engagement and strong grievance mechanisms on matters related to labour.	• Number of locals recruited. • Records of workers on site	• Daily	• Contractor	• Contractor to cover in his cost

Associated Impacts	Management Actions	Monitoring Indicator	Monitoring frequency	Responsibilities	Cost in KES
	• Effective contractual obligations for the contractor to adhere to the mitigation of risks against labour influx. • Proper records of labour force on site while avoiding child and forced labour. • Fair treatment, non-discrimination, and equal opportunity of workers.				
• Increased Transmission of HIV/AIDS	• Sensitize workers and the surrounding communities on awareness, prevention and management of HIV/AIDS and sexual health and rights through staff training, awareness campaigns, multimedia, and workshops or during community Barazas. • Use existing clinics to provide VCT services to construction crew and provision of ARVs for	• Number of cases of diseases reported. • No of workers trained on HIV/ AIDS. • Number of gender-disaggregated toilets constructed.	Weekly	Contractor	KES 20,000

Associated Impacts	Management Actions	Monitoring Indicator	Monitoring frequency	Responsibilities	Cost in KES
	vulnerable community members. • Ensure safety of women and girls in provision of VCT services.				
• Human Rights Principles and Gender Inclusivity	• Mainstream Gender Inclusivity in hiring of workers and entire Project Management as required by Gender Policy 2011 and 2/3 gender rule. • Comply to provisions of guidelines on incorporating Human Rights Standards and Principles, including Gender inclusivity.	• Records of women recruited.	Weekly	Contractor	No additional cost
• Increased crime and insecurity	• Contractor and Supervision Team to liaise regularly with the Local Administration and Police Service to address any security and crime arising during project implementation. • Contractor to provide 24 hours' security to	• No of crime related incidences reported regarding the project.	Daily	Contractor	Contractor to add in his cost

Associated Impacts	Management Actions	Monitoring Indicator	Monitoring frequency	Responsibilities	Cost in KES
	Workforce Camps, Yards, Stores and to the Supervising Team's Offices.				
• Increased GBV	• 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 shall 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,	• Mitigation plan for GBV occurring at the community level because of project implementation. • Number of GBV cases happening at the community level that receive survivor-centred referral and care. • GBV trainings.	Daily	❖ Contractor ❖ County Government	KES 60,000

Associated Impacts	Management Actions	Monitoring Indicator	Monitoring frequency	Responsibilities	Cost in KES
	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. • 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 develop specific plan for mitigating these known risks, e.g. sensitization				

Associated Impacts	Management Actions	Monitoring Indicator	Monitoring frequency	Responsibilities	Cost in KES
	around gender-equitable approaches to compensation and employment; etc. • The contractor shall ensure adequate referral mechanisms are in place if a case of GBV at the community level				
• Sexual Exploitation and Abuse by project workers against community members	• Develop and implement a SEA action plan with an Accountability and Response Framework as part of the C-ESMP. The SEA action plan shall 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 shall include how the project shall ensure necessary steps are in place for:	• SEA Action Plan • Code of Conduct • Number of staff trainings • SEA FP • Community Liaison trained in PSEA. • IEC materials for worker's sites and community • Discrete SEA reporting pathway • Relevant policies, e.g. investigations and discipline and whistle-blower protection • Monthly minutes	Daily	• Contractor • County Government	• Covered under GBV

Associated Impacts	Management Actions	Monitoring Indicator	Monitoring frequency	Responsibilities	Cost in KES
	❖ 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-cantered 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	from SEA coordination meetings			

Associated Impacts	Management Actions	Monitoring Indicator	Monitoring frequency	Responsibilities	Cost in KES
	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, employment 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				

Associated Impacts	Management Actions	Monitoring Indicator	Monitoring frequency	Responsibilities	Cost in KES
	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.				
• Child labour and protection	• The contractor shall develop and implement a Children Protection Strategy that shall ensures minors are protected against negative impacts associated by the Project including SEA. • All staff of the contractor must sign, committing themselves towards protecting children, which clearly defines what is and is not acceptable behaviour.	• Availability of child protection strategy • Signed CoC • Identification cards for all workers	Daily	Contractor	Covered under GBV

Associated Impacts	Management Actions	Monitoring Indicator	Monitoring frequency	Responsibilities	Cost in KES
	• Children under the age of 18 years should be hired on site as provided by Child Rights Act (Amendment Bill) 2014 • Wherever possible, ensure that another adult is present when working in the proximity of children. • Not invite unaccompanied children to worker's home unless they are at immediate risk of injury or in physical danger. • Refrain from physical punishment or discipline of children.				
Conflicts between Contractor and Community	• Establishment of a formal grievance and redress mechanism by the supervising consultant/Engineer. • The Contractor shall be required to minimize the possibility of occurrence	• Number of grievances lodged.	Daily	Contractor Supervising Consultant	KES 30,000

Associated Impacts	Management Actions	Monitoring Indicator	Monitoring frequency	Responsibilities	Cost in KES
	of grievances with the local community. • The contractor shall maintain a Complaints Register on site detailing all contacts of aggrieved persons, the investigations undertaken, and response provided, action taken and by whom, any follow up action taken. • Copies of received complaints shall be copied to the supervising consultant/Engineer and issues to be addressed accordingly.				
• Risk of accidents at work site and workers welfare	• Contractor to provide a Healthy and Safety Plan prior to the commencement of works to be approved by the Supervising Engineer. The plan shall comprehensively analyse all potential safety and	• Availability of incidences Occurrence book on site • No of complains from workers for lacking water or sanitation facilities	Daily	Contractor	KES 10,000

Associated Impacts	Management Actions	Monitoring Indicator	Monitoring frequency	Responsibilities	Cost in KES
	health risks and provide corresponding prevention measures, including emergency response plan. • All workers to be inducted and trained on specific safety measures regularly throughout the construction period. • As applicable, works including operating equipment and electromechanical installations shall be performed only by duly qualified personnel. • Construction Workers and the Supervising Team to be provided with Personal Protective Equipment including gloves, gumboots, overalls, and helmets. Use of PPE to be enforced by the Supervising Engineer.				

Associated Impacts	Management Actions	Monitoring Indicator	Monitoring frequency	Responsibilities	Cost in KES
	• Fully stocked First Aid Kits to be provided within the Sites, Camps and in all Project Vehicles • Isolate the site for access by the local communities during the construction for their safety and health. • Camps and Work Sites to be fenced off and Security Guards provided to restrict access to members of the public. • Strict use of warning signage and tapes where the trenches are open and at other active construction sites. • Provision of adequate clean drinking water • Provision of standard sanitation facilities for both genders.				
• Risk associated with working at height	• ladder to be issued in workplace shall be of good construction, sound	• Availability of signages • Training records	Daily	Contractor	KES 30,000

Associated Impacts	Management Actions	Monitoring Indicator	Monitoring frequency	Responsibilities	Cost in KES
	material adequate strength and suitable for the purpose for which it is used and shall be properly maintained. • All floors, steps, stairs, passages, and gangways in a workplace shall be of sound construction and be properly maintained. • Safety harnesses should be provided to workers working at height. • Regular training and awareness on the risks and safety measures to be followed when working at height should be done during the toolbox sessions.	• Available safety harness			
TOTAL					**KES 240,000**

Table 8-4: Operational ESMMP

Potential Impacts	Management Actions	Monitoring Indicators	Monitoring frequency	Target Areas& Responsibilities
Negative Impacts				
Environmental				
Solid waste generation	• Ensure that the hazardous solid waste generated at the BSL 1 Lab is regularly disposed of appropriately at authorised dumping sites by registered waste handlers. • Ensure that occupants of the laboratory manage their waste efficiently through recycling, reuse, and proper disposal procedures. • Provide labelled and covered solid waste handling facilities such as waste bins and skips within the BSL 1 Lab. • Donate redundant but serviceable equipment to charities and institutions	Number of visible blocked drainages	Daily	GAWASCO
Sewage disposal	• Conduct regular inspections for sewage pipe blockages or damages and fix appropriately. • Ensure regular monitoring of the sewage discharged from the laboratory to ensure that the stipulated sewage/effluent discharge rules and standards are not violated.	• Availability of septic tanks • Leaking sewerage pipes • Overflows from the septic tank	Weekly (in case of an overflow incident the issue should be resolved immediately)	GAWASCO
Lab waste	• Containers of solvent residues must not be allowed to accumulate in laboratories and fume cupboards; they must be returned to the designated store at frequent intervals, or as soon as full, for disposal.	• Presence of the effluents in the drains • Number of health-related issues reported.	Frequently	GAWASCO

Potential Impacts	Management Actions	Monitoring Indicators	Monitoring frequency	Target Areas& Responsibilities
	• Liquids that could result in an explosion, heat generation, or toxic gas release should not be disposed of down the drain. • A conservancy tank for liquid waste should be provided and well labelled before been disposed by licensed waste handlers. • Toxic chemicals that are identified as carcinogenic, mutagenic, or teratogenic should not be disposed of down the sewer. • Heavy metals should never be disposed of down the drain. • Biological agents must be inactivated by a validated autoclave or disinfectant process before disposal down the sink. • The management should engage licensed waste handler to dispose-off the laboratory waste. • The management should apply for an Effluent Discharge License (EDL).	• Waste tracking documents		
Visual and landscape impact management	• Elaborate landscaping and maintenance of these sites can limit the viewpoints to the facilities and thus reduce their visual impact.	Number of un-reinstated land Land degradation	Daily	GAWASCO

Potential Impacts	Management Actions	Monitoring Indicators	Monitoring frequency	Target Areas& Responsibilities
Increased energy consumption	• Ensure electrical equipment, appliances and lights are switched off when not being used. • Install energy saving fluorescent tubes at all lighting points instead of bulbs which consume higher electric energy. • Use of renewable sources of energy such as solar power. • Switch off electrical equipment, appliances and lights when not being used. • Install occupation sensing lighting at various locations such as storage areas which are not in use all the time. • Install energy saving fluorescent tubes at all lighting points within the laboratory instead of bulbs which consume higher electric energy. • Monitor energy use during the operation of the project and set targets for efficient energy use. • Sensitise apartment occupants to use energy efficiently.	Energy saving lighting equipment. Records of energy consumption	Daily	GAWASCO
Increase water consumption	• Promptly detect and repair water pipe and tank leaks • Occupants to conserve water e.g. by avoiding unnecessary toilet flushing. • Ensure taps are not running when not in use. • Install water conserving taps that turn-off automatically when water is not being used.	Water usage records	Daily	GAWASCO

Potential Impacts	Management Actions	Monitoring Indicators	Monitoring frequency	Target Areas& Responsibilities
	• Install a discharge meter at water outlets to determine and monitor total water usage.			
Social				
Labour issues	• Trained and skilled employees should first be sought within the project area. • Fair chances should be given to all during labour recruitment.	• Employees records	Monthly	GAWASCO
Theft and insecurity at the premises	• Always ensure the general safety and security by providing day and night security guards and adequate lighting within and around the premises.	• Number of reported theft cases	Frequently	GAWASCO
Occupation Health and Safety Risks				
Health and safety risks	• Implement all necessary measures to Theft and insecurity at the premises ensure health and safety of the client and the public during operation of the Laboratory Development project as stipulated in OSHA 2007.	• Number of accidents and incidents • Presence of blocked chambers	Daily	GAWASCO

Table 8-5: Decommissioning ESMMP

Potential Impacts	Management Actions	Monitoring Indicators	Monitoring frequency	Responsibilities	Budget
Negative impacts					
Environmental					
Solid Waste Generation	• Disposal of solid waste in compliance with EMCA 2006 Waste Management Regulations. • Segregation of waste to encourage reuse and recycling. • Where recycling/reuse of the removed materials and other demolition waste is not possible; the materials should be taken to a licensed waste disposal site, or arrangements made with the County Government. • Ensuring that the contracted waste collector is registered with NEMA to collect and dispose wastes. • Donate reusable demolition waste to charitable organizations, individuals, and institutions.	• Presence of solid waste in the environment	Daily	Contractor	To be determined in decommissioning phase
Noise pollution	• Schedule noisy activities during the daytime period. • Prepare a decommissioning plan to guide activities. • Monitor noise levels as per the NEMA Environmental Management and Coordination (Noise and Excessive Vibration Pollution) (Control) Regulations, 2009 & OSHA, 2007.	• Levels of noise produced. • Number of complaints recorded	Daily	Contractor	

Potential Impacts	Management Actions	Monitoring Indicators	Monitoring frequency	Responsibilities	Budget
	• The noise emission characteristics should be considered during selection and mobilization of decommissioning equipment; and • Sensitize staff to switch off machinery and vehicles when not in use;				
Social Impact					
Loss of jobs	• The Contractor should give early notices before laying off the workers to give them ample time to prepare for the transition. • Notify the employees in advance on the project closure date and adequately compensate them. • Dismissal procedures to be compliant with Employment Act, 2007. • Provide counselling and alternative skills for alternative activities.	Number of laid off workers	To be determined by the Contractor	Contractor	
Occupational Health and Safety Impacts					
Occupational Health and Safety	• Provide the correct PPE for the workers when conducting the demolition activities. • Conduct training on health and safety procedures to the workers prior to commencement of demolition. • Proper plans should be made prior to demolition to contain the raw sewage and other wastewater that poses as health risk to human beings and the environment, to prevent the workers and surrounding communities from getting into contact with it.	• Records of accidents and incidents	Daily	Contractor	

8.6 Emergency Procedure during Construction and Operation Phase of the Project

An emergency means unforeseen happening resulting in serious or fatal injury to employed persons or the neighbouring communities. The following elements of a conventional emergency response plan are recommended as summarized in table 8-9 below.

Table 8-6: Emergency Response Plan

Emergency Response Plan Components	Actions/Requirements	Actions/Requirements
Potential Emergency	Identification of all potential emergencies associated with the proposed project at the project site, Include, Fires, Accidents & Incidents, water burst, oil spill, Security, and Terrorism etc	• Contractor during construction and Decommissioning phases. • Proponent during operation phase.
Emergency Operations Coordinator (EOC)	Designate a primary and secondary contact person.	• Contractor during construction and decommissioning phases. • Proponent during operation phase
Emergency contact Numbers	Give & display contact for Fire station, Ambulance, police, Hospitals, NEMA, OSHA and others.	• Contractor during construction and decommissioning phases • Proponent during operation phase
Installation of emergency equipment	• Fire sensors, • Fire alarms, • Fire extinguishers, • Fire hose, • Panic alarm button, • Provision and enforcement of use of PPEs, • Emergency Communication equipment, such as Phone & alarm bells	• Contractor during construction and decommissioning phases. • Proponent during operation phase.
Training for emergency response First Aid	• Employees training in the use of emergency equipment • Provision of first aid kits, • First aid management training	• Contractor during construction and decommissioning phases. • Proponent during operation phase.
Signage	• Fire sensors.	• Contractor during construction and decommissioning phases.

Emergency Response Plan Components	Actions/Requirements	Actions/Requirements
	• Signage, action poster, alarm bell/ panic button	• Proponent during operation phase.
Procedure for rescue and evacuation	• Evacuation plan, • Warning system, • Assembly site • Shelter in place plan.	• Contractor during construction and decommissioning phases. • Proponent during operation phase.
Occupants' emergency contact information	• List of all occupants, residents & their activities	• Proponent during operation phase
ERP review	• Annual ERP review	• Contractor during construction and decommissioning phases. • Proponent during operation phase.

When emergency is over, the OSHA coordinator shall notify the workers by putting a message: "ALL CLEAR".

In the event of such an emergency during operation, the workers shall:

a. Alert other persons exposed to danger.
b. Ring the nearest police station and ambulance services.

All incidents and complaints will be recorded in the contractor's incident reporting system and reported to the client. All incidences involving deaths, near miss that can lead to incidences should be reported within 24 hrs.

8.7 Grievance Resolution Mechanism

This ESIA establishes all the project proposed works and have established Grievance Redress Mechanism (GRM). In addition, this ESIA has enhanced the GRM through the below described three-tier Grievance Mechanism.

(i) Local committee

It is desirable to resolve all the grievances at the community level to the greatest extent possible. The community or settlement level grievance mechanism must be credible and generally acceptable. The grievance redress mechanism will aim to solve disputes at the earliest possible time in the interest of all parties concerned. The committee comprises of chief, ward administrator, Member of county assembly and 2No youth representatives, 1No Member of marginalized community. The officer addressing construction-related grievances will give opportunity to the local communities and the public to express any grievances related to project.

This committee will sit at the Chiefs office. The following procedure is proposed:

- A PAP registers a grievance and within one working day, the committee members are alerted of the case.
- The affected person is immediately informed of the next date of the scheduled hearing. Depending on the case load, a maximum of 7 working days should be given between the date that a case is recorded and the date when the hearing is held.
- The committee meets once every seven-calendar day to deal with emerging cases. At these meetings, hearings with the affected persons and related witnesses will be held.
- The committee will communicate its judgment to the affected persons within 3 working days.
- If no resolution is met or the PAP is not satisfied with the judgment, the case is moved to the next level by the committee. This will be done within 5 working days of the hearing.

(ii) Mediation Committees

In case the grievance is not resolved at first tier, the GRC handling grievances will be enjoined by the project committee. This committee will sit once a month at the County Government Office. The following procedure is proposed:

- A grievance is logged at the County Government Office and within five working days, a notice is sent out to all the interested parties informing them of the date of the hearing.
- A hearing will then be held within thirty days of the grievance being raised.
- If investigations and technical witnesses are required, a maximum of thirty (30) calendar days will be taken prior to a hearing being held.
- The committee's decision will be communicated in writing within 5 working days of the date of the hearing.
- If the committee does not resolve an issue, the affected persons are free to go to the Land and Environment Court.

(iii) Land and Environment Courts of Law

If complainants are not satisfied by the decision of the first two tiers of the Grievance Mechanism, they can seek redress from the Courts of Law.

1. Procedure of receiving and Resolution of complaints

a) Step 1: Receipt of complaint/grievance

A verbal or written complaint from a PAP or community member will be received by the Grievance Officer (GO) on behave of the GRC (refer to Box -1 for the roles of the GO) or an assigned contract officer in each administrative jurisdiction/authority near to community level and recorded in a grievance log which will be held in the offices of the contractor and the REs office.

Box 1: Role of a Grievance Officer

A Grievance Officer (GO), who will be a member of the Project Implementation Team, will lead the grievance mechanism. Principal responsibilities of the GO will include:

a) Recording the grievances, both written and oral, of the affected people, categorising and prioritising them and providing solutions within a specified time.
b) Discussing grievances on a regular basis with the GRC and coming up with decisions/actions regarding issues that can be resolved at that level.
c) Informing the GRC of serious cases within an appropriate timeframe.
d) Reporting to the aggrieved parties about developments regarding their grievances and the decisions of the GRC and mediation committee.
e) Providing inputs into the monitoring and evaluation process.

Grievances will be received by a contact person who would then hand over the received complaints to the GO, for entering the grievance log using the grievance form.

The grievance log will indicate grievances, date opened/lodged, actions taken to address or reasons why the grievance was not acted upon (e.g., the grievance was not related to the impacts of the project), information provided to complainant and date on which the grievance was closed.

Grievances can be lodged at any time, either directly to the logbook in the contractor's site office or the REs offices. The process of lodging complaint is outlined below:

(i) The GO will receive a complaint from the complainant.
(ii) The GO will ask the claimant questions in their local language write the answers in English and enter them in English onto the grievance form.
(iii) The local leader (representative of an independent local civil society organisation) and the complainant both sign the grievance form after they have both confirmed the accuracy of the grievance.
(iv) The GO lodges the complaint in the grievance log.

b) Step 2: Determination of Corrective Action

If in their judgment, the grievance can be solved at this stage and the GO and GRC will determine a corrective action in consultation with the aggrieved person. A description of the action, the time frame within which the action is to take place, and the party charged with implementing the action will be recorded in the grievance data base.

Grievances will be resolved, and the status reported to complainants within 30 days. If more time is required, this will be clearly communicated and in advance to the aggrieved person. In cases that are not resolved within the stipulated time, site investigations will be undertaken, and results discussed in the monthly meeting with the affected persons. In some instances, it may be appropriate to appoint independent third parties to undertake the investigations.

c) Step 3: Meeting with the complainant

The proposed corrective action and the timeframe in which it is to be implemented will be discussed with the complainant within 30 days of receipt of the grievance. Written agreement to proceed with the corrective action will be sought from the complaint (e.g., by use of an appropriate consent form). If no agreement is reached Step 2 will be revisited.

d) Step 4: Implementation of Corrective Action

Agreed corrective actions will be undertaken by the project developer or its contracts within the agreed timeframe. The date of the completed action will be recorded in the grievance database.

e) Step 5: Verification of corrective action

To verify satisfaction, the aggrieved person will be approached by the GO and GRC to verify that the corrective action has been implemented. A signature of the complainant will be obtained and recorded in the log and/or on the consent form. If the complainant is not satisfied with the outcome of the corrective action, additional steps may be undertaken to reach agreement between the parties. If additional corrective action is not possible, alternative avenues maybe pursued.

f) Step 6: Action by Grievance Redress Committee

If the complainant remains dissatisfied and a satisfactory resolution cannot be reached, the complaint will be handled by the Mediation Committee, this committee is made up of the below listed persons.

(i) One representative of the Administration; - National Government
(ii) One representative of County Administration; - County Government
(iii) One representative of the client acting as an observer.
(iv) One representative of the construction contractor, acting as an observer
(v) Three representatives of the affected people, amongst them at least one woman, chosen i.e. from community-based organizations, elders, farmer.

This committee must have a quorum of at least three persons. Decisions will be reached by simple majority. The Grievance Committee should be constituted for as long as grievances are being lodged.

Once the Mediation Committee has determined its approach to the lodged grievance, this will be communicated to the GO, who will communicate this to the complainant. If satisfied, the complainant signs to acknowledge that the issue has been resolved satisfactorily. If the complainant is not satisfied, however, the complainant notes the outstanding issues, which may be re-lodged with the Grievance Committee, or the complainant may proceed with judicial proceedings.

g) Step 7: Alternative Action/Judicial Recourse and National Land Commission

In case this mechanism will not lead to resolution of the grievance, the complaint is free to seek redress at the courts of law at any given time.

h) Capacity-Building for the Grievance Officer and Grievance Committees

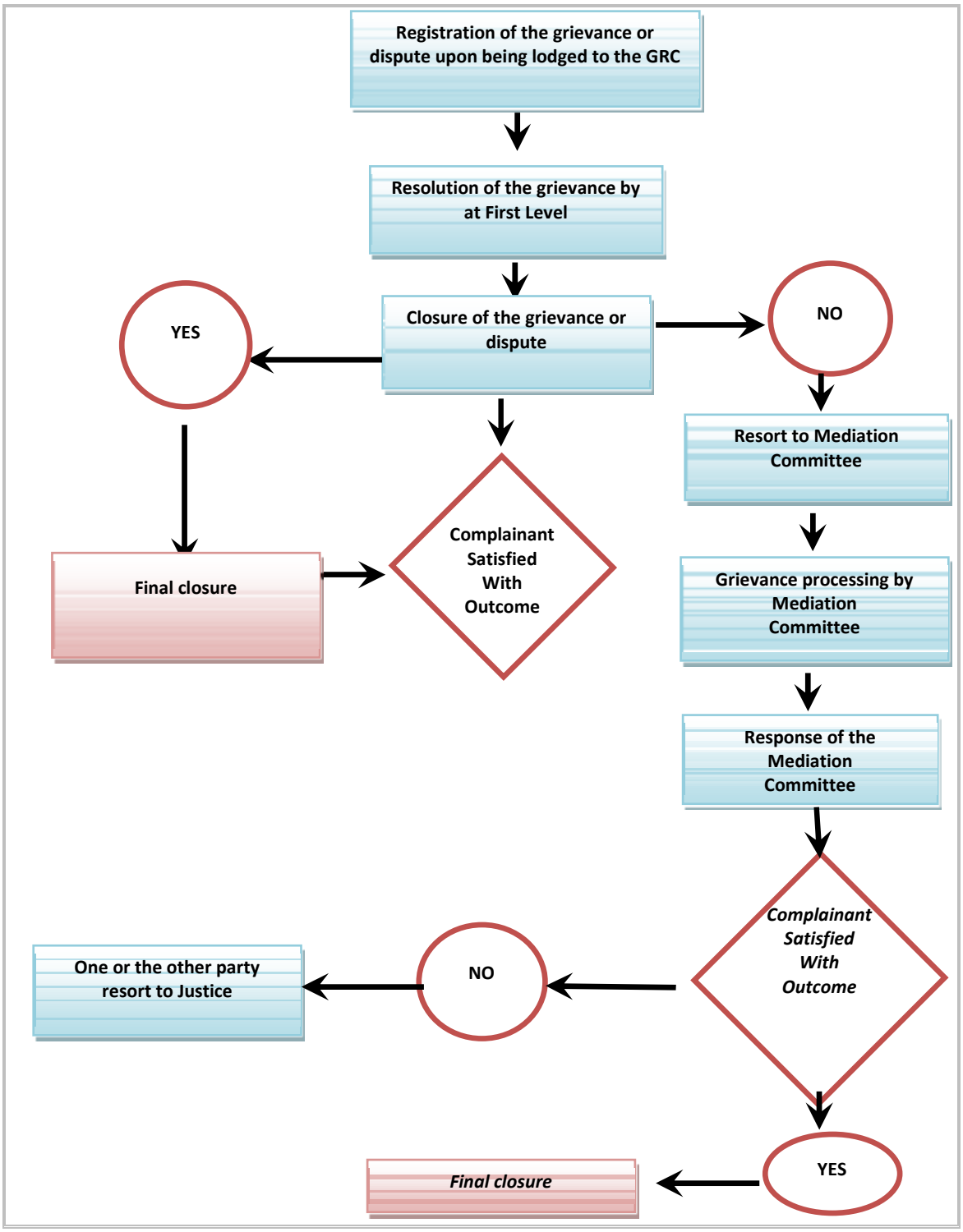
It will be important for the GO to be appointed based on his/her experience and training in conflict resolution through mediation and reconciliation. It will also be important for the GO to have sufficient skills in data management, including data entry, data analysis and storage. This notwithstanding, it will be important that steps are taken to orient and build the capacity of the GO as part of the project implementation team in conflict resolution procedures, such as mediation and reconciliation, and other management areas such as record-keeping, report-writing and Information and communications technology (ICT) equipment management.

The Grievance Committee members will also need to be oriented to the grievance management system suggested in the ESIA. The Grievance Committee members will also need to be built around issues of conflict identification, conflict information analysis and conflict resolution as provided for in the land legislation.

i) Other Alternatives

The other alternative recourse suggested as a last resort is for the complainant to seek redress in courts of law.

GRIEVANCE RESOLUTION PROCEDURE



CHAPTER 9: CONCLUSION AND RECOMMENDATION

9.1 Conclusion

In conclusion, the proposed laboratory project is likely to have both positive and negative impacts. Negative impacts can be mitigated during project construction and operation by strict adherence to Environmental Health and Safety (EHS) and Environmental and Social Management Monitoring Plan (ESMMP). The findings of the Environmental and Social Impact Assessment (ESIA) establishes that the proposed project will elicit positive impacts on the socio-economic environment of the area.

The project activities are likely to cause risks that have low-medium environmental and social impacts. The risks identified include but not limited to risk of accidents, waste generation, emission of dust, and increase in noise, social impacts such as GBV, labour influxes amongst others. However, mitigation measures have been proposed in this ESIA Report.

The study has proposed several measures to reduce negative impacts including amelioration of social negative impacts, noise abatement, waste management, reduction of visual intrusion, reduction of soil erosion, prevention of accidents and health hazards.

Monitoring has been identified as an important process in the protection of environment of the project area since it will reveal changes and trends brought about mainly by construction activities.

Based on the above and taking cognizance of the fact that the proponent has proved financially and environmentally credible, the project should be allowed to go on provided necessary clearance provided the mitigation measures outlined in this report are adhered to and the Environmental and Social Management Plan (ESMP) is implemented.

9.2 Recommendation

i. Necessary permits should be issued by the licensing authority so that the work can commence.

ii. The County Government of Garissa should finalize the land transfer process from the community. It is notable that the Elders have signed the land donation forms which are attached to this report.

iii. Thus, the land issue is adequately addressed.

iv. The proponent needs to support the implementation of environmental management (including mitigation plan and monitoring) to protect the environment of the project area from the negative impacts of the implementation.

v. The Client and Contractor should rehabilitate all sites that are used for construction activities such as sites for storage of materials and any access that may be established during the construction phase.

vi. Environmental, Social, Health and Safety requirements should be included in the bidding documents.

vii. The Contractor will be required to prepare a Construction Environment & Social Management Plan (CESMP) which shall be approved by the proponent before the beginning of works. Within the C-ESMP suite, the following instruments should be prepared:

- Health and Safety Management Plan.
- Labour, Influx and Local Recruitment Management Plan.
- Spoil Management Plan.
- Emergency Response Plan.
- A Gender Responsive Grievance Redress Management Plan for Internal and external grievances.
- Child Protection Strategy.
- Waste Management Plan.

viii. The proponent should develop a waste management plan during the operation of the facility.

REFERENCES

i. Republic of Kenya (2010). The Constitution of Kenya, 2010. National Council of Law Reporting. Nairobi.

ii. Republic of Kenya (2000), Environment Management and Co-ordination Act, (1999), Cap 387. National Council of Law Reporting. Nairobi.

iii. Republic of Kenya (2000), Environment Management and Co-ordination (Amendment), Act 2015. National Council of Law Reporting. Nairobi.

iv. MoALF. 2016. Climate Risk Profile for Garissa County. Kenya County Climate Risk Profile Series. The Ministry of Agriculture, Livestock and Fisheries (MoALF), Nairobi, Kenya- (https://hdl.handle.net/10568/80448)

v. World Bank Operational Policies

APPENDICES

No.	Attachment Description
1.	Lead Expert Practicing License
2.	Minutes and Attendance sheets
3.	Consultation questionnaires
4.	Land Ownership Documentation
5.	Chance Find Procedure

Annex 1: Expert's License

EAE 23060064

FORM 7

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/EISPL/20327

Application Reference No: NEMA/EIA/EL/20817

M/S **Dr Stephen Chege Wairuri**
(individual or firm) of address
P.O. Box 6710 - 01000 THIKA

is licensed to practice in the capacity of a (Lead Expert/Associate Expert/Firm of Experts) **Lead Expert General**

registration number **1580**

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

Issued Date: 1/8/2024 Expiry Date: **12/31/2024**

Signature.....

(Seal)
Director General
The National Environment Management Authority

P.T.O.

ISO 9001 : 2015 Certified

Annex 2: Minutes and Attendance Sheets

WATER AND SANITATION DEVELOPMENT PROJECT

MINUTES FOR STAKEHOLDER CONSULTATION/PUBLIC PARTICIPATION MEETING

Subject:	**Minutes For Stakeholder Consultation/Inception Meeting**
Date:	**May 17,2024**
Venue:	**Dadaab Municipality Offices**

Agenda

1. Introduction and Opening Remarks
2. Remarks from project team
3. Comments and response
4. Filling of the questionnaires
5. AOB
6. Closure

MINUTE NO	DESCRIPTION	ACTION BY
MIN 1-1	**INTRODUCTION AND OPENING REMARKS** The Sub-County representative (water department) called the meeting to order at 10:30 am and welcomed all the members present to the meeting and a brief introduction of the members was done. He later invited the Consultant to present the agenda of the meeting	**All**
MIN 1-2	**REMARKS FROM THE PROJECT TEAM/CONSULTANT** The Consultant briefed the community on the purpose of the meeting which was to inform them about the Proposed laboratory and seek their	**Project team**

MINUTE NO	DESCRIPTION	ACTION BY
	views for the purpose of preparing an ESIA report for licensing by NEMA to enable project implementation. The Consultant gave an overview of the proposed project components The Consultant further highlighted some of the benefits that will be associated with the project which included but not limited to: • Creation of job opportunities • Availability of clean water supply after testing and purification in the laboratory • Improve the economy of the region from the purchase of construction materials	
MIN 1-3	**REMARKS FROM COMMUNITY MEMBERS** The community members acknowledged they were aware about the project and that the construction works had already begun and stopped. They requested clarification on why the construction works had stopped despite been given a go ahead in the previous meeting held in 2020	**Community members**
MIN 1-4	**COMMENTS AND RESPONSE** **Stoppage of works** They requested clarification on why the construction works had stopped despite been given a go ahead in the previous meeting held in 2020. **Response** There was need to prepare two separate EIA reports for the proposed office block in Garissa and the proposed laboratory in Dadaab. The two separate reports will clearly highlight specific impacts for the two project and mitigation measures developed. The Consultant explained that the project will resume after approval of the environmental Impact Assessment Report and all the necessary project reports required by the financier World Bank and once all the documentations and technical aspects are resolved, the proposed project will proceed as intended and completed to ensure it benefits the community. **Job opportunities** The community requested job opportunities to be given to the local people.	**Community** **Consultant** **Community**

MINUTE NO	DESCRIPTION	ACTION BY
	Response Priority during labour recruitment for skilled and non-skilled workers will be given to the community.	**Consultant**
MIN 1 -4	**Filling of the questionnaires** The Consultant explained the questionnaires issued were for the community to present their views and will later be analyzed and incorporated in the ESIA report. The community members were guided in filling the questionnaires.	**All**
MIN 1-5	**AOB** The community and the administrative leaders stated they are grateful for the project and requested for the timely completion of the construction works.	**All**
MIN 1 -6	**CLOSURE** There being no other business the Ward Administrator adjourned the meeting at 1:05 pm.	**All**

17-05-2024

Garissa Water and Sewerage Company

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VENUE: DAADAB MUNICIPALITY.

WATER AND SANITATION DEVELOPMENT PROJECT (WSDP)

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT

NO	NAME	ORGANISATION/ DESIGNATION	ID NO.	PHONE NO/ EMAIL	SEX		PWD		AGE	SIGNATURE
					M	F	YES	NO		
1.	DIRYE BILLOW	CCG WARD ADMIN	22640791	0720326777	M			✓	36	
2.	MOHAMED ADAKANE	CGC WATSO	13116505	dakane75@gmail.com	M			✓	46	
3.	IBRAHIM IGEH GABAT	Community		0712159257	M				43	
4.	HUSSEIN M DUALE	MCA OFFICE	12912201	0724779069	M			✓	0	
5.	ABDIKADIR ABDI	S/CHIEF	12912185	0725383805	M			-	50	
6.	HUSSEIN GURE	COMMUNITY	00504864	0728550178	M				62	
7.	ALI ABIKAR YARE	WUA	0030140	0712459570	M				64	
8.	HASSAN SHI ABDI	ENDGE	0030064	0707276416	M				64	
9.	HUSSEIN BWL ABDI	"	9085110	0712058616	M				56	

NO	NAME	ORGANISATION/ DESIGNATION	ID NO.	PHONE NO/ EMAIL	SEX M	SEX F	PWD YES	PWD NO	AGE	SIGNATURE
10.	Mohamed Adan Mohamed	Elder	3518525	0711354137	M			✓	59	[illegible]
11.	Sugow Salat	Elder	40064046	[illegible]	M			✓	65	Sugow
12.	Abdi Abdullahi Ahmed	Elder	0047063	[illegible]	M			✓	72	[illegible]
13.	Ibrahim Mohamed	"	40459561	0707828662	M			✓	40	[illegible]
14.	Yussuf Digale	Elder	[illegible]	[illegible]	M			–	60	[illegible]
15.	Sahalan Abdi	"	3974369	0757151614		✓			19	[illegible]
16.	[illegible] Hussein	"	40307753	0116562850		✓			19	[illegible]
17.	Sahal Hussein	Elder	33610184	[illegible]	M				28	[illegible]
18.										
19.										
20.										
21.										
22.										

WSDP DADAAB WATER SERVICE OFFICE BLOCK BENEFICIARIES LIST

S/NO	NAME	ID NO	SIGNATURE
1	[illegible]	[illegible]	
2	[illegible]	[illegible]	
3	Hamed [illegible]	[illegible]	
4	[illegible]	36244680	
5	[illegible]	20651594	
6	[illegible]	21476981	
7	[illegible]	31185365	
8	[illegible]	[illegible]	
9	Ali [illegible] Haji	34874083	
10	[illegible] Omar	34263974	
11	[illegible]	13119845	
12	[illegible]	[illegible]	
13	[illegible]	[illegible]	
14	[illegible]	[illegible]	
15	[illegible]	[illegible]	
16	[illegible]	25663592	
17	Mohamed Noor [illegible]	35683246	
18	Mohamed Noor [illegible]	[illegible]	
19	[illegible]	[illegible]	
20	[illegible] Omar	[illegible]	
21	[illegible]	[illegible]	
22	Ali [illegible]	[illegible]	
23	[illegible] Mohamed [illegible]	25868425	
24	[illegible]	12741241	
25	[illegible]	[illegible]	
26	Mohamed [illegible]	33071490	
27	[illegible] Ibrahim Abdi	[illegible]	
28	Abdi [illegible]	23479293	
29	[illegible] Hassan Omar	25689121	
28	[illegible] Omar	0192255	
29	[illegible]	[illegible]	
30	[illegible] Mohamed [illegible]	30891293	
31	[illegible] Abdi Haji	[illegible]	
32	Guho Hassan Mohamed	34168992	
33	[illegible] Mohamed [illegible]	[illegible]	
34	Ibrahim [illegible]	[illegible]	
35	Fatuma Abdi [illegible]	[illegible]	
36	[illegible]	35626668	
37	Abdirahman [illegible]	25755858	
38	[illegible] Mohamed [illegible]	21512255	
39	Abdi Omar Ali	20840596	
40	Abdikadir Omar Ali		

4

Dadaab – office Block:

WSP DADAAB AND FAFI PROJECT

LOCATION: DADAAB   SUB-LOCATION: DADAAB   SUB-COUNTY: DADAAB

NO	NAMED	ID NUMBER	SIGN
1.	ABDULLAHI ABDI MAHAMED	34707060	
2.	FARDOWSA OSMAN	30780627	
3.	BATULA ABDIKADIR ALI	21482129	
4.	Bashir Abdi Said	26980095	
5.	ESHA MUSTAF SHEIKH	23562884	
6.	MAHADA Hussein Mohamed	21525063	
7.	Halima Mohamed Hussein	21689035	
8.	KATRA DAHIR Sheikh	29488053	
9.	ABDULLAHI BATHEWOW	27509776	
10.	ABSHIRA ABDI SALAH	11885846	
11.	ABDI MUHAMED HASSEN	22655770	
12.	ABDI MUHAMED MOHAMED	25896748	
13.	ABDI OSMAN ABDIH	29651863	
14.	FARHIYA HASSAN ABDI	25569986	
15.	AHMED HASSAN ABDI	27522932	
16.	Culay Ungule Tofen	7549450	
17.	AHMED HASSAN IBRAHIM	25638065	
18.	ABDIHAKID MUSTAF	23452358	
19.	ABDIRAHMAN HUSSEIN	84662913	
20.	MUSA ALI KHALIF	30843842	
21.	AMINA BISHAR JAMAC	22548450	
22.	SEINAB MUSTAF Sheikh	13701852	
23.	MOHAMED ALI RASHID	34026069	
24.	HABIBA MOHAMED ABDI	25655233	
25.	Hubi MOHAMED Ali	34198768	

WSP DADAAB AND FAFI PROJECT

LOCATION DADAAB SUB-LOCATION DADAAB SUB-COUNTY DADAAB

NO	NAMED	ID NUMBER	SIGN
26	MOHAMED HASSAN	31018217	
27	ABDISAMAD MUSAFF	24442006	
28.	GAMADO MOHAMED ABDI	33676545	
29.	MOHAMED Abdirahman	12953569	
30.	MARYAN HUSSEIN ALI	21599428	
31	MOHAMED SHAKE	D030479	
32	IBRAHIM HASSAN ADEN	38182966	
33	ISMAIL MOHAMUD	25710202	
34	ISSA FARAH	23477202	
35.	Mohamed Abdullahi	32723308	
36	Noor Rashid Salah	2342767	
37.	ISNINO HAREI ABDI	23671497	
38.	Isho Yusuf Abdi	9138591	
39.	KALTUMA MUSE	7634633	
40.	Caltay NUR ABDI	10261026	
41.	GEDIYO OMAR Ali	0025786	
42.	MAHMOD IBRAHIM	21768171	
43.	BATULA AHMED	7045832	
44	FATUMA AHMED Salat	21760520	
45.	SARURA MUKTAR	0048196	
46	OSMAN SULEIMAN	25696690	
47.	ABDIFATAH MOHAMED	34684674	
48.	FATUMA BURALE	9084533	
49.	ADEN Yussuf	2600525	
50	ABDULLAHI ABDI MAALIM	3476733	

Annex 3: Stakeholder Consultation Questionnaires

GV 1

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KII ESIA QUESTIONNAIRE

The World Bank conceived and has financed the project of intervention into the water supply to the host communities under the Water and Sanitation Development Program (WSDP). The development objective of Water and Sanitation Development Project is to improve water supply and sanitation services in select coastal and north-eastern regions in Kenya. This project has four components. 1) The first component, Rehabilitation and expansion of urban water supply and sanitation services in the coastal region, has the following subcomponents: (i) Support to coastal counties; and (ii) Support to the coast bulk water services provider. 2) The second component is Expansion of water supply and sanitation services in underserved north-eastern counties. It aims to finance a program of activities designed to improve water supply and sanitation services in the north-eastern counties, such as Wajir town in Wajir County and the Dadaab refugee camp host communities in Garissa County. 3) The third component, National performance-based financing, has the following two subcomponents: (i) Support for water and sanitation infrastructure investments and services; and (ii) Technical assistance for national performance-based financing. 4) The fourth component, Project management, finance a program of activities designed to strengthen the capacity of the Recipient for project management, implementation and coordination, and Monitoring and Evaluation (M and E). This Project Report gives the findings of the Environmental and Social Impact Assessment Study (ESIAs) undertaken as an integral part of the design process. The Project highlights salient social and environmental issues associated with the design, construction and operational aspects of the office block and laboratory project. The World Bank through the Water and Sanitation Development Project (WSDP) in Garissa County will fund the project.

You have been selected to participate in this exercise and we would highly appreciate your assistance for responding to all questions in this questionnaire adequately and appropriately as possible. Please fill in the following questionnaire giving in your comments where necessary.

This questionnaire is intended to ensure there is adequate Consultations & Public Participation (CPP) before implementation of the said project. It is proposed this questionnaire is filled and signed by members of the surrounding community and institutions in the area of the said project, as required by the National Environment Management Authority, NEMA and World Bank.

Your response will be treated with confidentiality and will only be used for the purpose of this project.

Respondents' Details

Name Mission M Ojwang [illegible]	
ID Number [illegible]	
Telephone: 0724179069	
Institution/Department Water	
Designation Dadaab [illegible]	
Project area: Water laboratory	

1. What is your education level

Education level	Tick appropriately
None Mission M Ojwang	
Preprimary	
Primary	
Secondary	
Vocational/Technical training	
University	

2. Is the proposed project viable in this area? It is very viable

3. Are you aware of the proposed Project in this area?

Yes ☑ No ☐

4. Do you think this project will affect the normal land use in the area and if so in what way?

It will not affect

5. Are there historical or cultural heritage that would be affected by this project? If so, state them.

No so far

6. Are there any safety concerns that may arise from the proposed development?

to complete the project after [illegible]

Local Management Limited

7. Do you think there will be any wastes generated during this project and how do you propose that is handled?

Yes it is very organize

8. What are the expected POSITIVE environmental and social impacts?

Clean water, treated water

9. What are the expected NEGATIVE environmental and social impacts?

Lack of employment and engagement

10. What suggestions would you make to mitigate any adverse environmental and social impacts?

I would have advise the Government and other partner organization to continue community participation.

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11. Give any relevant observations, recommendations or comments on this project.

The project is good but the workers should come from the local community who are qualified.

12. In your conclusion, do you welcome the project in the said area, and why?

Yes [✓] No [ ]

The project will significantly change the livelihood of the local community in a good way.

Signature: .....

Date: .....

THE WORLD BANK

KII ESIA QUESTIONNAIRE

The World Bank conceived and has financed the project of intervention into the water supply to the host communities under the Water and Sanitation Development Program (WSDP). The development objective of Water and Sanitation Development Project is to improve water supply and sanitation services in select coastal and north-eastern regions in Kenya. This project has four components. 1) The first component, Rehabilitation and expansion of urban water supply and sanitation services in the coastal region, has the following subcomponents: (i) Support to coastal counties; and (ii) Support to the coast bulk water services provider. 2) The second component is Expansion of water supply and sanitation services in underserved north-eastern counties. It aims to finance a program of activities designed to improve water supply and sanitation services in the north-eastern counties, such as Wajir town in Wajir County and the Dadaab refugee camp host communities in Garissa County. 3) The third component, National performance-based financing, has the following two subcomponents: (i) Support for water and sanitation infrastructure investments and services; and (ii) Technical assistance for national performance-based financing. 4) The fourth component, Project management, finance a program of activities designed to strengthen the capacity of the Recipient for project management, implementation and coordination, and Monitoring and Evaluation (M and E). This Project Report gives the findings of the Environmental and Social Impact Assessment Study (ESIAs) undertaken as an integral part of the design process. The Project highlights salient social and environmental issues associated with the design, construction and operational aspects of the office block and laboratory project. The World Bank through the Water and Sanitation Development Project (WSDP) in Garissa County will fund the project.

You have been selected to participate in this exercise and we would highly appreciate your assistance for responding to all questions in this questionnaire adequately and appropriately as possible. Please fill in the following questionnaire giving in your comments where necessary.

This questionnaire is intended to ensure there is adequate Consultations & Public Participation (CPP) before implementation of the said project. It is proposed this questionnaire is filled and signed by members of the surrounding community and institutions in the area of the said project, as required by the National Environment Management Authority, NEMA and World Bank.

Your response will be treated with confidentiality and will only be used for the purpose of this project.

Respondents' Details

Name	
ID Number	
Telephone:	
Institution/Department	
Designation	
Project area:	

1. What is your education level

Education level	Tick appropriately
None	
Preprimary	
Primary	
Secondary	✓
Vocational/Technical training	
University	

2. Is the proposed project viable in this area?

Yes

3. Are you aware of the proposed Project in this area?

Yes ☑ No ☐

4. Do you think this project will affect the normal land use in the area and if so in what way?

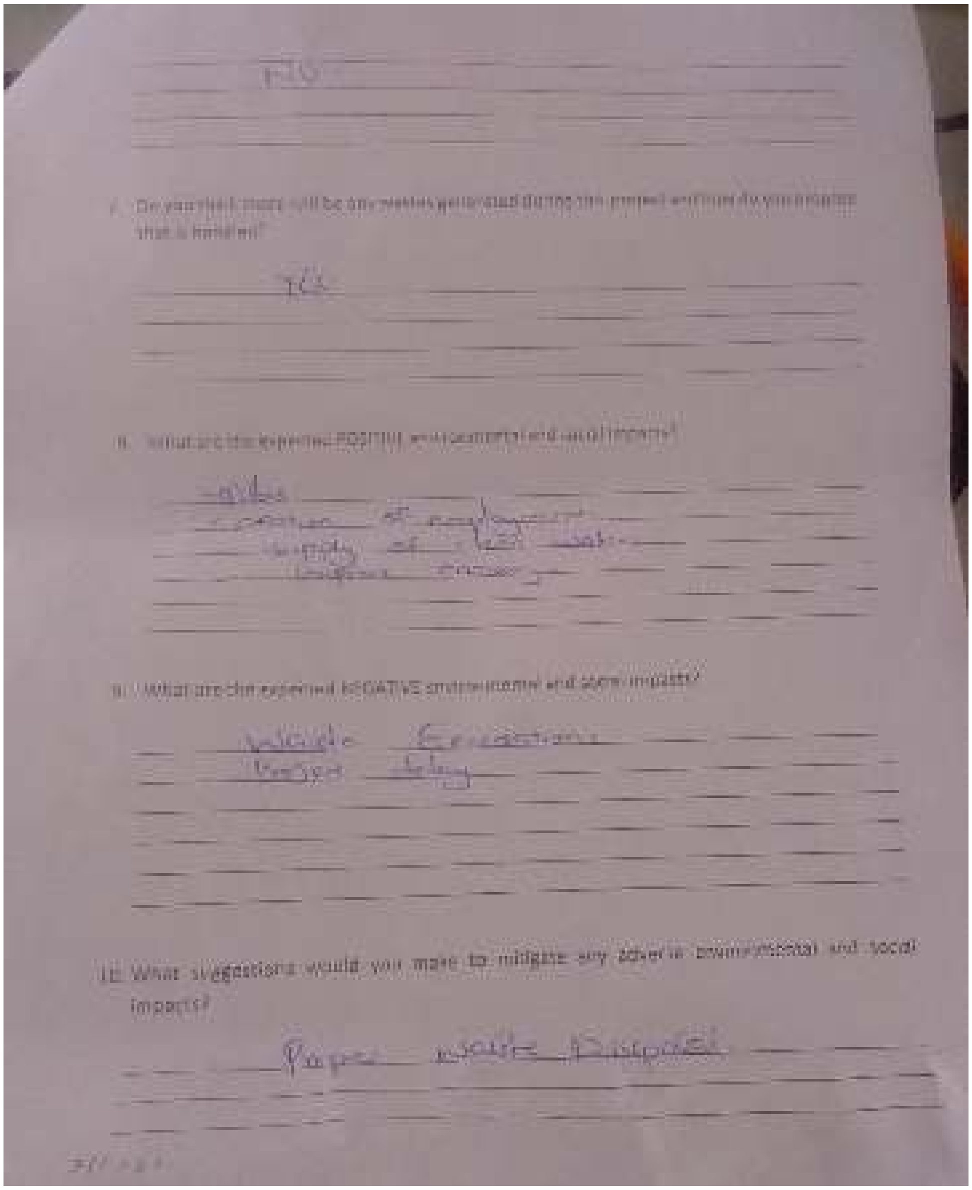
NO

5. Are there historical or cultural heritage that would be affected by this project? If so, state them.

NO

6. Are there any safety concerns that may arise from the proposed development?

~~YES~~ NO



NO

YES

8. What are the expected POSITIVE environmental and social impacts?

9. What are the expected NEGATIVE environmental and social impacts?

10. What suggestions would you make to mitigate any adverse environmental and social impacts?

Paper waste Disposal


The project should be implemented
Yes
No
It will create jobs
Also will be available clean water
supply
Signature
Date

Respondents' Details

Name	DIRYE BILLOW
ID Number	22640791
Telephone:	0720326797
Institution/Department	COUNTY AFFAIRS
Designation	WARDEN
Project area:	DADAAB

1. What is your education level

Education level	Tick appropriately
None	
Preprimary	
Primary	
Secondary	
Vocational/Technical training	
University	✓

2. Is the proposed project viable in this area?

YES

3. Are you aware of the proposed Project in this area?

Yes ☑ No ☐

4. Do you think this project will affect the normal land use in the area and if so in what way?

NO

5. Are there historical or cultural heritage that would be affected by this project? If so, state them.

NO

6. Are there any safety concerns that may arise from the proposed development?

7. Do you think there will be any wastes generated during this project and how do you propose that is handled?

No waste.

8. What are the expected POSITIVE environmental and social impacts?

The positive impact is healthy wise

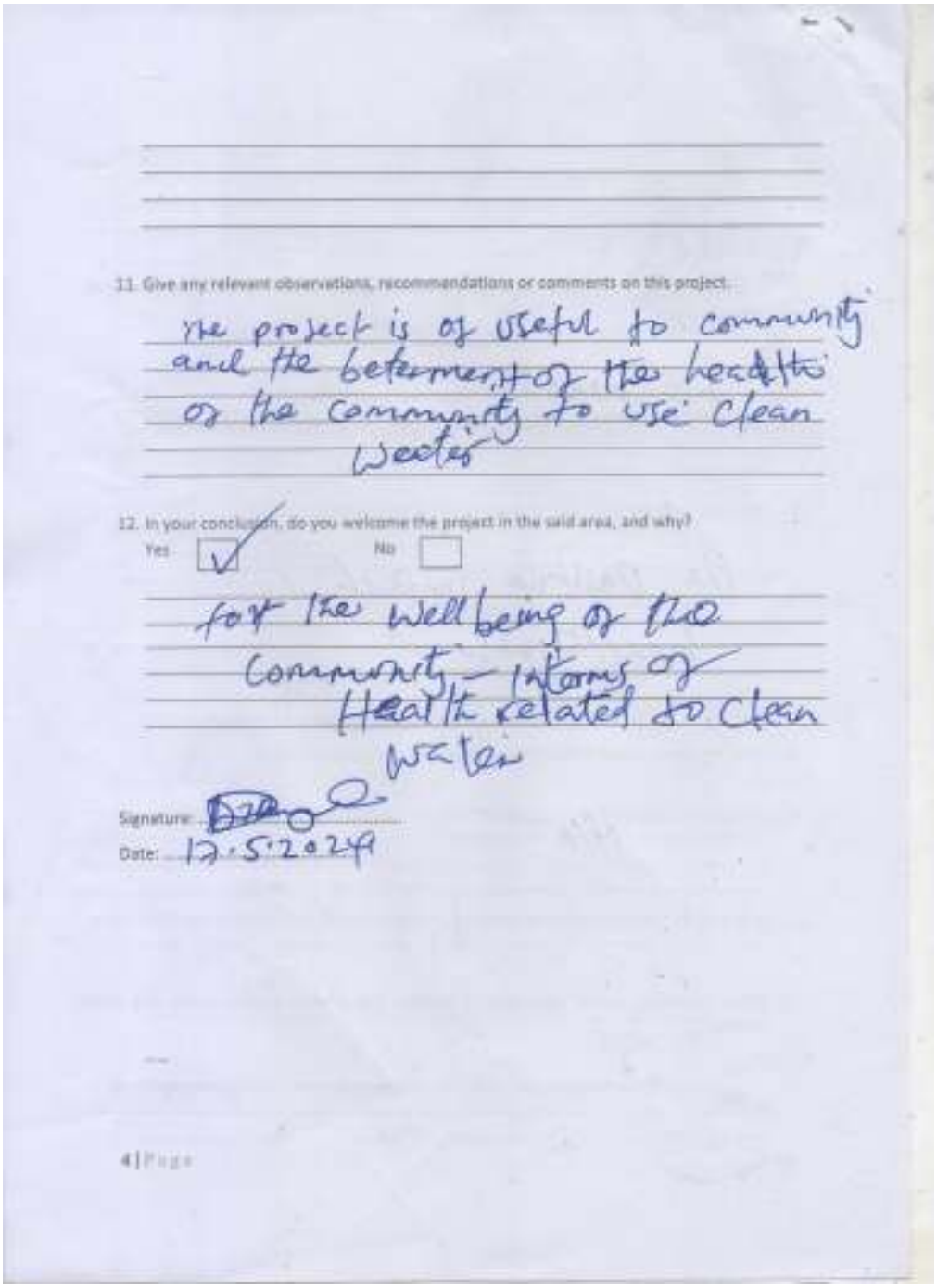
9. What are the expected NEGATIVE environmental and social impacts?

N/A

10. What suggestions would you make to mitigate any adverse environmental and social impacts?

—

3 | Page



11. Give any relevant observations, recommendations or comments on this project.

The project is of useful to community and the betterment of the health of the community to use clean water

12. In your conclusion, do you welcome the project in the said area, and why?

Yes [✓] No [ ]

for the well being of the community - in terms of Health related to clean water

Signature:

Date: 17.5.2024

4 | Page

Respondents' Details

Name	JOSEPH OLOOLO
ID Number	7229042
Telephone:	0708382159
Institution/Department	ADMINISTRATION/INTERIOR
Designation	AS COUNTY COMMISSIONER
Project area:	

1. What is your education level

Education level	Tick appropriately
None	
Preprimary	
Primary	
Secondary	
Vocational/Technical training	
University	✓

2. Is the proposed project viable in this area?

YES

3. Are you aware of the proposed Project in this area?

Yes ☑ No ☐

4. Do you think this project will affect the normal land use in the area and if so in what way?

Yes, in a positive way

5. Are there historical or cultural heritage that would be affected by this project? If so, state them.

Yes, there will be no long-distance movements with camels & donkeys to fetch water

6. Are there any safety concerns that may arise from the proposed development?

Yes the water pipes may burst and may cause floods or any other risks that might arise from the flow of water.

7. Do you think there will be any wastes generated during this project and how do you propose that is handled?

Yes, there should be usage of environment grinding machines and equipments in the implementation of the project.

8. What are the expected POSITIVE environmental and social impacts?

The water supply will increase hence people may engage in agricultural activities that may required irrigation since there will be enough water hence changing their livelihood.

9. What are the expected NEGATIVE environmental and social impacts?

Absence of the facilities or even there might be a bad behaviour that the people doing the project may instill in the host community.

10. What suggestions would you make to mitigate any adverse environmental and social impacts?

There should be a public participation and also the use of environmental friendly equipments.

3 | Page

11. Give any relevant observations, recommendations or comments on this project.

The project is good but the workers should come from the local community who all qualified.

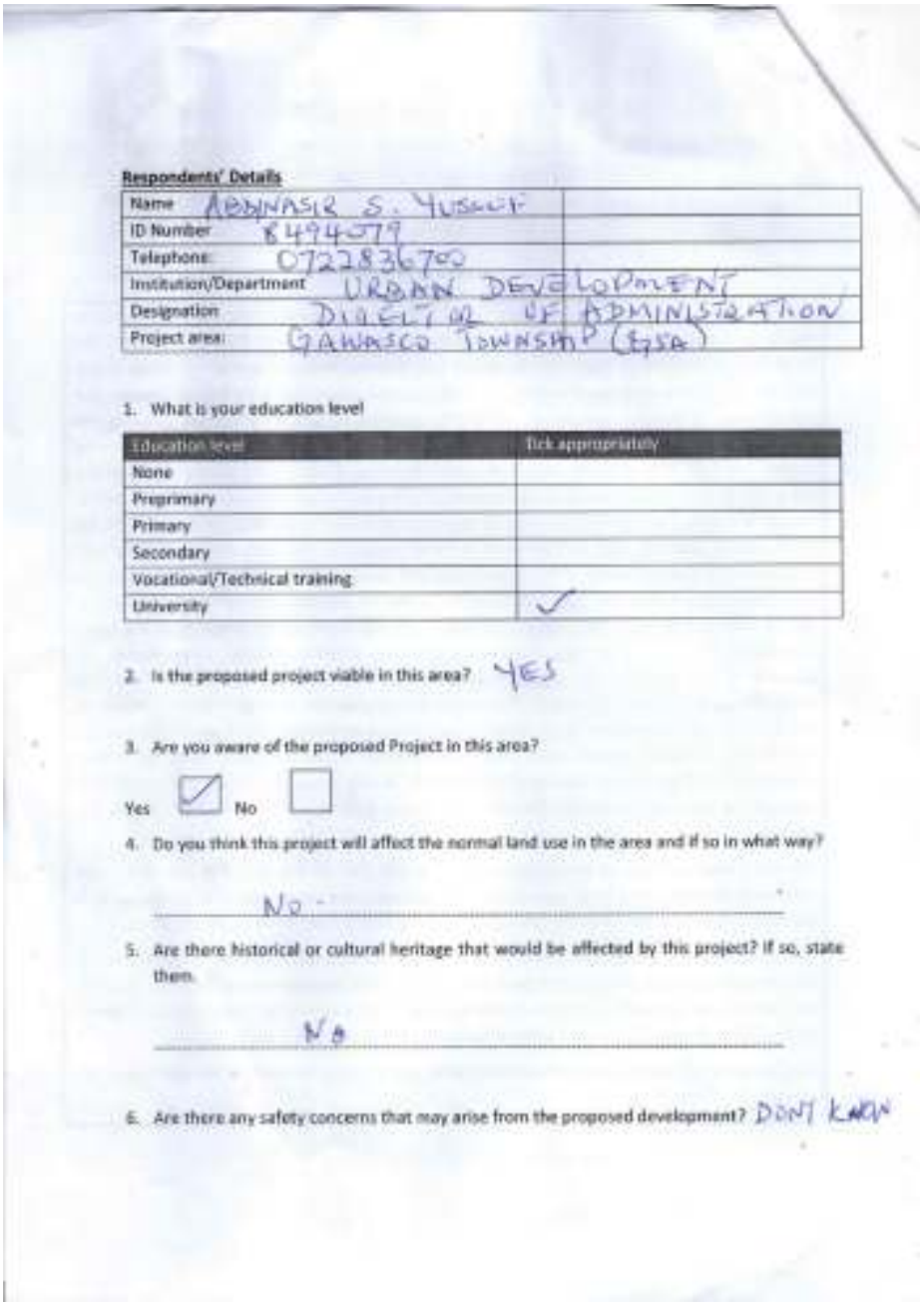
12. In your conclusion, do you welcome the project in the said area, and why?

Yes [✓] No [ ]

The project will dramatically change the livelihood of the local community in a good way.

Signature: .....

Date: .....



Respondents' Details

Name	ABDINASIR S. YUSUF
ID Number	8494079
Telephone	0722836700
Institution/Department	URBAN DEVELOPMENT
Designation	DIRECTOR OF ADMINISTRATION
Project area	GARISSA TOWNSHIP (ESA)

1. What is your education level

Education level	Tick appropriately
None	
Preprimary	
Primary	
Secondary	
Vocational/Technical training	
University	✓

2. Is the proposed project viable in this area? YES

3. Are you aware of the proposed Project in this area?

Yes ☑ No ☐

4. Do you think this project will affect the normal land use in the area and if so in what way?

No

5. Are there historical or cultural heritage that would be affected by this project? If so, state them.

No

6. Are there any safety concerns that may arise from the proposed development? DONT KNOW

7. Do you think there will be any wastes generated during this project and how do you propose that is handled?

WASTE PIPES COULD BURST IN THE CONSTRUCTION PROCESS, BUT THE CONSTRUCTOR CAN HANDLE THAT

8. What are the expected POSITIVE environmental and social impacts?

THE PROJECT COMPLETION WILL IMPACT POSITIVELY FOR ALL OFFICES RELATED TO GARISSA

9. What are the expected NEGATIVE environmental and social impacts?

NINE

10. What suggestions would you make to mitigate any adverse environmental and social impacts?

I DON'T KNOW

3 | Page

11. Give any relevant observations, recommendations or comments on this project.

12. In your conclusion, do you welcome the project in the said area, and why?

Yes ☑ No ☐

Signature: .....

Date: 21st MAY 2024

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Q3

THE WORLD BANK

ESIA QUESTIONNAIRE

The World Bank conceived and has financed the project of intervention into the water supply to the host communities under the Water and Sanitation Development Program (WSDP). The development objective of Water and Sanitation Development Project is to improve water supply and sanitation services in select coastal and north-eastern regions in Kenya. This project has four components. 1) The first component, Rehabilitation and expansion of urban water supply and sanitation services in the coastal region, has the following subcomponents: (i) Support to coastal counties; and (ii) Support to the coast bulk water services provider. 2) The second component is Expansion of water supply and sanitation services in underserved north-eastern counties. It aims to finance a program of activities designed to improve water supply and sanitation services in the north-eastern counties, such as Wajir town in Wajir County and the Dadaab refugee camp host communities in Garissa County. 3) The third component, National performance-based financing, has the following two subcomponents: (i) Support for water and sanitation infrastructure investments and services; and (ii) Technical assistance for national performance-based financing. 4) The fourth component, Project management, finance a program of activities designed to strengthen the capacity of the Recipient for project management, implementation and coordination, and Monitoring and Evaluation (M and E). This Project Report gives the findings of the Environmental and Social Impact Assessment Study (ESIAs) undertaken as an integral part of the design process. The Project highlights salient social and environmental issues associated with the design, construction and operational aspects of the office block and laboratory project. The World Bank through the Water and Sanitation Development Project (WSDP) in Garissa County will fund the project.

You have been selected to participate in this exercise and we would highly appreciate your assistance for responding to all questions in this questionnaire adequately and appropriately as possible. Please fill in the following questionnaire giving in your comments where necessary.

This questionnaire is intended to ensure there is adequate Consultations & Public Participation (CPP) before implementation of the said project. It is proposed this questionnaire is filled and signed by members of the surrounding community and institutions in the area of the said project, as required by the National Environment Management Authority, NEMA and World Bank.

Your response will be treated with confidentiality and will only be used for the purpose of this project.

Respondents' Details

Name (Optional) (Ina (Kwa hiari)	
ID Number (Optional): Namba ya Kitambulisho (Kwa hiari)	00301400
Telephone (Optional): Namba ya Simu (Kwa hiari)	0712199506
Project area: Eneo la mradi	Dadaab

1. How long have you lived in this area (umeishi katika eneo hili kwa muda mgani)

Time	Tick appropriately
Months (Indicate the number)	
1-2 Years	
3-5 Years	
6-10 Years	
More than 10 Years	✓

2. What is your occupation (Unafanya kazi/Biashara gani?)

Occupation	Tick appropriately
Fishermen(Mvuvi)	
Farmer (Mkulima)	
Civil servant (Mfanyakazi wa Umma)	
Casual labour (Kibarua)	✓
Self-employed (Unajiajiri)	
House wife (Mke nyumbani)	
Trader (Mchuuzi)	
Student (Mwanafunzi)	
Unemployed (Hana Ajira)	
Others (Please specify) (Nyingineto: taja)	

3. What is your education level (Kiwango chako cha elimu ni kipi?)

Education level	Tick appropriately
None (Sijasoma)	✓
Preprimary (Chekechea)	
Primary (Shule ya Msingi)	
Secondary (Shule ya Upili)	

Vocational/Technical training (*Masomo ya mundo mwingi*)	
University (*Chuo Kikuu*)	

4. Is the proposed project viable in this area? (*inayowezekana katika eneo hili*)

Yes

5. Are you aware of the proposed Project in this area? (*Unajua kuhusu mradi huu?*)

Yes / Ndiyo ☑ No / Hapana ☐

6. Do you think this project will affect the normal land use in the area and if so in what way? (*Unaona kama huu mradi utabadirisha matumizi ya kiuchumi ama ya ardhi na kwa njia ipi?*)

NO

7. Are there historical or cultural heritage that would be affected by this project? If so, state them. (*Kuna mambo za kale ama za kitamaduni ambazo zitadhuriwa ama zitaribiwe ama zitamaishwe na huu mradi? Kama ndiyo, zitaje.*)

NO

8. Are there any safety concerns that may arise from the proposed development?

9. Do you think there will be any wastes generated during this project and how do you propose that is handled? (*Unafikiria kuna takataka ambazo zitatokana na huu mradi na ungetaka zifanywe nini?*)

13. Give any relevant observations, recommendations or comments on this project.
(Toa maoni yako yoyote kuhusu hua mradi ambayo ungetaka iangaliwe ama isuluhishwe kwa makini.)

14. In your conclusion, do you welcome the project in the said area, and why? (*Kwa tamati, unakaribisha hua mradi kwa eneo hili, na kwa nini?*)
Yes (Ndiyo) ☑ No (apana) ☐

Signature.....

Respondents' Details

Name (Optional) Jina (Kwa hiari)	MOHAMED ABDI LOH 93
ID Number (Optional): Namba ya Kitambulisho (Kwa hiari)	01 01 1967
Telephone (Optional):Namba ya Simu (Kwa hiari)	0700 184330
Project area: Eneo la mradi	

1. How long have you lived in this area *(umeisha katika eneo hili kwa muda mgani)*

Time	Tick appropriately
Months (indicate the number)	
1-2 Years	
3-5 Years	
6-10 Years	
More than 10 Years	✓

2. What is your occupation (Unafanya *kazi/biashara gani?)*

Occupation	Tick appropriately
Fisherman*(Mvuvi)*	
Farmer *(Mkulima)*	
Civil servant *(Mfanyikazi wa Umma)*	
Casual labour *(Kibarua)*	
Self-employed *(Umejiajiri)*	
House wife *(Mke nyumbani)*	
Trader *(Mchuuzi)*	
Student *(Mwanafunzi)*	
Unemployed *(Hana Ajira)*	
Others (Please specify) *(Nyinginezo, taja)*	ELDERS

3. What is your education level *(Kiwango chako cha elimu ni kipi?)*

Education level	Tick apropriately
None (Sijasoma)	N/A
Preprimary (Chekechea)	
Primary (Shule ya Msingi)	
Secondary (Shule ya Upili)	

Vocational/Technical training (*Mesomo ya mivundo msingi*)	
University (*Chuo Kikuu*)	

4. Is the proposed project viable in this area? (*nayowezekana katika eneo hili*

YES

5. Are you aware of the proposed Project in this area? (*Unajua kuhusu mradi huu?*)

Yes / Ndiyo ☑ No / Hapana ☐

6. Do you think this project will affect the normal land use in the area and if so in what way? (*Unaona kama huu mradi utabadilisha matumizi ya kiuchumi ama ya ardhi na kwa njia ipi?*)

The Project will be beneficial

7. Are there historical or cultural heritage that would be affected by this project? If so, state them. (*Kuna mambo za kale ama za kitamaduni ambazo zitadhuriwa ama zihartibiwe ama zihamishiwe na huu mradi? Kama ndiyo, zitaje.*)

N/A

8. Are there any safety concerns that may arise from the proposed development?

NO

9. Do you think there will be any wastes generated during this project and how do you propose that is handled? (*Unafikiria kuna takataka ambazo zitatokana na huu mradi na unpetaka zifanywe nini?*)

N/A

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NO

10. What are the expected POSITIVE environmental and social impacts? *(Ni manufaa gani yetu sisi ama ya mazingira ambayo itatokana na kukamilishwa kwa huu mradi?)*

The Project is a good with
NO Negative environmental impacts

11. What are the expected NEGATIVE environmental and social impacts? *(Ni madhara gani kwetu sisi ama kwa mazingira ambayo itatokana na huu mradi?)*

N/A

12. What suggestions would you make to mitigate any adverse environmental and social impacts? *(Ungetoka ili madhara kwetu sisi ama kwa mazingira yetu kutokana na hii mradi itatuliwe namna gani?)*

Proper disposal of Reagents
if Any

13. Give any relevant observations, recommendations or comments on this project.
(Toa maoni yako yoyote kuhusu huu mradi amboyo ungetaka iangaliwe ama isuluhishwe kwa makini.)

We wish the project to be completed in good time

14. In your conclusion, do you welcome the project in the said area, and why? *(Kwa tamati, unakaribisha huu mradi kwa eneo hili, na kwa nini?)*
Yes (Ndiyo) ☑ No (apana) ☐

because the project will enhance water quality in the area.

Signature.....

Respondents' Details

Name (Optional) Jina (Kwa hiari)	SAHLAN ABDI ADAN
ID Number (Optional): Namba ya Kitambulisho (Kwa hiari)	39743639
Telephone (Optional):Namba ya Simu (Kwa hiari)	0757 0757 151 11
Project area: Eneo la mradi	DADAAB

1. How long have you lived in this area *(umeisha katika eneo hili kwa muda mgani)*

Time	Tick appropriately
Months (indicate the number)	
1-2 Years	
3-5 Years	
6-10 Years	
More than 10 Years	

2. What is your occupation *(Unafanya kazi/biashara gani?)*

Occupation	Tick appropriately
Fisherman/Mvuvi	
Farmer *(Mkulima)*	
Civil servant *(Mfanyikazi wa Umma)*	
Casual labour *(Kibarua)*	
Self-employed *(Umejiajiri)*	✓
House wife *(Mke nyumbani)*	
Trader *(Mchuuzi)*	
Student *(Mwanafunzi)*	
Unemployed *(Hana Ajira)*	
Others (Please specify) *(Nyinginezo, taja)*	

3. What is your education level *(Kiwango chako cha elimu ni kipi?)*

Education level	Tick appropriately
None (Sijasoma)	
Preprimary (Chekechea)	
Primary (Shule ya Msingi)	✓
Secondary (Shule ya Upili)	

Vocational/Technical training (*Masomo ya mundo mzima*)	
University (*Chuo Kikuu*)	

4. Is the proposed project viable in this area? (*nayowezekana katika eneo hili*

5. Are you aware of the proposed Project in this area? (*Unajua kuhusu mradi huu?*)

Yes / Ndiyo ☑ No / Hapana ☐

6. Do you think this project will affect the normal land use in the area and if so in what way? (*Unaona kama huu mradi utabadirisha matumizi ya kiuchumi ama ya ardhi na kwa njia ipi?*)

N/A

7. Are there historical or cultural heritage that would be affected by this project? If so, state them. (*Kuna mambo za kale ama za kitamaduni ambazo zitadhuriwa ama ziharibiwe ama zhamasishwe na huu mradi? Kama ndiyo, zitaje.*)

NV

8. Are there any safety concerns that may arise from the proposed development?

NO Safety Concern

9. Do you think there will be any wastes generated during this project and how do you propose that is handled? (*Unafikiria kuna takataka ambazo zitatokana na huu mradi na ungetaka zifanywe nini?*)

NO

10. What are the expected POSITIVE environmental and social impacts? *(Ni manufaa gani yetu sisi ama ya mazingira ambayo itatokana na kukamilishwa kwa huu mradi?)*

The Project is a good wish
NO Negative environmental impacts

11. What are the expected NEGATIVE environmental and social impacts? *(Ni madhara gani kwetu sisi ama kwa mazingira ambayo itatokana na huu mradi?)*

N/A

12. What suggestions would you make to mitigate any adverse environmental and social impacts? *(Ungetoka ili madhara kwetu sisi ama kwa mazingira yetu kutokana na hii mradi itatuliwe namna gani?)*

Proper disposal of Reagents
IF Any

13. Give any relevant observations, recommendations or comments on this project.
(Toa maoni yako yoyote kuhusu huu mradi amboyo ungetaka iangaliwe ama isuluhishwe kwa makini.)

We wish the project to be completed in good time

14. In your conclusion, do you welcome the project in the said area, and why? *(Kwa tamati, unakaribisha huu mradi kwa eneo hili, na kwa nini?)*
Yes (Ndiyo) ☑ No (apana) ☐

because the project will enhance water quality in the area.

Signature.....

Respondents' Details

Name (Optional) Jina (Kwa hiari)	MOHAMED ADAN MOHAMUD
ID Number (Optional): Nambe ya Kitambulisho (Kwa hiari)	25198725
Telephone (Optional) Namba ya Simu (Kwa hiari)	0711354137
Project area: Eneo la mradi	DADAAB

1. How long have you lived in this area (*umeishi katika eneo hili kwa muda mgani*)

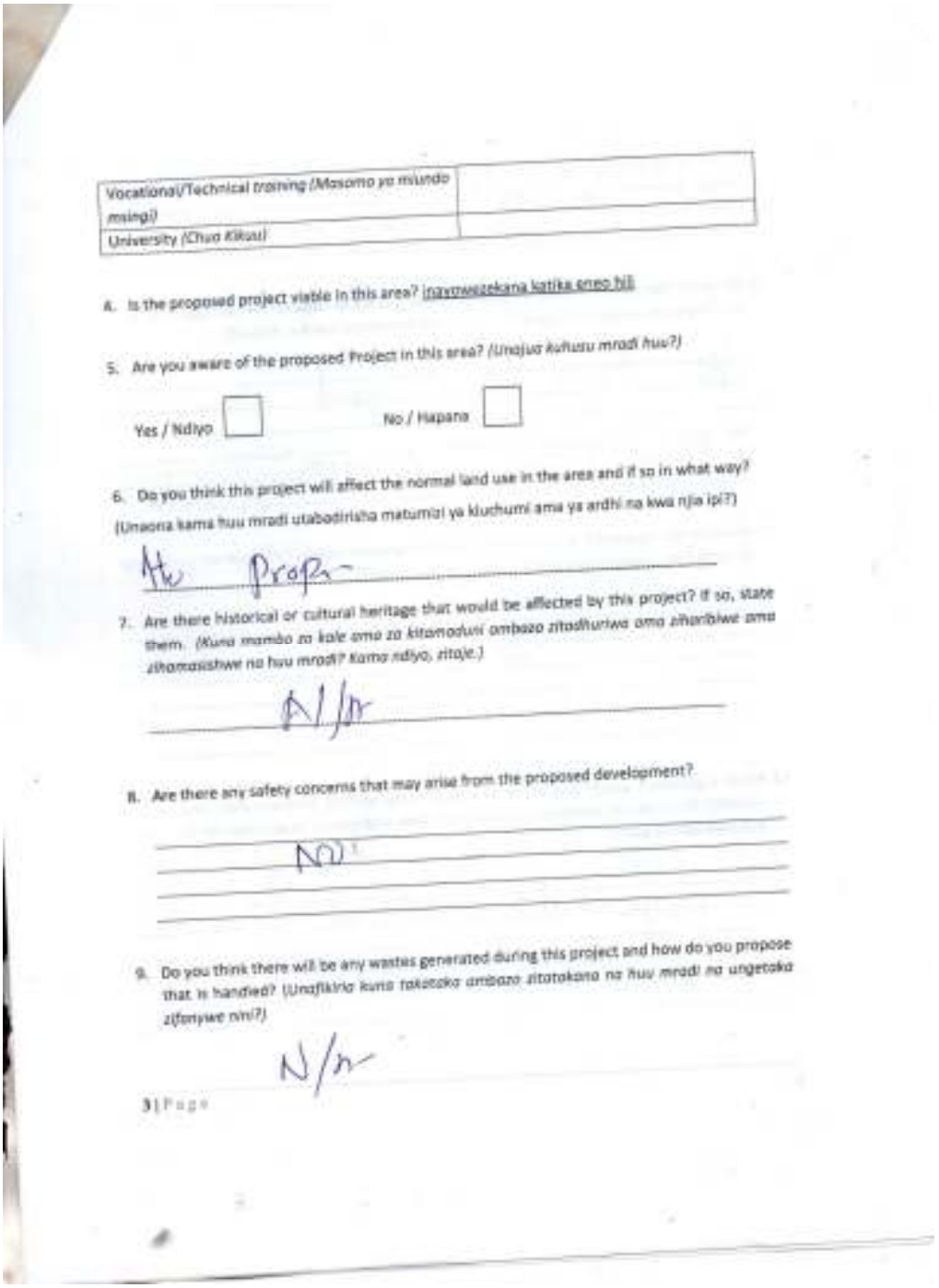
Time	Tick appropriately
Months (indicate the number)	
1-2 Years	
3-5 Years	
6-10 Years	
More than 10 Years	

2. What is your occupation (*Unafanya kazi/biashara gani?*)

Occupation	Tick appropriately
Fisherman/Muuvi	
Farmer (*Mkulima*)	
Civil servant (*Mfanyikazi wa Umma*)	
Casual labour (*Kibarua*)	
Self-employed (*Umejiajiri*)	
House wife (*Mke nyumbani*)	
Trader (*Mchuuzi*)	
Student (*Mwanafunzi*)	
Unemployed (*Hana Ajira*)	
Others (Please specify) (*Nyinginezo, taja*)	

3. What is your education level (*Kiwango chako cha elimu ni kipi?*)

Education level	Tick appropriately
None (Sijasoma)	
Preprimary (Chekechea)	
Primary (Shule ya Msingi)	
Secondary (Shule ya Upili)	



Vocational/Technical training (*Masomo ya mundo msingi*)	
University (*Chuo Kikuu*)	

4. Is the proposed project viable in this area? (*inawezekana katika eneo hili*

5. Are you aware of the proposed Project in this area? (*Unajua kuhusu mradi huu?*)

Yes / Ndiyo ☐ No / Hapana ☐

6. Do you think this project will affect the normal land use in the area and if so in what way? (*Unaona kama huu mradi utabadirisha matumizi ya kiuchumi ama ya ardhi na kwa njia ipi?*)

Nil Propa-

7. Are there historical or cultural heritage that would be affected by this project? If so, state them. (*Kuna mambo za kale ama za kitamaduni ambazo zitadhuriwa ama zitaribiwe ama zitamaishwe na huu mradi? Kama ndiyo, itaje.*)

N/A

8. Are there any safety concerns that may arise from the proposed development?

NO

9. Do you think there will be any wastes generated during this project and how do you propose that is handled? (*Unafikiria kuna takataka ambazo zitatokana na huu mradi na ungetaka zifanywe nini?*)

N/A

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N/

10. What are the expected **POSITIVE** environmental and social impacts? *(Ni manufaa gani yetu sisi ama yo mazingira ambayo itatokana na kukamilishwa kwa huu mradi?)*

the Project is good for

No negative environmental impact

11. What are the expected **NEGATIVE** environmental and social impacts? *(Ni madhara gani kwetu sisi ama kwa mazingira ambayo itatokana na huu mradi?)*

N/a

12. What suggestions would you make to mitigate any adverse environmental and social impacts? *(Ungetaka hii madhara kwetu sisi ama kwa mazingira yetu kutokana na hii mradi itatuliwe namna gani?)*

Proper disposal of [illegible]

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13. Give any relevant observations, recommendations or comments on this project.
(Toa maoni yako yoyote kuhusu huu mradi ambayo ungetaka iangaliwe ama isuluhishwe kwa makini.)

14. In your conclusion, do you welcome the project in the said area, and why? *(Kwa tamati, unakaribisha huu mradi kwa eneo hili, na kwa nini?)*
Yes (Ndiyo) ☑ No (apana) ☐

Signature.....

Respondents' Details

Name (Optional) Jina (Kwa hiari)	OMAR DUBOW BULLE
ID Number (Optional): Namba ya Kitambulisho (Kwa hiari)	01/01/1960
Telephone (Optional):Namba ya Simu (Kwa hiari)	0701123388 30
Project area: Eneo la mradi	

1. How long have you lived in this area *(umeisha katika eneo hili kwa muda mgani)*

Time	Tick appropriately
Months (indicate the number)	
1-2 Years	
3-5 Years	
6-10 Years	
More than 10 Years	✓

2. What is your occupation (Unafanya kazi/biashara gani?)

Occupation	Tick appropriately
Fisherman(Mvuvi)	
Farmer (Mkulima)	
Civil servant (Mfanyikazi wa Umma)	
Casual labour (Kibarua)	
Self-employed (Ujiajiri)	
House wife (Mke nyumbani)	
Trader (Mchuuzi)	
Student (Mwanafunzi)	
Unemployed (Hana Ajira)	
Others (Please specify) (Nyinginezo, taja)	EL BEDS

3. What is your education level (Kiwango chako cha elimu ni kipi?)

Education level	Tick appropriately
None (Sijasoma)	N/A
Preprimary (Chekechea)	
Primary (Shule ya Msingi)	
Secondary (Shule ya Upili)	

Vocational/Technical training (*Masomo ya miundo msingi*)	
University (*Chuo Kikuu*)	

4. Is the proposed project viable in this area? inayowezekana katika eneo hili

YES

5. Are you aware of the proposed Project in this area? *(Unajua kuhusu mradi huu?)*

Yes / Ndiyo ☑ No / Hapana ☐

6. Do you think this project will affect the normal land use in the area and if so in what way? (Unaona kama huu mradi utabadirisha matumizi ya kiuchumi ama ya ardhi na kwa njia ipi?)

The Project will be beneficial

7. Are there historical or cultural heritage that would be affected by this project? If so, state them. *(Kuna mambo za kale ama za kitamaduni ambazo zitadhuriwa ama zitaribiwe ama zihamishwe na huu mradi? Kama ndiyo, zitaje.)*

N/A

8. Are there any safety concerns that may arise from the proposed development?

No

9. Do you think there will be any wastes generated during this project and how do you propose that is handled? *(Unafikiria kuna takataka ambazo zitatokana na huu mradi na ungetaka zifanywe nini?)*

N/A

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NO

10. What are the expected POSITIVE environmental and social impacts? *(Ni manufaa gani yetu sisi ama ya mazingira ambayo itatokana na kukamirishwa kwa huu mradi?)*

The Project Is a good with to NO Negative Enviroment Impacts

11. What are the expected NEGATIVE environmental and social impacts? *(Ni madhara gani kwetu sisi ama kwa mazingira ambayo itatokana na huu mradi?)*

NIA

12. What suggestions would you make to mitigate any adverse environmental and social impacts? *(Ungetaka hii madhara kwetu sisi ama kwa mazingira yetu kutokana na hii mradi itatuliwe namna gani?)*

Proper disposal of debris if any

13. Give any relevant observations, recommendations or comments on this project.
(Toa maoni yako yoyote kuhusu huu mradi ambayo ungetaka izingatiwe ama isuluhishwe kwa makini.)

We wish the Project to be completed in good time

14. In your conclusion, do you welcome the project in the said area, and why? (Kwa tomati, unakaribisha huu mradi kwa eneo hili, na kwa nini?)
Yes (Ndiyo) ☑ No (apana) ☐

because the Project will enhance Water quality in the area

Signature.....

Respondents' Details

Name (Optional) Jina (Kwa hiari) IBRAHIM IGRS	IBRAHIM IGRS
ID Number (Optional): Namba ya Kitambulisho (kwa hiari)	26054357
Telephone (Optional):Namba ya Simu (Kwa hiari)	0717159257
Project area: Eneo la mradi	DADAAB

1. How long have you lived in this area (*umeishi katika eneo hili kwa muda mgani*)

Time	Tick appropriately
Months (indicate the number)	
1-2 Years	
3-5 Years	
6-10 Years	
More than 10 Years	✓

2. What is your occupation (*Unafanya kazi/biashara gani?*)

Occupation	Tick appropriately
Fisherman/Mvuvi)	
Farmer (*Mkulima*)	
Civil servant (*Mfanyikazi wa Umma*)	
Casual labour (*Kibarua*)	
Self-employed (*Umejiajiri*)	
House wife (*Mke nyumbani*)	
Trader (*Mchuuzi*)	✓
Student (*Mwanafunzi*)	
Unemployed (*Hana Ajira*)	
Others (Please specify) (*Nyinginezo, taja*)	

3. What is your education level (*Kiwango chako cha elimu ni kipi?*)

Education level	Tick appropriately
None (*Sijasoma*)	
Preprimary (*Chekechea*)	
Primary (*Shule ya Msingi*)	✓
Secondary (*Shule ya Upili*)	

Vocational/Technical training *(Masomo ya mundo msingi)*	
University *(Chuo Kikuu)*	

4. Is the proposed project viable in this area? *inayowezekana katika eneo hili*

YES

5. Are you aware of the proposed Project in this area? *(Unajua kuhusu mradi huu?)*

Yes / Ndiyo ☑ No / Hapana ☐

6. Do you think this project will affect the normal land use in the area and if so in what way? (Unaona kama huu mradi utabadirisha matumizi ya kiuchumi ama ya ardhi na kwa njia ipi?)

N/A

7. Are there historical or cultural heritage that would be affected by this project? If so, state them. *(Kuna mambo za kale ama za kitamaduni ambazo zitadhuriwa ama ziharibiwe ama zihamasishwe na huu mradi? Kama ndiyo, zitaje.)*

No

8. Are there any safety concerns that may arise from the proposed development?

No Safety Concerns

9. Do you think there will be any wastes generated during this project and how do you propose that is handled? (*Unafikiria kuna takataka ambazo zitatokana na huu mradi na ungetaka zifanywe nini?)*

NO

10. What are the expected POSITIVE environmental and social impacts? *(Ni manufaa gani yetu sisi ama ya mazingira ambaya itatokana na kukamirishwa kwa huu mradi?)*

The Project is a good with NO Negative environment impact

11. What are the expected NEGATIVE environmental and social impacts? *(Ni madhara gani kwetu sisi ama kwa mazingira ambaya itatokana na huu mradi?)*

N/A

12. What suggestions would you make to mitigate any adverse environmental and social impacts? *(Ungetaka hii madhara kwetu sisi ama kwa mazingira yetu kutokana na hii mradi itatuliwe namna gani?)*

Proper disposal of waste/remains of the Construction Materials

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13. Give any relevant observations, recommendations or comments on this project.
(Toa maoni yako yoyote kuhusu huu mradi amboyo ungetaka iangaliwe ama isuluhishwe kwa makini.)

We wish the project to be completed in good time

14. In your conclusion, do you welcome the project in the said area, and why? *(Kwa tamati, unakaribisha huu mradi kwa eneo hili, na kwa nini?)*
Yes (Ndiyo) ☑ No (apana) ☐

because the project will enhance water quality in the area.

Signature.....

Respondents' Details

Name (Optional) Jina (Kwa hiari)	SUGOW SPLAT SIMA
ID Number (Optional): Namba ya Kitambulisho (Kwa hiari)	40044061
Telephone (Optional):Namba ya Simu (Kwa hiari)	0728351369
Project area: Eneo la mradi	GS 40

1. How long have you lived in this area *(umeishi katika eneo hili kwa muda mgani)*

Time	Tick appropriately
Months (indicate the number)	
1-2 Years	
3-5 Years	
6-10 Years	
More than 10 Years	✓

2. What is your occupation (Unafanya kazi/biashara gani?)

Occupation	Tick appropriately
Fisherman(*Mvuvi*)	
Farmer (*Mkulima*)	
Civil servant (*Mfanyikazi wa Umma*)	
Casual labour (*Kibarua*)	
Self-employed (*Umejiajiri*)	
House wife (*Mke nyumbani*)	
Trader (*Mchuuzi*)	
Student (*Mwanafunzi*)	
Unemployed (*Hana Ajira*)	
Others (Please specify) (*Nyinginezo, taja*)	☐ DET-S

3. What is your education level (*Kiwango chako cha elimu ni kipi?*)

Education level	Tick appropriately
None (*Sijasoma*)	N/A
Preprimary (*Chekechea*)	
Primary (*Shule ya Msingi*)	
Secondary (*Shule ya Upili*)	

Vocational/Technical training (Mosomo ya mjundo msingi)	
University (Chuo Kikuu)	

4. Is the proposed project viable in this area? Inayowezekana katika eneo hili

yes

5. Are you aware of the proposed Project in this area? *(Unajua kuhusu mradi huu?)*

Yes / Ndiyo ☑ No / Hapana ☐

6. Do you think this project will affect the normal land use in the area and if so in what way? (Unaona kama huu mradi utabadilisha matumizi ya kuchumi ama ya ardhi na kwa njia ipi?)

the Project will be benefi...

7. Are there historical or cultural heritage that would be affected by this project? If so, state them. *(Kuna mambo ya kale ama ya kitamaduni ambayo yatadhuriwa ama yataribiwa ama yatahamishwa na huu mradi? Kama ndiyo, yataje.)*

N/A

8. Are there any safety concerns that may arise from the proposed development?

N.

9. Do you think there will be any wastes generated during this project and how do you propose that is handled? *(Unafikiria kuna takataka ambazo zitatokana na huu mradi na ungetaka zifanywe nini?)*

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No

10. What are the expected POSITIVE environmental and social impacts? *(Ni manufaa gani yetu sisi ama ya mazingira ambayo itatokana na kukamilishwa kwa huu mradi?)*

the project is a good with no negative environment impact

11. What are the expected NEGATIVE environmental and social impacts? *(Ni madhara gani kwetu sisi ama kwa mazingira ambayo itatokana na huu mradi?)*

N/A

12. What suggestions would you make to mitigate any adverse environmental and social impacts? *(Ungetaka hii madhara kwetu sisi ama kwa mazingira yetu kutokana na hii mradi itatuliwe namna gani?)*

Make disposal of waste/remains of the construction materials

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NO

10. What are the expected POSITIVE environmental and social impacts? *(Ni manufaa gani yetu sisi ama ya mazingira ambayo itatokana na kukamilishwa kwa huu mradi?)*

The Project is a good wish
NO Negative environmental impacts

11. What are the expected NEGATIVE environmental and social impacts? *(Ni madhara gani kwetu sisi ama kwa mazingira ambayo itatokana na huu mradi?)*

N/A

12. What suggestions would you make to mitigate any adverse environmental and social impacts? *(Ungetoka ili madhara kwetu sisi ama kwa mazingira yetu kutokana na hii mradi itatuliwe namna gani?)*

Proper disposal of Reagents
If Any

13. Give any relevant observations, recommendations or comments on this project.
(Toa maoni yako yoyote kuhusu huu mradi ambayo ungetaka iangaliwe ama iuluhishwe kwa makini.)

We wish the Project to be completed in good time

14. In your conclusion, do you welcome the project in the said area, and why? (Kwa tamati, unakaribisha huu mradi kwa eneo hili, na kwa nini?)
Yes (Ndiyo) ☑ No (apana) ☐

because the Project will enhance Water quality in the area

Signature.....

Respondents' Details

Name (Optional) Jina (Kwa hiari)	Hussein Ow[illegible] ABD I.
ID Number (Optional): Namba ya Kitambulisho (Kwa hiari)	90.5880
Telephone (Optional) Namba ya Simu (Kwa hiari)	0712 or 86 16
Project area: Eneo la mradi	56 yo

1. How long have you lived in this area (*umeishi kotiko eneo hili kwa muda mgani*)

Time	Tick appropriately
Months (indicate the number)	
1-2 Years	
3-5 Years	
6-10 Years	
More than 10 Years	✓

2. What is your occupation (*Unafanya kazi/biashara gani?*)

Occupation	Tick appropriately
Fisherman(*Mvuvi*)	
Farmer (*Mkulima*)	
Civil servant (*Mfanyikazi wa Umma*)	
Casual labour (*Kibarua*)	
Self-employed (*Umejiajiri*)	
House wife (*Mke nyumbani*)	
Trader (*Mchuuzi*)	
Student (*Mwanafunzi*)	
Unemployed (*Hana Ajira*)	
Others (Please specify) (*Nyinginezo, taja*)	ELDERS

3. What is your education level (*Kiwango chako cha elimu ni kipi?*)

Education level	Tick appropriately
None (*Sijasoma*)	N/A
Preprimary (*Chekechea*)	
Primary (*Shule ya Msingi*)	
Secondary (*Shule ya Upili*)	

Vocational/Technical training (Masomo ya miundo msingi)	
University (Chuo Kikuu)	

4. Is the proposed project viable in this area? (inawezekana katika eneo hili)

YES

5. Are you aware of the proposed Project in this area? (Unajua kuhusu mradi huu?)

Yes / Ndiyo ☑ No / Hapana ☐

6. Do you think this project will affect the normal land use in the area and if so in what way? (Unaona kama huu mradi utabadilisha matumizi ya kiuchumi ama ya ardhi na kwa njia ipi?)

The Project will be beneficial.

7. Are there historical or cultural heritage that would be affected by this project? If so, state them. (*Kuna mambo za kale ama za kitamaduni ambazo zitaathiriwa ama zihamishwe na huu mradi? Kama ndiyo, zitaje.*)

N/A

8. Are there any safety concerns that may arise from the proposed development?

NO

9. Do you think there will be any wastes generated during this project and how do you propose that is handled? (*Unafikiria kuna takataka ambazo zitatokana na huu mradi na ungetaka zifanywe nini?*)

N/A

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NO

10. What are the expected POSITIVE environmental and social impacts? *(Ni manufaa gani yetu sisi ama ya mazingira ambayo itatokana na kukamilishwa kwa huu mradi?)*

The Project is a good will
NO Negative enviroment

11. What are the expected NEGATIVE environmental and social impacts? *(Ni madhara gani kwetu sisi ama kwa mazingira ambayo itatokana na huu mradi?)*

N/A

12. What suggestions would you make to mitigate any adverse environmental and social impacts? *(Ungetoka hii madhara kwetu sisi ama kwa mazingira yetu kutokana na hii mradi itatuliwe namna gani?)*

Proper disposal of debris
if any.

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13. Give any relevant observations, recommendations or comments on this project.
(Toa maoni yako yoyote kuhusu huu mradi ambayo ungetaka yangaliwe ama yashughulikiwe kwa makini.)

We wish the project to be complete in good time

14. In your conclusion, do you welcome the project in the said area, and why? (Kwa tamati, unakaribisha huu mradi kwa eneo hili, na kwa nini?)

Yes (Ndiyo) ☑ No (Apana) ☐

Because the project will enhance water quality in the town.

Signature ....

Respondents' Details

Name (Optional) Jina (Kwa hiari)	Yussuf Digale
ID Number (Optional): Namba ya Kitambulisho (Kwa hiari)	0049993
Telephone (Optional):Namba ya Simu (Kwa hiari)	0726259706
Project area: Eneo la mradi	Wato

1. How long have you lived in this area *(umeishi katika eneo hili kwa muda mgani)*

Time	Tick appropriately
Months (indicate the number)	
1-2 Years 24	
3-5 Years	
6-10 Years	
More than 10 Years	

2. What is your occupation (*Unafanya kazi/biashara gani?*)

Occupation	Tick appropriately
Fisherman/*Mvuvi*	
Farmer (*Mkulima*)	It help the Camp
Civil servant (*Mfanyikazi wa Umma*)	
Casual labour (*Kibarua*)	at large
Self-employed (*Umejiajiri*)	
House wife (*Mke nyumbani*)	
Trader (*Mchuuzi*)	
Student (*Mwanafunzi*)	
Unemployed (*Hana Ajira*)	
Others (Please specify) (*Nyinginezo, taja*)	

3. What is your education level (*Kiwango chako cha elimu ni kipi?*)

Education level	Tick appropriately
None (Sijasoma)	
Preprimary (Chekechea)	
Primary (Shule ya Msingi)	Prim School
Secondary (Shule ya Upili)	

Vocational/Technical training *(Masomo ya miundo msingi)*	
University *(Chuo Kikuu)*	

4. Is the proposed project viable in this area? Inayowezekana katika eneo hili

5. Are you aware of the proposed Project in this area? *(Unajua kuhusu mradi huu?)*

Yes / Ndiyo ☑ No / Hapana ☐

6. Do you think this project will affect the normal land use in the area and if so in what way? (Unaona kama huu mradi utabadilisha matumizi ya kiuchumi ama ya ardhi na kwa njia ipi?)

[illegible]

7. Are there historical or cultural heritage that would be affected by this project? If so, state them. *(Kuna mambo ya kale ama ya kitamaduni ambayo yataathiriwa ama yataribiwa ama yatapotezwa na huu mradi? Kama ndiyo, yataje.)*

8. Are there any safety concerns that may arise from the proposed development?

9. Do you think there will be any wastes generated during this project and how do you propose that is handled? *(Unafikiria kuna takataka ambazo zitatoka na huu mradi na ungetaka zifanywe nini?)*

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NO WEAK

10. What are the expected POSITIVE environmental and social impacts? *(Ni manufaa gani yetu sisi ama ya mazingira ambayo itatokana na kukamilishwa kwa huu mradi?)*

N/A

11. What are the expected NEGATIVE environmental and social impacts? *(Ni madhara gani kwetu sisi ama kwa mazingira ambayo itatokana na huu mradi?)*

N/A

12. What suggestions would you make to mitigate any adverse environmental and social impacts? *(Ungetake hii madhara kwetu sisi ama kwa mazingira yetu kutokana na hii mradi itatuliwe namna gani?)*

Proper disposal of waste if any

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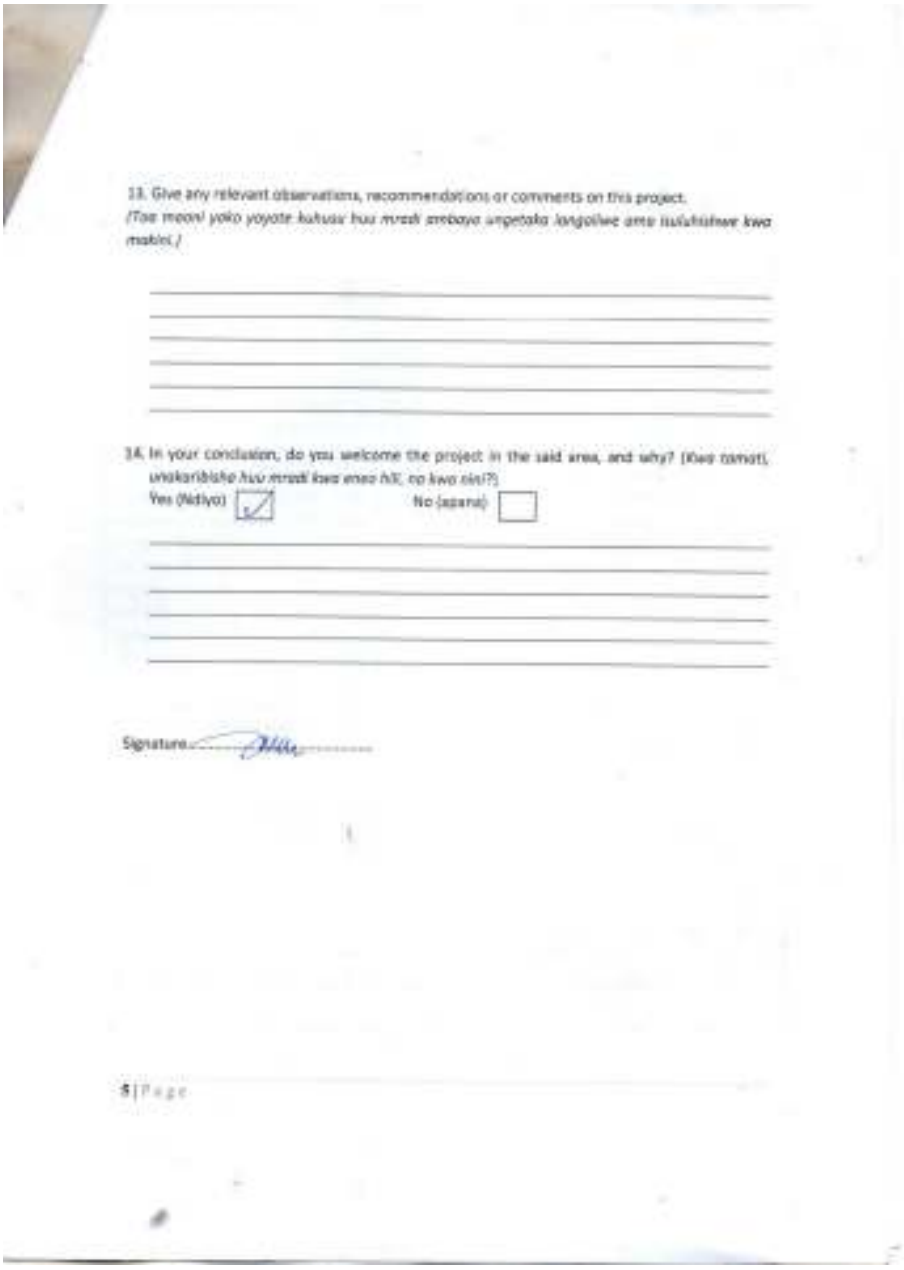

13. Give any relevant observations, recommendations or comments on this project.
(Toa maoni yako yoyote kuhusu huu mradi ambayo ungetaka Jangolilwe ama isuluhishwe kwa makini.)

14. In your conclusion, do you welcome the project in the said area, and why? (Kwa ramati, unakaribisha huu mradi kwa eneo hili, na kwa nini?)

Yes (Ndiyo) ☑ No (apana) ☐

Signature.....

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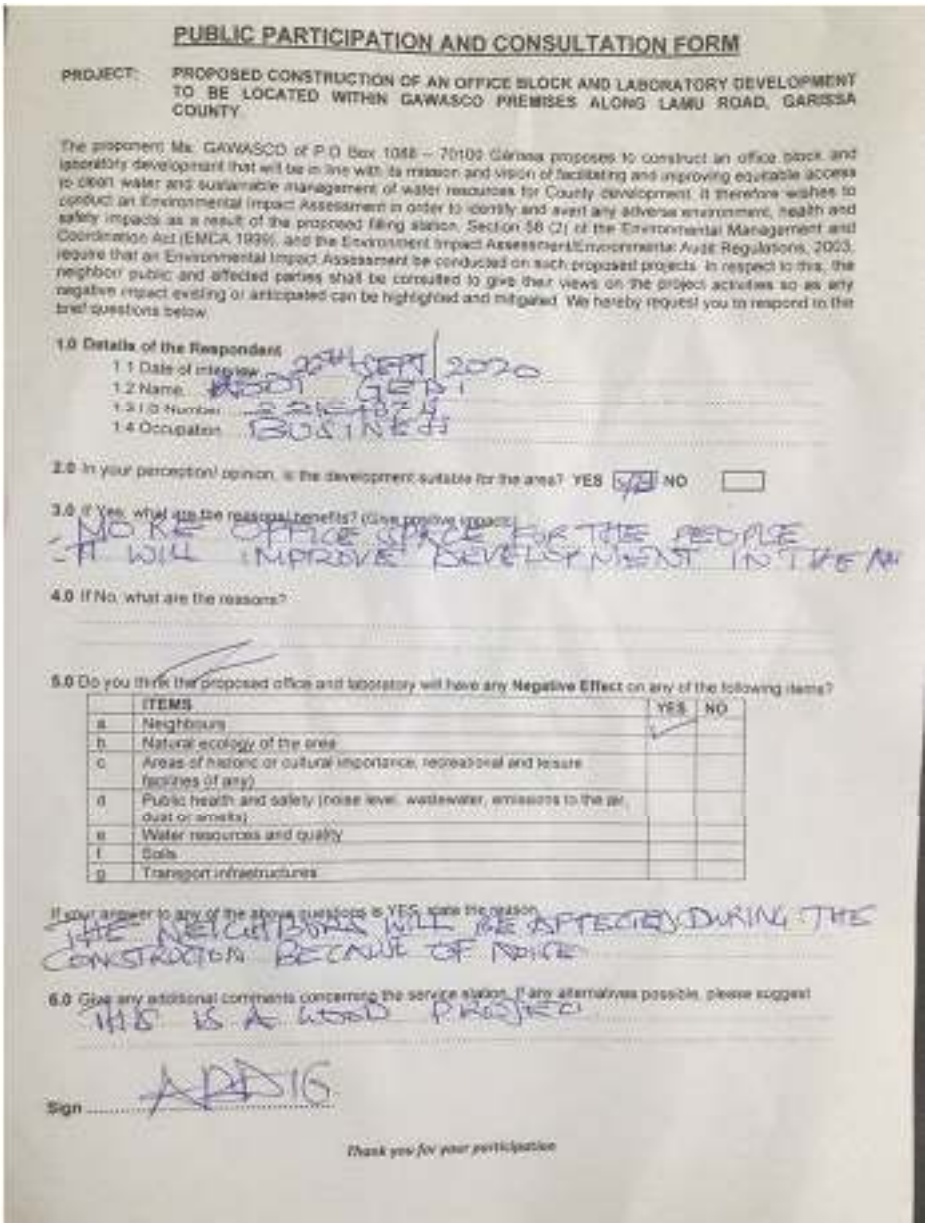


PUBLIC PARTICIPATION AND CONSULTATION FORM

PROJECT: PROPOSED CONSTRUCTION OF AN OFFICE BLOCK AND LABORATORY DEVELOPMENT TO BE LOCATED WITHIN GAWASCO PREMISES ALONG LAMU ROAD, GARISSA COUNTY

The proponent Ms. GAWASCO of P.O Box 1068 – 70100 Garissa proposes to construct an office block and laboratory development that will be in line with its mission and vision of facilitating and improving equitable access to clean water and sustainable management of water resources for County development. It therefore wishes to conduct an Environmental Impact Assessment in order to identify and avert any adverse environment, health and safety impacts as a result of the proposed filling station. Section 58 (2) of the Environmental Management and Coordination Act (EMCA 1999), and the Environment Impact Assessment/Environmental Audit Regulations, 2003, require that an Environmental Impact Assessment be conducted on such proposed projects. In respect to this, the neighbor/ public and affected parties shall be consulted to give their views on the project activities so as any negative impact existing or anticipated can be highlighted and mitigated. We hereby request you to respond to the brief questions below.

1.0 Details of the Respondent

1.1 Date of interview 26TH SEPT 2020

1.2 Name: ABDI GEDI

1.3 I.D Number: 2[illegible]

1.4 Occupation: BUSINESS

2.0 In your perception/ opinion, is the development suitable for the area? YES [✓] NO [ ]

3.0 If Yes, what are the reasons/ benefits? (Give positive impacts)

- NO NE OFFICE SPACE FOR THE PEOPLE
- IT WILL IMPROVE DEVELOPMENT IN THE AR

4.0 If No, what are the reasons?

5.0 Do you think the proposed office and laboratory will have any **Negative Effect** on any of the following items?

	ITEMS	YES	NO
a	Neighbours	✓	
b	Natural ecology of the area		
c	Areas of historic or cultural importance, recreational and leisure facilities (if any)		
d	Public health and safety (noise level, wastewater, emissions to the air, dust or smells)		
e	Water resources and quality		
f	Soils		
g	Transport infrastructures		

If your answer to any of the above questions is YES, state the reason

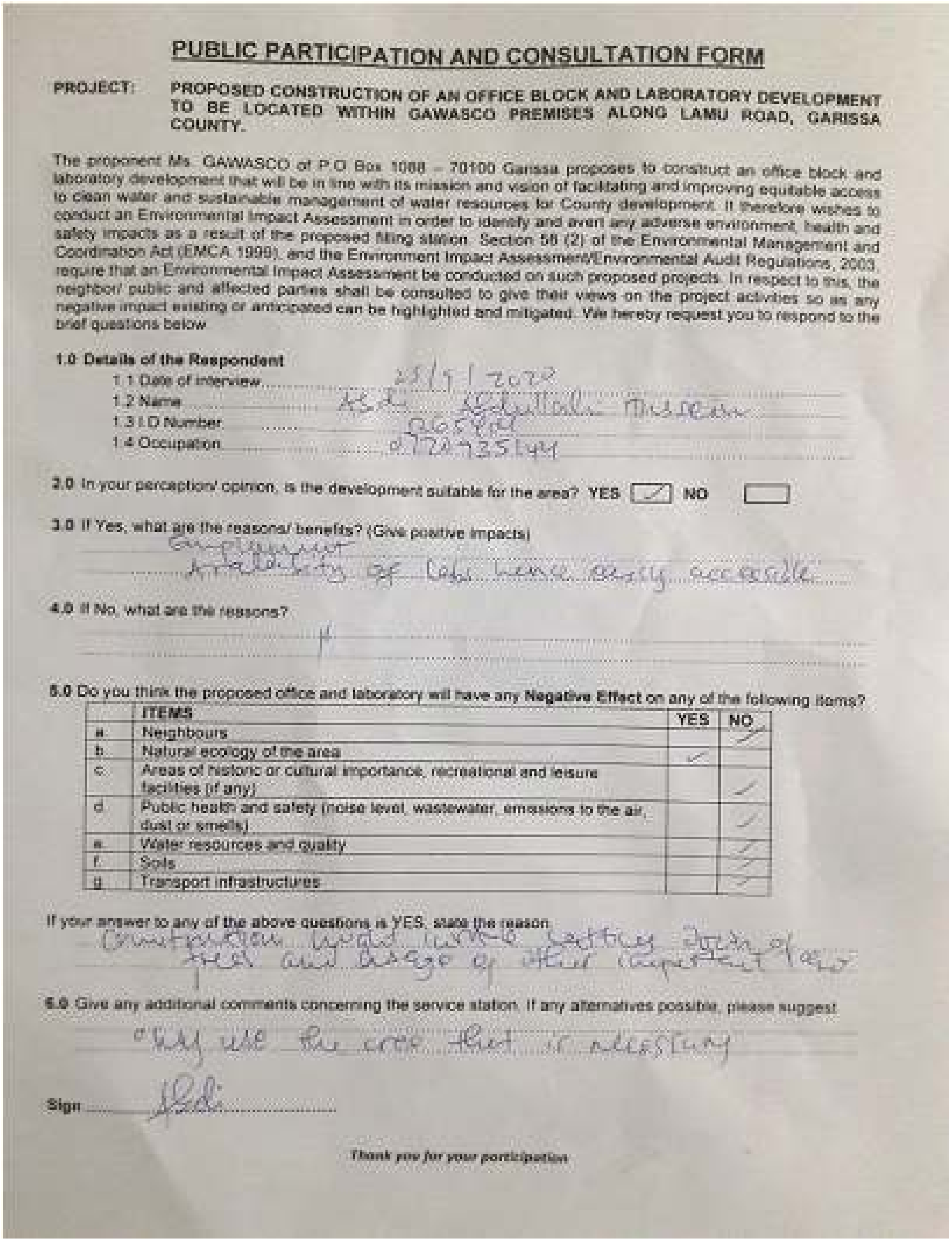
THE NEIGHBORS WILL BE AFFECTED DURING THE CONSTRUCTION BECAUSE OF NOISE

6.0 Give any additional comments concerning the service station. If any alternatives possible, please suggest

THIS IS A GOOD PROJECT

Sign ABDIG

Thank you for your participation



PUBLIC PARTICIPATION AND CONSULTATION FORM

PROJECT: **PROPOSED CONSTRUCTION OF AN OFFICE BLOCK AND LABORATORY DEVELOPMENT TO BE LOCATED WITHIN GAWASCO PREMISES ALONG LAMU ROAD, GARISSA COUNTY.**

The proponent M/s. GAWASCO of P.O Box 1088 – 70100 Garissa proposes to construct an office block and laboratory development that will be in line with its mission and vision of facilitating and improving equitable access to clean water and sustainable management of water resources for County development. It therefore wishes to conduct an Environmental Impact Assessment in order to identify and avert any adverse environment, health and safety impacts as a result of the proposed filling station. Section 58 (2) of the Environmental Management and Coordination Act (EMCA 1999), and the Environment Impact Assessment/Environmental Audit Regulations, 2003, require that an Environmental Impact Assessment be conducted on such proposed projects. In respect to this, the neighbor/ public and affected parties shall be consulted to give their views on the project activities so as any negative impact existing or anticipated can be highlighted and mitigated. We hereby request you to respond to the brief questions below

1.0 Details of the Respondent

1.1 Date of interview 28/9/2022
1.2 Name [illegible]
1.3 I.D Number [illegible]
1.4 Occupation 0720435144

2.0 In your perception/ opinion, is the development suitable for the area? **YES** ☑ **NO** ☐

3.0 If Yes, what are the reasons/ benefits? (Give positive impacts)

Employment
Availability of lab hence easily accessible

4.0 If No, what are the reasons?

5.0 Do you think the proposed office and laboratory will have any **Negative Effect** on any of the following items?

	ITEMS	YES	NO
a.	Neighbours		✓
b.	Natural ecology of the area	✓	
c.	Areas of historic or cultural importance, recreational and leisure facilities (if any)		✓
d.	Public health and safety (noise level, wastewater, emissions to the air, dust or smells)		✓
e.	Water resources and quality		✓
f.	Soils		✓
g.	Transport infrastructures		✓

If your answer to any of the above questions is YES, state the reason

Construction would involve cutting [illegible] [illegible] and [illegible] of other important [illegible]

6.0 Give any additional comments concerning the service station. If any alternatives possible, please suggest

Only use the area that is necessary

Sign [signature]

Thank you for your participation

PUBLIC PARTICIPATION AND CONSULTATION FORM

PROJECT: **PROPOSED CONSTRUCTION OF AN OFFICE BLOCK AND LABORATORY DEVELOPMENT TO BE LOCATED WITHIN GAWASCO PREMISES ALONG LAMU ROAD, GARISSA COUNTY.**

The proponent Ms. GAWASCO of P.O Box 1088 – 70100 Garissa proposes to construct an office block and laboratory development that will be in line with its mission and vision of facilitating and improving equitable access to clean water and sustainable management of water resources for County development. It therefore wishes to conduct an Environmental Impact Assessment in order to identify and avert any adverse environment, health and safety impacts as a result of the proposed filling station. Section 58 (2) of the Environmental Management and Coordination Act (EMCA 1999), and the Environment Impact Assessment/Environmental Audit Regulations, 2003, require that an Environmental Impact Assessment be conducted on such proposed projects. In respect to this, the neighbor/ public and affected parties shall be consulted to give their views on the project activities so as any negative impact existing or anticipated can be highlighted and mitigated. We hereby request you to respond to the brief questions below.

1.0 Details of the Respondent

1.1 Date of interview 25/7/2020

1.2 Name Mohamed Saulk

1.3 I.D Number 1342 47

1.4 Occupation Business

2.0 In your perception/ opinion, is the development suitable for the area? **YES** ☑ **NO** ☐

3.0 If Yes, what are the reasons/ benefits? (Give positive impacts)

Good.

4.0 If No, what are the reasons?

—

5.0 Do you think the proposed office and laboratory will have any **Negative Effect** on any of the following items?

	ITEMS	YES	NO
a.	Neighbours		✓
b.	Natural ecology of the area		✓
c.	Areas of historic or cultural importance, recreational and leisure facilities (if any)		✓
d.	Public health and safety (noise level, wastewater, emissions to the air, dust or smells)		✓
e.	Water resources and quality		✓
f.	Soils		✓
g.	Transport infrastructures		✓

If your answer to any of the above questions is YES, state the reason

—

6.0 Give any additional comments concerning the service station. If any alternatives possible, please suggest

Sign .....

Thank you for your participation

PUBLIC PARTICIPATION AND CONSULTATION FORM

PROJECT: **PROPOSED CONSTRUCTION OF AN OFFICE BLOCK AND LABORATORY DEVELOPMENT TO BE LOCATED WITHIN GAWASCO PREMISES ALONG LAMU ROAD, GARISSA COUNTY.**

The proponent Ms GAWASCO of P.O Box 1058 – 70100 Garissa proposes to construct an office block and laboratory development that will be in line with its mission and vision of facilitating and improving equitable access to clean water and sustainable management of water resources for County development. It therefore wishes to conduct an Environmental Impact Assessment in order to identify and avert any adverse environment, health and safety impacts as a result of the proposed filing station. Section 58 (2) of the Environmental Management and Coordination Act (EMCA 1999), and the Environment Impact Assessment/Environmental Audit Regulations, 2003, require that an Environmental Impact Assessment be conducted on such proposed projects. In respect to this, the neighbor/ public and affected parties shall be consulted to give their views on the project activities so as any negative impact existing or anticipated can be highlighted and mitigated. We hereby request you to respond to the brief questions below

1.0 Details of the Respondent

1.1 Date of interview 26th April 2020

1.2 Name [illegible]

1.3 I.D Number [illegible]

1.4 Occupation [illegible]

2.0 In your perception/ opinion, is the development suitable for the area? YES [✓] NO [ ]

3.0 If Yes, what are the reasons/ benefits? (Give positive impacts)

There will be job opportunities for the people.
There will be good development in the area.

4.0 If No, what are the reasons?

none.

5.0 Do you think the proposed office and laboratory will have any **Negative Effect** on any of the following items?

	ITEMS	YES	NO
a	Neighbours		✓
b	Natural ecology of the area		✓
c	Areas of historic or cultural importance, recreational and leisure facilities (if any)		✓
d	Public health and safety (noise level, wastewater, emissions to the air, dust or smells)		✓
e	Water resources and quality		✓
f	Soils		✓
g	Transport infrastructures		✓

If your answer to any of the above questions is YES, state the reason

None.

6.0 Give any additional comments concerning the service station. If any alternatives possible, please suggest

The project is good

Sign [signature]

Thank you for your participation

PUBLIC PARTICIPATION AND CONSULTATION FORM

PROJECT: **PROPOSED CONSTRUCTION OF AN OFFICE BLOCK AND LABORATORY DEVELOPMENT TO BE LOCATED WITHIN GAWASCO PREMISES ALONG LAMU ROAD, GARISSA COUNTY.**

The proponent Ms. GAWASCO of P.O Box 1088 – 70100 Garissa proposes to construct an office block and laboratory development that will be in line with its mission and vision of facilitating and improving equitable access to clean water and sustainable management of water resources for County development. It therefore wishes to conduct an Environmental Impact Assessment in order to identify and avert any adverse environment, health and safety impacts as a result of the proposed filling station. Section 58 (2) of the Environmental Management and Coordination Act (EMCA 1999), and the Environment Impact Assessment/Environmental Audit Regulations, 2003, require that an Environmental Impact Assessment be conducted on such proposed projects. In respect to this, the neighbor/ public and affected parties shall be consulted to give their views on the project activities so as any negative impact existing or anticipated can be highlighted and mitigated. We hereby request you to respond to the brief questions below.

1.0 Details of the Respondent

1.1 Date of interview: 25/9/2020

1.2 Name: Abdi Tuyab

1.3 I.D Number: 27760020

1.4 Occupation: Teacher

2.0 In your perception/ opinion, is the development suitable for the area? **YES** [✓] **NO** [ ]

3.0 If Yes, what are the reasons/ benefits? (Give positive impacts)

can be also for educational purposes
Promotion of development too

4.0 If No, what are the reasons?

/

5.0 Do you think the proposed office and laboratory will have any **Negative Effect** on any of the following items?

	ITEMS	YES	NO
a.	Neighbours		/
b.	Natural ecology of the area		/
c.	Areas of historic or cultural importance, recreational and leisure facilities (if any)		/
d.	Public health and safety (noise level, wastewater, emissions to the air, dust or smells)		/
e.	Water resources and quality		/
f.	Soils		/
g.	Transport infrastructures		/

If your answer to any of the above questions is YES, state the reason.

/

6.0 Give any additional comments concerning the service station. If any alternatives possible, please suggest

/

Sign ....

Thank you for your participation

PUBLIC PARTICIPATION AND CONSULTATION FORM

PROJECT: **PROPOSED CONSTRUCTION OF AN OFFICE BLOCK AND LABORATORY DEVELOPMENT TO BE LOCATED WITHIN GAWASCO PREMISES ALONG LAMU ROAD, GARISSA COUNTY.**

The proponent Ms GAWASCO of P.O Box 1088 – 70100 Garissa proposes to construct an office block and laboratory development that will be in line with its mission and vision of facilitating and improving equitable access to clean water and sustainable management of water resources for County development. It therefore wishes to conduct an Environmental Impact Assessment in order to identify and avert any adverse environment, health and safety impacts as a result of the proposed filling station. Section 58 (2) of the Environmental Management and Coordination Act (EMCA 1999), and the Environment Impact Assessment/Environmental Audit Regulations, 2003, require that an Environmental Impact Assessment be conducted on such proposed projects. In respect to this, the neighbor/ public and affected parties shall be consulted to give their views on the project activities so as any negative impact existing or anticipated can be highlighted and mitigated. We hereby request you to respond to the brief questions below.

1.0 Details of the Respondent

1.1 Date of interview ..... 25th Sept 2020

1.2 Name ..... Khadija Mohamed Hassan

1.3 I.D Number 20098203

1.4 Occupation ..... Business man

2.0 In your perception/ opinion, is the development suitable for the area? **YES** [✓] **NO** [ ]

3.0 If Yes, what are the reasons/ benefits? (Give positive impacts)

Easy access to labs

4.0 If No, what are the reasons?

/

5.0 Do you think the proposed office and laboratory will have any **Negative Effect** on any of the following items?

	ITEMS	YES	NO
a.	Neighbours		/
b.	Natural ecology of the area		/
c.	Areas of historic or cultural importance, recreational and leisure facilities (if any)		/
d.	Public health and safety (noise level, wastewater, emissions to the air, dust or smells)		/
e	Water resources and quality		/
f	Soils		/
g	Transport infrastructures		/

If your answer to any of the above questions is YES, state the reason

/

6.0 Give any additional comments concerning the service station. If any alternatives possible, please suggest

/

Sign .....

Thank you for your participation

PUBLIC PARTICIPATION AND CONSULTATION FORM

PROJECT: **PROPOSED CONSTRUCTION OF AN OFFICE BLOCK AND LABORATORY DEVELOPMENT TO BE LOCATED WITHIN GAWASCO PREMISES ALONG LAMU ROAD, GARISSA COUNTY.**

The proponent Ms GAWASCO of P.O Box 1088 – 70100 Garissa proposes to construct an office block and laboratory development that will be in line with its mission and vision of facilitating and improving equitable access to clean water and sustainable management of water resources for County development. It therefore wishes to conduct an Environmental Impact Assessment in order to identify and avert any adverse environment, health and safety impacts as a result of the proposed filling station. Section 58 (2) of the Environmental Management and Coordination Act (EMCA 1999), and the Environment Impact Assessment/Environmental Audit Regulations, 2003, require that an Environmental Impact Assessment be conducted on such proposed projects. In respect to this, the neighbor/ public and affected parties shall be consulted to give their views on the project activities so as any negative impact existing or anticipated can be highlighted and mitigated. We hereby request you to respond to the brief questions below.

1.0 Details of the Respondent

1.1 Date of interview 25/9/2020

1.2 Name Abdullahi Hussein Ali

1.3 I.D Number 31256111

1.4 Occupation Biologist

2.0 In your perception/ opinion, is the development suitable for the area? **YES** [✓] **NO** [ ]

3.0 If Yes, what are the reasons/ benefits? (Give positive impacts)

Improved water and Sanitation Status of Garissa County due to availability of quick and responsive laboratory testing facilities

4.0 If No, what are the reasons?

Only excavation work that may result to small dust and noise impacts.

5.0 Do you think the proposed office and laboratory will have any **Negative Effect** on any of the following items?

	ITEMS	YES	NO
a	Neighbours		–
b	Natural ecology of the area		–
c	Areas of historic or cultural importance, recreational and leisure facilities (if any)		–
d	Public health and safety (noise level, wastewater, emissions to the air, dust or smells)	–	
e	Water resources and quality		–
f	Soils		–
g	Transport infrastructures		–

If your answer to any of the above questions is YES, state the reason

Ensure that noise and dust is managed by sprinkling water.

6.0 Give any additional comments concerning the service station. If any alternatives possible, please suggest

Sign .....

Thank you for your participation

PUBLIC PARTICIPATION AND CONSULTATION FORM

PROJECT: **PROPOSED CONSTRUCTION OF AN OFFICE BLOCK AND LABORATORY DEVELOPMENT TO BE LOCATED WITHIN GAWASCO PREMISES ALONG LAMU ROAD, GARISSA COUNTY.**

The proponent Ms. GAWASCO of P.O Box 1088 – 70100 Garissa proposes to construct an office block and laboratory development that will be in line with its mission and vision of facilitating and improving equitable access to clean water and sustainable management of water resources for County development. It therefore wishes to conduct an Environmental Impact Assessment in order to identify and avert any adverse environment, health and safety impacts as a result of the proposed filing station. Section 58 (2) of the Environmental Management and Coordination Act (EMCA 1999), and the Environment Impact Assessment/Environmental Audit Regulations, 2003, require that an Environmental Impact Assessment be conducted on such proposed projects. In respect to this, the neighbor/ public and affected parties shall be consulted to give their views on the project activities so as any negative impact existing or anticipated can be highlighted and mitigated. We hereby request you to respond to the brief questions below.

1.0 Details of the Respondent

1.1 Date of interview: 25th September 2020

1.2 Name: Dubed Osman Mohamed

1.3 I.D Number: [illegible]

1.4 Occupation: Businessman

2.0 In your perception/ opinion, is the development suitable for the area? **YES** [✓] **NO** [ ]

3.0 If Yes, what are the reasons/ benefits? (Give positive impacts)

The offices will provide adequate space and conducive environment for performing office work. It will also improve the aesthetic view of the area

4.0 If No, what are the reasons?

/

5.0 Do you think the proposed office and laboratory will have any **Negative Effect** on any of the following items?

	ITEMS	YES	NO
a	Neighbours		—
b	Natural ecology of the area		—
c	Areas of historic or cultural importance, recreational and leisure facilities (if any)		—
d	Public health and safety (noise level, wastewater, emissions to the air, dust or smells)		—
e	Water resources and quality		—
f	Soils		—
g	Transport infrastructures		—

If your answer to any of the above questions is YES, state the reason.

None

6.0 Give any additional comments concerning the service station. If any alternatives possible, please suggest

No Objection

Sign: [signature]

Thank you for your participation

PUBLIC PARTICIPATION AND CONSULTATION FORM

PROJECT: **PROPOSED CONSTRUCTION OF AN OFFICE BLOCK AND LABORATORY DEVELOPMENT TO BE LOCATED WITHIN GAWASCO PREMISES ALONG LAMU ROAD, GARISSA COUNTY.**

The proponent Ms. GAWASCO of P.O Box 1088 – 70100 Garissa proposes to construct an office block and laboratory development that will be in line with its mission and vision of facilitating and improving equitable access to clean water and sustainable management of water resources for County development. It therefore wishes to conduct an Environmental Impact Assessment in order to identify and avert any adverse environment, health and safety impacts as a result of the proposed filling station. Section 58 (2) of the Environmental Management and Coordination Act (EMCA 1999), and the Environment Impact Assessment/Environmental Audit Regulations, 2003, require that an Environmental Impact Assessment be conducted on such proposed projects. In respect to this, the neighbor/ public and affected parties shall be consulted to give their views on the project activities so as any negative impact existing or anticipated can be highlighted and mitigated. We hereby request you to respond to the brief questions below.

1.0 Details of the Respondent

1.1 Date of interview 25/7/2021

1.2 Name Hussein Mohamed

1.3 I.D Number

1.4 Occupation Office Assistant

2.0 In your perception/ opinion, is the development suitable for the area? **YES** ☑ **NO** ☐

3.0 If Yes, what are the reasons/ benefits? (Give positive impacts)

There will be employment due to the work. There will be improved infrastructure facility that will quicken turn around time

4.0 If No, what are the reasons?

None

5.0 Do you think the proposed office and laboratory will have any **Negative Effect** on any of the following items?

	ITEMS	YES	NO
a	Neighbours		✓
b	Natural ecology of the area		✓
c	Areas of historic or cultural importance, recreational and leisure facilities (if any)		✓
d	Public health and safety (noise level, wastewater, emissions to the air, dust or smells)		✓
e	Water resources and quality		✓
f	Soils		✓
g	Transport infrastructures		✓

If your answer to any of the above questions is YES, state the reason

No objections

6.0 Give any additional comments concerning the service station. If any alternatives possible, please suggest

None

Sign .....

Thank you for your participation

PUBLIC PARTICIPATION AND CONSULTATION FORM

PROJECT: **PROPOSED CONSTRUCTION OF AN OFFICE BLOCK AND LABORATORY DEVELOPMENT TO BE LOCATED WITHIN GAWASCO PREMISES ALONG LAMU ROAD, GARISSA COUNTY.**

The proponent Ms. GAWASCO of P.O Box 1088 – 70100 Garissa proposes to construct an office block and laboratory development that will be in line with its mission and vision of facilitating and improving equitable access to clean water and sustainable management of water resources for County development. It therefore wishes to conduct an Environmental Impact Assessment in order to identify and avert any adverse environment, health and safety impacts as a result of the proposed filling station. Section 58 (2) of the Environmental Management and Coordination Act (EMCA 1999), and the Environment Impact Assessment/Environmental Audit Regulations, 2003, require that an Environmental Impact Assessment be conducted on such proposed projects. In respect to this, the neighbor/ public and affected parties shall be consulted to give their views on the project activities so as any negative impact existing or anticipated can be highlighted and mitigated. We hereby request you to respond to the brief questions below.

1.0 Details of the Respondent

1.1 Date of interview 25/9/2020

1.2 Name Abdi Mohamed

1.3 I.D Number 27986066

1.4 Occupation Businessman

2.0 In your perception/ opinion, is the development suitable for the area? **YES** ☑ **NO** ☐

3.0 If Yes, what are the reasons/ benefits? (Give positive impacts)

There will be quick access to laboratory services and it will bring development in the area hence creation of employment opportunities

4.0 If No, what are the reasons?

5.0 Do you think the proposed office and laboratory will have any **Negative Effect** on any of the following items?

	ITEMS	YES	NO
a.	Neighbours		✓
b.	Natural ecology of the area		✓
c.	Areas of historic or cultural importance, recreational and leisure facilities (if any)		✓
d.	Public health and safety (noise level, wastewater, emissions to the air, dust or smells)		✓
e.	Water resources and quality		✓
f.	Soils		✓
g.	Transport infrastructures		✓

If your answer to any of the above questions is YES, state the reason

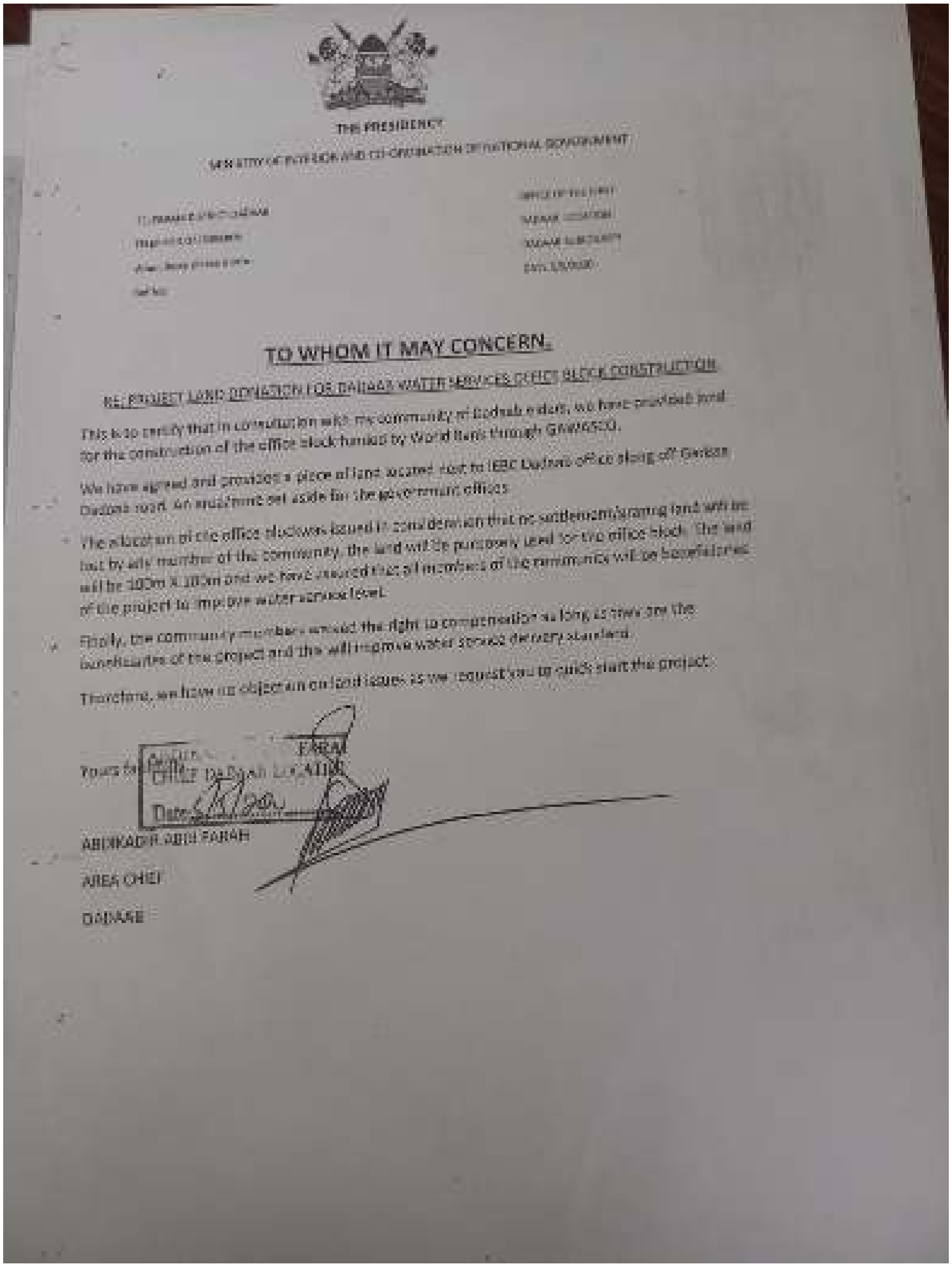
6.0 Give any additional comments concerning the service station. If any alternatives possible, please suggest

Continue - it is good for the area

Sign Abdi

Thank you for your participation

Annex 3: Land Ownership Documentation



THE PRESIDENCY

MINISTRY OF INTERIOR AND CO-ORDINATION OF NATIONAL GOVERNMENT

[illegible]

TO WHOM IT MAY CONCERN.

RE: PROJECT LAND DONATION FOR DADAAB WATER SERVICES OFFICE BLOCK CONSTRUCTION

This is to certify that in consultation with the community of Dadaab elders, we have provided land for the construction of the office block funded by World Bank through GAWASCO.

We have agreed and provided a piece of land located next to IEBC Dadaab office along off Garissa Dadaab road. An allotment set aside for the government offices.

The allocation of the office block was issued in consideration that no settlement/grazing land will be lost by any member of the community, the land will be purposely used for the office block. The land will be 100m X 100m and we have assured that all members of the community will be beneficiaries of the project to improve water service level.

Finally, the community members waived the right to compensation as long as they are the beneficiaries of the project and this will improve water service delivery standard.

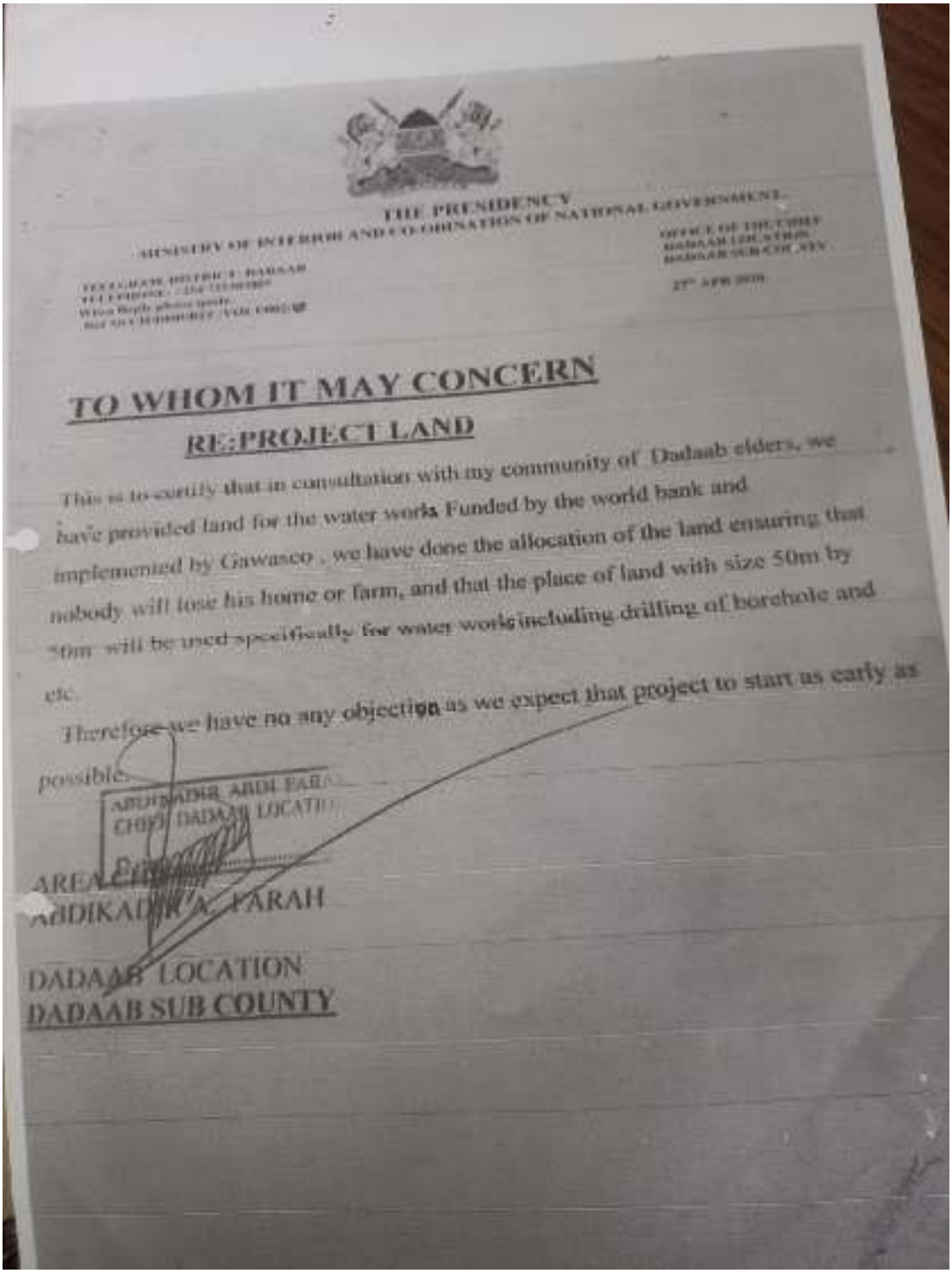
Therefore, we have no objection on land issues as we request you to quick start the project.

Yours faithfully,

ABDIKADIR ABDI FARAH

AREA CHIEF

DADAAB



THE PRESIDENCY

MINISTRY OF INTERIOR AND CO-ORDINATION OF NATIONAL GOVERNMENT

OFFICE OF THE CHIEF
DADAAB LOCATION
DADAAB SUB-COUNTY

27TH APR 2020

TO WHOM IT MAY CONCERN

RE:PROJECT LAND

This is to certify that in consultation with my community of Dadaab elders, we have provided land for the water works Funded by the world bank and implemented by Gawasco , we have done the allocation of the land ensuring that nobody will lose his home or farm, and that the place of land with size 50m by 50m will be used specifically for water works including drilling of borehole and etc.

Therefore we have no any objection as we expect that project to start as early as possible.

ABDINADIR ABDI FARAH
CHIEF DADAAB LOCATION

AREA CHIEF
ABDIKADIR A. FARAH

DADAAB LOCATION
DADAAB SUB COUNTY

Annex 5: Sample Chance Find Procedure

Chance find procedures are an integral part of the project ESMMP and civil works contracts. The following is proposed in this regard:

- If the Contractor discovers archaeological sites, historical sites, remains and objects during excavation or construction, the Contractor shall:
- Stop the construction activities in the chance find.
- Delineate the discovered site or area.
- Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until the responsible local authorities, or the Ministry of State for National Heritage and Culture take over.
- Notify the supervisor, Project Environmental Officer and Resident Engineer who in turn will notify the responsible local authorities and the Ministry of State for National Heritage and Culture immediately (within 24 hours or less).
- Responsible local authorities and the Ministry of State for National Heritage and Culture would then oversee protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed by the archaeologists of the National Museums of Kenya. The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage, namely the aesthetic, historic, scientific or research, social and economic values.
- Decisions on how to handle the find shall be taken by the responsible authorities and the Ministry of State for National Heritage and Culture. This could include changes in the layout (such as when finding irremovable remains of cultural or archaeological importance) conservation, preservation, restoration and salvage.
- Implementation for the authority decision concerning the management of the finding shall be communicated in writing by relevant local authorities.
- Construction work may resume only after permission is given from the responsible local authorities or the Ministry of State for National Heritage and Culture concerning safeguard of the heritage.