ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) FOR THE PROPOSED CONSTRUCTION OF REGIONAL SCHOOL ON PLOT NO 10, BLOCK "C" AT KIONGOZI VILLAGE, MAISACA WARD, BABATI TOWN COUNCIL IN MANYARA REGION

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EXECUTIVE SUMMARY

Introduction

The Government of United Republic of Tanzania (URT) in collaboration with the World Bank has prepared the Secondary Education Quality Improvement Project (SEQUIP). The objectives of SEQUIP are to increase access to secondary education, provide responsive learning environments for girls and improve completion of quality secondary education for girls and boys.

In summary, activities under SEQUIP will be structured into four main components:

Component 1: Empowering Girls through Secondary Education and Life Skills

1.1 Creating Safe Schools: Implementation of the Safe Schools Program including:

i. Trained school guidance and counselling teachers;
ii. Students' life skills training through girls' and boys' clubs by the guidance and counselling teachers;
iii. In-service training of secondary school teachers on the teacher code of conduct and gender sensitive pedagogical approaches;
iv. Training of school heads and School Boards on GBV, safe school issues etc.;
v. School and classroom monitoring system for early identification of and intervention on girls at risk of drop out; and
vi. Community-based mechanism for safe passage to school.

1.2 Promoting Girls' Completion of Secondary Education through Quality Alternative Education Pathways including:

i. Setting up an ICT-enabled system for tracking girls dropping out at national and district level to provide key information for AEP planning and implementation.
ii. Alternative Education Centers and LGAs undertaking local outreach activities to out-of-school girls in the community, which will include activities such as AEP center-organized community meetings, information via local radio, flyers and brochures.
iii. Enhancing access to Alternative Education Pathways through (i) expansion of the network of AEP centers; and (ii) tuition fee subsidies for vulnerable girls.
iv. A quality package for strengthening student learning in Alternative Education Pathways will also be implemented.
v. Environmental and Social Management Framework –Tanzania - Secondary Education Quality Improvement Project (SEQUIP).

Component 2: Digitally-Enabled Effective Teaching and Learning

2.1 Effective Teaching and Learning

i. Minimum package of critical teaching and learning resources for all schools: This package consists of an adequate number of textbooks and teacher guides in core subjects (English, Math and Sciences).
ii. Equitable, gender-balanced teacher deployment to schools.
iii. In-service teacher training/continuous professional development (CPD) to improve classroom teaching practice for secondary English, Mathematics and Science teachers.
iv. Evaluate student learning in lower secondary to provide opportunities for remedial use: to allow for targeted early intervention to prevent girl dropout due to learning difficulties.

2.2 Digitally-enabled Teaching of Math Sciences and English:

i. Development of an ICT in Education Strategy and plan for secondary education,
ii. Digital content and connectivity package to facilitate the teaching of English Mathematics and Science in phases.

Component 3: Reducing Barriers to Girls' Education through Facilitating Access to Secondary Schools

Expansion of the secondary school network to substantially reduce the distance to secondary schools through an expansion of the secondary school network, especially in rural areas. SEQUIP will disburse project funding on the basis of the number of schools in each LGA meeting minimum infrastructure standards.

Support upgrading existing secondary schools with the minimum infrastructure package (number of classrooms/students, adequate WASH facilities; multi-purpose science labs, electricity, etc) with the

objective is that at least 50 percent of all existing schools in all LGAs will meet the minimum standards set.

Component 4: Technical Assistance, Impact Evaluation and Project Coordination Environmental and Social Management Framework –Tanzania - Secondary Education Quality Improvement Project (SEQUIP)

SEQUIP will be jointly implemented by the Ministry of Education, Science and Technology (MoEST) and the President's Office, Regional Administration and Local Government (PO-RALG. With that regard PO-RALG has contracted Tansheq Limited, a NEMC registered environmental consulting firm to supervise the SEQUIP implementation.

Project Description,

The Project will apply the new Environmental and Social Standards (ESS's), as a requirement for the Bank financing. The Government has prepared this Environmental and Social Management Framework (ESMF) for the application of the following Environmental and Social Standards: Assessment and Management of Environmental and Social Risks and Impacts

The proposed project site is administratively located at Kiongozi Village, Maisaka ward in Babati Town council- MANYARA Region and is bordered by individual owned farm to all sides.

Accessibility

The proposed project site is administratively located at Kiongozi village, Maisaka ward in Babati Town Municipal- Manyara Region and is bordered by individual owned farm to the West, South and East, However in North the proposed site is bordered by Babati Arusha Road and there is seasonal river, crossing at the middle of the land.

The proposed site is accessible through Babati Arusha Road 14km from Babati Town toward Arusha in Kiongozi Village with coordinate -4.201839, 35.750908

Project Planning and Design

The school construction and design will consist of a required infrastructure package based on the school construction and maintenance strategy (e.g. number of classrooms/students, adequate WASH facilities, especially important for girls; multi-purpose science labs, electricity, etc.). The construction package will involve the following buildings;

Classrooms
The classrooms are designed following Education Bulletin number 1 of 2007 that directs capacity of each classroom level, 30 students for advance and 40 students for ordinary level. However, schedule of materials indicates each classroom will be having capacity of 40 students.

Construction will be undertaken in two phases. The first phase will involve construction of 12 classrooms within six blocks followed by the second phase that will involve the construction of 6 classrooms which will be of 3 different designs (2 classrooms with office, 2 classrooms with toilet and a 2 classrooms block).The proposed project development will adhere to the fire and rescue force directives for public premises.

The Education Global Practice Africa Region report prepared by World Bank provides the following directives; Student classroom ratios of 50:1 or less, student to functioning latrine ratio of 25:1 for girls and 30:1 for boys, at least one multipurpose science laboratory, student textbook ratios in mathematics and science subjects of 1:1, teacher: teacher guide availability of 2:1.

Laboratories
Education Bulletin number 1 of 2007 explain the capacity and set up of laboratory building for each level is 40 students, The scheduling of materials will adhere the bulletin as the following laboratory rooms will be constructed;

- Physics and geography lab
- Chemistry and biology lab,
- ICT room which is to be constructed in the second phase, and
- Domestic science

Administration block
The bulletin indicate for the school having capacity of 1000 student plus need to have not less than 40 teachers excluding other staffs such as school bursar, secretary etc. The administrative building will be constructed as an elevated building whereas only one (1) building will be constructed.

Toilets
The proposed toilet facility will comprise of one block with 16 holes to be constructed standalone as scheduling shows with estimates of one (1) hole for twenty (20) people, nevertheless, some of classrooms will be having sanitary rooms as designed, dormitory, and dining hall will also be having sanitary rooms.

The development of sanitary facilities is necessary to ensure the surrounding environment is well-managed and ensuring social well-being and practical operation of the school since human dignity is directly linked to access of safety and hygienic sanitation.

Dining hall
The Dining Hall is a pivotal gathering space on School's campus and is emblematic of The Family Boarding School ideal. The school will be having enough dinning space to all students since it is a boarding school thus meal will be served. According to the designs of the dining hall, it has the capacity of 2000 students.

Staff houses
The teachers' houses are designed to attract teachers out to the countryside, as well as to increase teachers morally to perform their duties unlike if they are coming far from the school. The design considers the staff house to have one (1) master bedroom, two (2) bedrooms/ one (1) master bedroom, three (3) bedrooms with Public toilet, Sitting room/dining, Kitchen and Store. Four (4) of the staff houses will be constructed.

Dormitories

Dormitories are places where students stay. The student housing must also aim to provide healthy and acoustically pleasant environments for the protection, comfort, and productivity of the students. The dormitories are designed as per provided to meet the SEQUIP objectives having a capacity to accommodate 120 students. For phase one five (5) buildings will be constructed while for phase two four (4) buildings.

Library
The library is important because it affects cultures, it affects innovation, and it affects individuals. Because of all this, library architecture has the responsibility to enhance these effects by providing a knowledge center that is inspirational and conducive to good communication and teaching interactions.

According to designs, the library to be constructed will accommodate 52 students for readings and the computer learning room will accommodate 8 students.

Sick bay
A sick bay provides a dedicated space for students who may feel unwell or require immediate medical attention. It will serve as a primary point of care within the school premises, allowing for timely assessment and treatment of minor illness or injuries.

Incinerator
This will provide a safe and efficient men of disposing waste specifically biomedical waste such as used sanitary pads, medical supplies and other potentially hazardous materials.

Other components that will be constructed within school compounds area are Playgrounds, Water tunnel, Water tank (hippo) and its pillars), Manhole and gully trap, Walkway & Paving.

Project activities

Main activities of the project include preconstruction, Construction, Operations, and decommissioning.

Mobilization phase/Pre-Construction Activities

The mobilization phase of the project, which is estimated to take average of maximum three months, will entail the following activities:

- Establishment of construction of camps, material and equipment storage areas, materials processing yards, including sanitation facilities. The following activities will be involved during establishment of the camp.
    - Bush clearing.
    - Construction of Material and equipment storage areas
    - Construction of sanitation facilities
    - Installation of electrical infrastructure
    - Installation of water and wastewater infrastructure
- Identification of naturally-occurring material borrow sites (sand, fill, gravel borrow and quarry sites),
- Identification of sources of water for domestic and construction works

Construction Phase

The construction phase of the project, which is estimates to take 12 month for each of the phase one and will encompass following major activities:

- Earth works to facilitate widening and re-alignment of the road. Earth works will entail the following activities:
    a) Clearing and grubbing (clearing of vegetation, including trees).
- Extraction of naturally occurring construction materials. This will include:
    b) Excavation and transport of natural sand, gravel, and sub-base materials to construction sites
    c) Stone quarrying (including blasting), crushing and transport of crushed aggregates to construction sites
    d) Transport and handling of fuel, lubricants etc. from their sources to the project site
- Transport of construction materials from source to site such as roof, steel, woods, nails, rope

Operation phase

The maintenance activities of the Overall, SEQUIP will contribute to increasing total enrolment in secondary school by 1.8 million students and increase the number of girls graduating from both secondary schools and alternative secondary education pathways.

Decommissioning Phase

After completion of construction, all the utilities which were used shall be reverted to the Municipal Director who will decide on their future use. The main activities during demobilization phase, will engross the following:

- Collection and disposal of storage facilities such as pallets, packing, boxes
- Collection and disposal of construction materials and waste such as waste oil, sewage, solid waste (plastics, wood, metal, papers, etc.) at the workshop, site office etc. to authorized dumpsite
- Restoration of material borrows areas to safer condition

Project Cost

Total Project Cost is four billion Tanzanian shillings

Legal Framework

Relevant sectorial and cross–sectorial policies that provide directives on how projects should be operated

In/on concerned natural resources and sensitive ecosystems are:

i. The National Energy Policy,2015
ii. Education and training policy,2014
iii. The National Environmental Policy, 2021
iv. The Occupational Health And Safety Policy 2009
v. The National Employment Policy, 2008
vi. The National Research And Development Policy, 2010
vii. The National Biotechnology Policy,2020

Key legislation, which PO-RALG must adhere to during implementation of this project, includes:

I. The Education Act, Cap.353.
II. The Law Of The Child Act, Cap. 13 R.E 2019
III. The Engineers Registration Act, Cap 63
IV. The Architects And Quantity Surveyors Act, Cap 267
V. The Workers Compensation Act, Cap 263
VI. The Persons With Disabilities Act, Cap 183
VII. The Occupier Liability Act, Cap 64
VIII. The standard Act, Cap. 130
IX. The Environmental Management Act, Cap 191
X. The Water Resources Management Act, Cap 331
XI. The Forest Act, Cap 323 R.E 2022
XII. The Electricity Act, Cap 131
XIII. The Local Government (District Authorities) Act, Cap,287
XIV. The Local Government (Urban Authorities) Act, Cap,288
XV. The Fire And Rescue Force (Safety Inspection And Certificates) Regulations, 2008 As Amended In 2017
XVI. The Fire And Rescue Force (Fire Precautions In Buildings) Regulations, 2015
XVII. The Environmental Management (Control And Management Of Electrical And Electronic Equipment Waste) Regulations, 2021.

Vulnerable group

Means a group of people who, due to their characteristics and circumstances, are likely to suffer more adverse impacts of natural disasters than other groups in the community.

Vulnerable Person means any person who by reason of age, infirmity, illness, disability or any other circumstance is in need of care or attention.

Vulnerable groups associated to SEQUIP

- Age group (children& elders)
- Indigenous
- Physical challenged group
- Women/Sexuality (Gender issue)

Project Cost

Total Project Cost is four billion Tanzanian shillings

National Legislation

Tanzania has ample legislation for the protection of the environment, health, safety and social welfare which is relevant for the application of the World Bank Environmental and Social Standards included in the ESF.

The main environmental, biodiversity, water, health, cultural resources, social and labour, policies and regulations relevant to SEQUIP and its commitment to this legislation during implementation has been discussed in this report, relevant legislation that applies to the project has been discussed too,

Baseline

In order to estimate the extent of impact, it is crucial to establish the status quo. The consulting team conducted the baseline study of the current level of impacts. This involved a study on flora and fauna, air, soil and water. It also covered socioeconomic issues, noise, and vibration etc. The aim of ascertaining the baseline it to appreciate to what extent the proposed project can alleviate or exacerbate the current situation and issues from key stakeholders.

Assessment of Impacts (Both Good and Negative)

This critically reviews and analyses interaction between the proposed project and the existing environment. In this analysis, the consultant distinguished between significant positive and negative impacts, direct and indirect impacts, and immediate and long-term impacts. Impacts, which are unavoidable or irreversible, are also identified. Wherever possible, impacts are described quantitatively in terms of environmental costs and benefits.

Consideration of Alternatives

This environmental assessment also involved an analysis of reasonable alternatives to meet the ultimate project objective. This analysis included any alternatives examined while developing the proposed project and that from an environmental, socio-cultural or economic point of view may be sounder than the proposed project.

This also includes the 'no action' alternative, which assesses environmental conditions without project. It is described how the alternatives compare in terms of potential impacts, costs, suitability under local conditions, as well as institutional, training, and monitoring requirements.

To the extent possible, costs and benefits of each alternative are quantified, incorporating the estimated costs of any associated mitigating measures. Finally, this report described the reasons for selecting the proposed project over the other alternatives.

Developing an Environmental Management Plan

This report recommends feasible and cost-effective measures to prevent or reduce any significant negative impacts to levels that are acceptable. This involves:

- Estimating the impacts and costs of those measures, and of the institutional and training requirements to implement them,
- Preparing a management plan including proposed work programs, budget estimates, schedules, staffing and training requirements, and other necessary support services to implement the mitigating measures,
- A management plan also covering the decommissioning phase of the project.

Developing an Environmental Monitoring Plan

This report contains a detailed plan to monitor the implementation of mitigation measures and the impacts of the project during its execution. This plan includes a cost estimate for carrying out the proposed monitoring plan.

Decommissioning

Decommissioning is the last phase of project life. It involves terminating project activities and operations and rehabilitating the project site to or close to its original state. It is anticipated that the project shall continue if there is a demand for a project, however, individual components of the plant shall be decommissioned as need be.

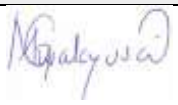
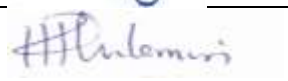
Conclusion and recommendations

The project will have both positive and negative impact to the environment and the local communities along it. Measures have been proposed to enhance impacts which are positive to the environment and the local people.

For those impacts that are negative, mitigation measures have been proposed to avoid or abate them to the extent possible for the purpose of maximizing benefits of the school construction project and minimizing detriments impacts of the project intervention to the communities.

LIST OF EIA EXPERTS WHO CONDUCTED THE STUDY

Tansheq Registration No. NEMC/EIA/0034

S/N	Experts	Specialty	Signatures
1.	Eng. Gwakisa Mwakyusa	Senior Environment expert	
2.	Mr. Lusako Raphael	Senior Environment expert	
3.	Eng. Anamary Philemon	Monitoring and Waste Management Expert	
4.	Mr. Erick Gagalla	Environmental expert	
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DOCUMENT QUALITY CONTROL PLAN

Rev	Action	Responsibility	Date
1.	First Draft		
2.	Reviewed Internally		
3.	Verified by the Client		
4.	Complied and proofread		

ACRONYMS AND ABBREVIATIONS

ADB	African Development Bank
AIDS	Acquired Immune Deficiency Syndrome
AEP	Alternative Education Program
BAWASA	Babati Water Sanitation and Authority
CBOs	Community Based Organisations
CO	Carbon Monoxide
CDP	Community Development Program
CO_2	Carbon Dioxide
dB	Decibels
DC	District Commissioner
DP	Development Partner
DEO	District Education Officer
DOE	Director Of Environment
DEMO	District Environment Management Officer
DED	District Executive Director
DRC	Democratic Republic of Congo
EMA	Environmental Management Act
EIA	Environment Impact Assessment
ESIA	Environment and Social Impact Assessment
ESS	Environment and Social Standards
ESDP	Education Sector Development Plan
ESF	Environment and Social Framework
EMP	Environmental Management Plan
EPFIs	Equator Principle Financial Institutions
ESMP	Environment and Social Management Plant
EBRD	European Bank for Reconstruction and Development
FI	Financial Intermediaries
FYDP	Five Year Development Plan
GDP	Gross Domestic Product
GBV	Gender Based Violence
GCA	Game Controlled Areas
GIIP	Good International Industry Practices

GCS	Geographic Coordinate System
GCLA	Government Chemistry Laboratory Authority
GS Pipe	Galvanized steel
HIPC	Heavily Indebted Poor Country
HIV	Human Immunodeficiency Virus
ICT	Information and Communications Technology
IFC	International Finance Institution
IST	Implementing Supporting Team
ISO	International Organization for Standardization
IPF	Investment Project Financing
IUCN	International Union for Conservation of Nature
LGAs	Local Government Authorities
LPG	Liquefied Petroleum Gas
MoEST	Ministry of Education, Science and Technology
NAPA	National Adaptation Programme Of Action
NEMC	National Environment Management Council
NEP	National Environment Policy
NGOs	Non-Governmental Organisations
NOx	Oxides of Nitrogen
NFYDP	National Five Years Development Plan 2012/22 – 2025/26
OHS	Occupational Health and Safety
O	Oxygen
OP	Operational Policy
OIP	Other Interested Parties
OSHA	Occupational Safety and Health Authority
OSPAR	Oil Spill Prevention Administration And Response
OPC	Ordinary Portland Cement
PAP	Project Affected People
PDO	Project Development Objectives
pH	Potential of Hydrogen
PLONOR	Pose Little Or No Risk
PM	Particulate Matters
PoRALG	President office, Regional Administration and Local Government

PPE	Personal Protective Equipment
PVC	Polyvinyl Chloride
RAS	Region Administrative Secretary
RAO	Region Academic Officer
RC	Region Commissioner
REO	Region Education Officer
REMO	Region Management Officer
SEP	Stakeholder Engagement Plan
SEQUIP	Secondary Education Quality Improvement Project
SO_2	Sulfur dioxide
MATEX	MANYARA Textile
TANESCO	Tanzania Electric Supply Company Limited
TDV	Tanzania Development Vision
ToR	Terms of Reference
URT	United Republic of Tanzania
VEC	Valued Environmental Component
VOCs	Volatile Organic Compounds
WB	World Bank
WBMS	World Bureau of Metal Statistics
WEO	Ward Executive Officer
WHO	World Health Organization

ACKNOWLEDGEMENT

PO-RALG extends its heartfelt appreciation to the World Bank group for their positive support in creating an enabling environment for young girls to pursue their education in every possible way.

Additionally, we would like to thank and express our gratitude to the officials of We thank and appreciate Manyara Region officials, Babati Town Council officials, ward executive officer for Maisaka ward, village executive officer for Kiongozi village, and all community members for their remarkable opinions and contribution during the preparation of this study

Lastly, we would like to acknowledge and sincerely appreciate the hard work and dedication of the staff at Tansheq Limited, without whom this project would not have been possible.

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CHAPTER ONE

1 INTRODUCTION

1.1 Background

The Government of the United Republic of Tanzania (URT) in co-operation with the World Bank developed the Secondary Education Quality Improvement Project (SEQUIP). The objectives of SEQUIP are to increase access to secondary education, provide responsive learning environments for girls and in result, improve completion of quality secondary education for girls and boys.

Although access to and completion of primary education has improved over the last decade and substantial progress has been made in secondary education, secondary student enrolment rates of girls and boys are still very low in Tanzania compared to other East African countries. The share of secondary students of the relevant school age population enrolled was only 28 percent in 2018, compared to 68 percent in Kenya, despite the recent enrolment surge. Secondary school attendance was 28 percent for girls and 27 percent for boys.

The three main challenges in secondary education are:

(i) Access to and completion of quality secondary education for girls and boys;
(ii) A safe, supportive learning environment to keep girls in school longer and delay early marriage; and
(iii) Effective and clear Alternative Education Pathways (AEP) to enable girls and boys who drop out of lower secondary school, for various reasons including early pregnancy, to finish the lower secondary education cycle and enter upper secondary schools.

The proposed project intends at enhancing the secondary education through delivery point's improvement by increasing access to secondary education, provide responsive learning environments for girls and improve completion of quality secondary education for girls and boys.

The implementing Government Agencies are Ministry of Education, Science and Technology (MoEST) and the President's Office – Regional Administration and Local Government (PO-RALG). Both Ministries are responsible for implementation of school-level education activities through the Local Government Authority (LGA). One of the key components to be implemented through SEQUIP is facilitating access to secondary schools and bringing schools closer to communities. The project plans to support construction of 1000 new schools and rehabilitation of additional facilities at existing secondary schools.

The project will specifically have the following components.

- Component 1: Empowering Girls Through Secondary Education and Life Skills
- Component 2: Digitally Enabled Effective Teaching and Learning
- Component 3: Reducing Barriers to Girls' Education through Facilitating Access to Secondary Schools
- Component 4: Project Coordination, Monitoring and Evaluation

The Secondary Education Quality Improvement Project (SEQUIP) will focus on enabling young girls to continue their secondary education despite social and economic barriers. More generally, SEQUIP will improve the completion of quality, learner-friendly secondary education for girls and boys. In 2018, 1,025,629 girls and 965,242 boys attended lower secondary school.

However, in the same year, a further 134,000 children, half of whom were girls, qualified to continue their schooling but were unable to because of lack of spaces in government secondary schools. Drop-out rates are high for both boys and girls with a quarter of students leaving before they complete their lower secondary schooling. In 2017, about 5,500 girls were not able to continue with their secondary education due to adolescent pregnancy and early motherhood. SEQUIP will contribute to addressing these key challenges by:

(i) Creating a gender sensitive, learner-friendly school environment through investing in supportive structures in the school and community including trained school guidance counsellors, stronger links with the community through Parent Teacher Associations and life skills training.
(ii) Supporting female students to avoid dropping out of secondary school due to pregnancy through measures that include:
    (a) Encouraging community awareness of risks for girls;
    (b) Supporting safe passage and reducing the distance to schools to lower the risks of gender-based violence on the way to and from school; and supporting girls who become pregnant to access recognized, quality Alternative Education Pathways (AEPs) to obtain lower secondary certification and continue with upper secondary education or post-secondary education.
    (c) Improving the quality of secondary school teaching and learning environments through the hiring of additional qualified teachers in core subjects and providing textbooks in core subjects.
    (d) Increasing the number of secondary school spaces through the construction of new classrooms that meet minimum infrastructure standards and supporting the expansion of the school network to bring schools closer to communities.
    (e) Using innovative digital technology to facilitate mathematics and science teaching and improve learning.

These SEQUIP interventions are aligned with the Government's Education Sector Development Plan (ESDP) (2016/17–2020/21) and related strategies. SEQUIP design also draws on lessons learned from previous and ongoing World Bank and Development Partner (DP) support to education in Tanzania. Overall, SEQUIP will contribute to increasing total enrolment in secondary school by 1.8 million students and increase the number of girls graduating from both secondary schools and alternative secondary education pathways. Over its lifetime, the Project will directly benefit about 6.5 million new and existing secondary school students, including 3.2 million girls. 1 SEQUIP will help more girls transition from lower to upper secondary education, including girls who had to leave lower secondary government schools due to pregnancy.

1.2 Project Objectives

The Program's objective is to increase access to secondary education, provide responsive learning environments for girls and improve completion of quality secondary education for girls and boys. The project interventions will:

(i) Create a safe, gender sensitive and learner-friendly school environment,
(ii) Provide good quality alternative education opportunities for secondary school drop-outs including young mothers,
(iii) Improve the quality of secondary education by improving teacher skills, reducing class sizes and providing adequate teaching and learning materials,
(iv) Use innovative digital technology to improve mathematics and science teaching and;
(v) Increase access to secondary education by providing more schools closer to the homes of children. Over the project's lifetime, 6.5 million children (3.1 million girls) will benefit from project interventions and an additional 900,000 children are expected to successfully complete their secondary education.

A need and evidence-based approach will be used in identification and selecting locations and schools that will benefit

1.3 Scope of the Study

According to Environment Management Act of 2004, and its Environmental Impact Assessment and Audit Regulation of 2005 objectives for carrying out EIA include:

- To ensure that environmental considerations are explicitly addressed and incorporated into the decision-making process, with the aim to anticipate and avoid, minimize, or offset the adverse significant biophysical and social effects of the proposed project; and to protect the capacity of natural systems and ecological processes to maintain their functions.

- To promote development that is sustainable and optimizes resources use and management opportunities.

1.4 Land requirement for the project

Land is public property and rights to the land are issued in the form of residential leases and certificates of rights to occupancy. The construction of new schools in Babati Town Council will require enough land. Site selection will be important in minimizing the extent of resettlement including of informal land owners and or users who were present in an area prior to the selection of a site for a school.

The proposed school construction area in Manyara Region was government land until 1997 when the government gave the land to settler for conducting cultivation, until 2006 when the government revoked the title ownership of the land whereas the land was given to community. The land had total area of 90 Acres, then the coming of construction of region school, the government now has taken portion of 30 acres to build the proposed school. With that regard the land was previous given to people of Kiongozi village and they had developed for agriculture activities. With the agreement with the village government, people have been willingly accepted to give the land of 30 acres for the construction of school

As per construction directives from PO-RALG, specific land size requirement for school construction is 20 acres for both rural areas and urban areas. However, the proposed site for this project has a total of 30 acres which was previously owned by the community.

1.5 Study Approach and Methodology

The approach to this exercise was structured to cover the requirements under the Environment Impact Assessment and Audit Regulations, 2005. It involved largely an understanding of the project background, the preliminary designs and the implementation plan as well as commissioning. In addition, baseline information was obtained through physical investigation of the project site areas, desktop studies, and public consultations with members of the community in the project areas, survey, photography, and discussions with the project Proponent.
The methodology used in this study follows specific procedures and guidelines set by the EIA & Audit Regulations of 2005. The study adopted the following approach:

The The proces for Conducting Impact Assessment is closely related to the flowchart in Figure 1-1.

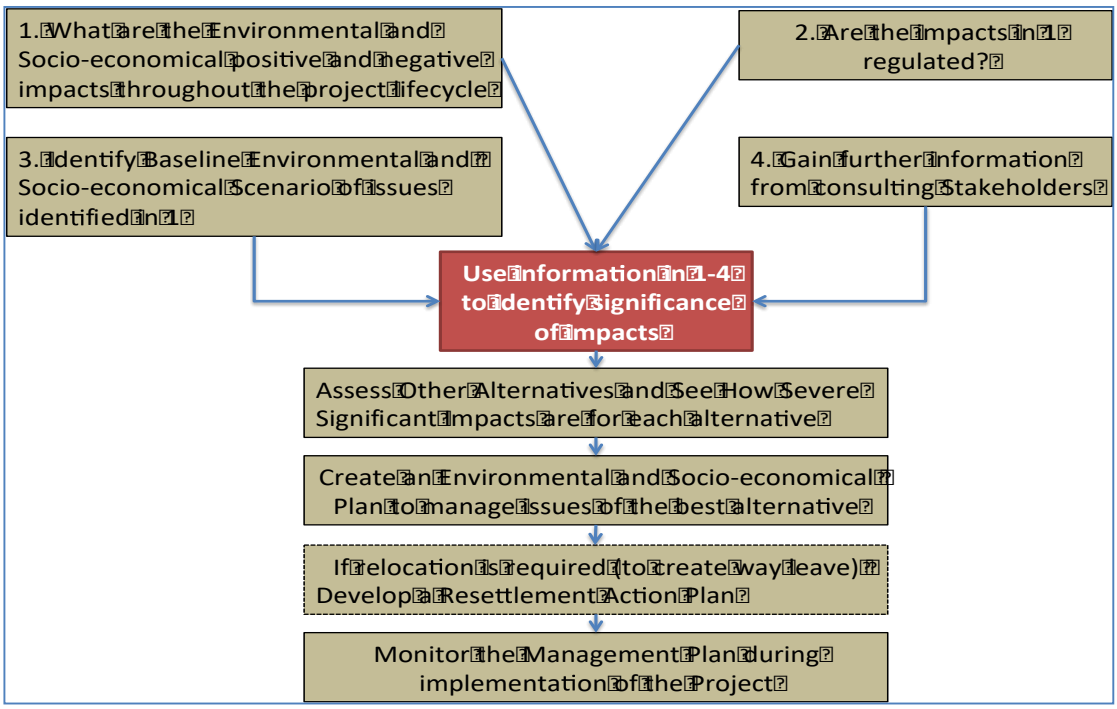

Figure 1-1: Impact Assessment Process

1.5.1 Issues Associated with the Proposed Project

Environmental and social Issues associated with school construction activities were identified based on previous history and detailed project activities. These are detailed in Chapter 2.

1.5.2 Regulatory Framework with Associated Issues

Description the relevant regulations and standards governing environmental quality, health and safety, protection of sensitive areas, sitting, land use control as detailed in CHAPTER THREE.

1.5.3 How the Situation is Currently (Baseline Situation)

In order to gauge the extent of impact, it is crucial to establish the status quo (CHAPTER). The consulting team conducted the baseline study of the current level of impacts. This involved a specialized study on flora and fauna, air, soil and water. It also covered socioeconomic issues, noise, and vibration etc. The aim of ascertaining the baseline it to appreciate to what extent the proposed project can alleviate or exacerbate the current situation.

1.5.4 Issues from Key Stakeholders

This EISA also reports on the following:

- A list of stakeholders consulted together with a stakeholder analysis.
- The method used to get their views and issues of concern raised.
- Issues raised by the stakeholders and the way they were addressed.
- Records of stakeholder meetings, communications, and comments.

1.5.5 Assessment of Impacts (Both Good and Negative)

This critically reviews and analyses interaction between the proposed project and the existing environment. In this analysis, the consultant distinguished between significant positive and negative impacts, direct and indirect impacts, and immediate and long-term impacts. Impacts, which are unavoidable or irreversible, are also identified. Wherever possible, impacts are described quantitatively in terms of environmental costs and benefits.

1.5.6 Consideration of Alternatives

This environmental assessment also involved an analysis of reasonable alternatives to meet the ultimate project objective. This analysis included any alternatives examined while developing the proposed project and that from an environmental, socio-cultural or economic point of view may be sounder than the proposed project. This also includes the ‘no action’ alternative, which assesses environmental conditions without project. It describes how the alternatives compare in terms of potential impacts, costs, suitability under local conditions, as well as institutional, training, and monitoring requirements. To the extent possible, costs and benefits of each alternative are quantified, incorporating the estimated costs of any associated mitigating measures. Finally, this report described the reasons for selecting the proposed project over the other alternatives.

1.5.7 Developing an Environmental Management Plan

This report recommends feasible and cost-effective measures to prevent or reduce any significant negative impacts to levels that are acceptable. This involves:

- Estimating the impacts and costs of those measures, and of the institutional and training requirements to implement them,
- Preparing a management plan including proposed work programs, budget estimates, schedules, staffing and training requirements, and other necessary support services to implement the mitigating measures,

- A management plan also covering the decommissioning phase of the project,

1.5.8 Developing an Environmental Monitoring Plan

This report contains a detailed plan to monitor the implementation of mitigation measures and the impacts of the project during its execution. This plan includes a cost estimate for carrying out the proposed monitoring plan.

1.6 Content of the Report

This report is designed to meet the requirements of Regulation 18 of Environmental Impact Assessment and Audit Regulations (United Republic of Tanzania, 2005) and as per the process of conducting ESIA. This introductory chapter is followed by the subsequent chapters as detailed in Table 1-1.

Table 1-1: Content of the Report

Chapter	Description
1. Introduction	Overview and objective of the study, methodology and outline of the report
2. Project Background and Description;	This chapter describes: • The executing entities of the project and their respective roles in the project • The project's geographic location, preferably illustrated with appropriate maps • Summary of the project (project objective(s), expected results/outcomes, outputs and main activities • Implementation arrangements.
3. Policy, Administrative and Legal Framework;	Describe the policy, legal and administrative framework within which the project takes place and identify any laws and regulations that pertain to environmental and social matters relevant to the project. This includes regulations about environmental and/or social impact assessments to which the project must adhere as well as laws implementing host country obligations under international law. If applicable. Where pertinent, consider legal frameworks for promoting gender equality. Flag any areas where the project might fall short on compliance.
4. Baseline or Existing Conditions;	The main purpose of this section of the ESIA report is to provide an understanding of current environmental and social conditions that form the baseline against which project impacts can be predicted and measured during project implementation. For moderate-risk projects that require only a partial ESIA and no scoping study, this section also provides an opportunity to substantiate the results of the ESMS screening by confirming potential impacts and/or identifying other potential impacts.
5. Stakeholder Identification and Analysis	The purpose of the stakeholder identification and analysis is to understand potential impacts on stakeholders and to clarify who should be involved in the ESIA process and how. This should be able to elaborate: • stakeholders' interests in and expectations from the project; • how they might influence the project (positively or negatively; • a first appraisal or estimation of how their livelihoods could be impacted by the project (positively or negatively); and • How they should be involved in the ESIA based on the information in the three items above.
6. Assessment of Impacts and Identification of Alternatives	This step is the heart of the ESIA; it itemizes and describes the identified impacts, makes predictions in terms of their probability, and assesses their significance. When analyzing the risks not only direct impacts should be taken into consideration but also indirect impacts such as inadvertent knock-on effects or cumulative effects that materialize through interaction with other developments, impacts occurring at the project site or within the project's wider area of influence and impacts triggered over time

Chapter	Description
	The purpose of the analysis of alternatives is to identify other options, including not implementing the project, to achieve the project objectives and compare their impacts with the original proposal. This step is required only for high-risk projects where the identified impacts are very significant.
7. Impacts Management or Environmental Mitigation Measures	A main output of the ESIA process is a strategy for managing risks and mitigating impacts. The identification of mitigation measures is done in consultation with affected groups and is guided by the mitigation hierarchy. The mitigation hierarchy implies that all reasonable attempts must first be made to avoid negative social or environmental impacts. If avoidance is not possible without challenging the conservation objective of the project, measures should be taken to minimize the impacts to acceptable levels and address remaining residual impacts with adequate and fair compensation measures.
8. Environmental and Social Management Plan	This is a risk management strategy is documented in an Environmental and Social Management Plan (ESMP) that describes: the mitigation measures developed during the ESIA, an implementation schedule and required resources and responsibilities. The technical and operational feasibility, cultural adequacy and sustainability of proposed measures must be demonstrated as well as requirements for capacity building and institutional strengthening, where relevant.
9. Environmental and Social Monitoring Plan	The ESMP should also indicate how the measures designed to avoid impacts will be monitored for effectiveness.
10. Resource Evaluation or Cost Benefit Analysis	This chapters intends to internalize all costs associated with management of environmental and social impacts while comparing with the benefits which could be derived from implementation of the project
11. Decommissioning;	How decommissioning of the project shall be affected and restoration of the site
12. Summary and Conclusions	An overview of the study as well as conclusion from experts regarding the findings
13. References	List of all sources of information used in the report
14. Appendices	Detailed descriptions which are important for the study but cannot be included in the main body

1.7 Limitations of the Study

The process of conducting Environmental and Social Impact Assessment of the proposed SEQUIP projects faced the following key challenges:

a) Limitation of alternative selections as the sites were selected prior EIA

b) Data availability and lack of proper records at the regional and district levels

c) Capacity of the team from the client involved in conducting ESIA

d) Non consideration of associated facilities

e) Lack of cooperation from the zonal and site coordinators

f) Delay in response/ request of information

CHAPTER TWO

2 PROJECT BACKGROUND DESCRIPTION

2.1 Overview

The Project Development Objectives (PDOs) is to increase access to secondary education, provide responsive learning environments for girls and improve completion of quality secondary education for girls and boys. SEQUIP will contribute to addressing key challenges to girls and boys accessing education and this school will definitely target girls for their studying excel. The project aims to reduce distance to government target: 3km (or 45 minutes)

The project will contribute to increasing the total number of students in secondary education including Alternative Education Pathways (AEP) by 250,000. It will directly benefit about 1.8 million secondary school students, including 920,000 girls, 95% of whom are enrolled in lower secondary. SEQUIP will help more girls' transition from lower to upper secondary education, as girls are underrepresented at this level

The project is being implemented in the location where there this no potential wildlife animals any sensitive features including flora and fauna
At full project operation the expected number of student will be 1000

2.2 land ownership;

The proposed school construction area in Manyara Region was government land until 1997 when the government gave the land to settler for conducting cultivation, until 2006 when the government revoked the title ownership of the land whereas the land was given to community. The land had total area of 90 Acres, then the coming of construction of region school, the government now has taken portion of 30 acres to build the proposed school. With that regard the land was previous given to people of Kiongozi village and they had developed for agriculture activities. With the agreement with the village government, people have been willingly accepted to give the land of 30 acres for the construction of school
In this project no resettlement or compensation is envisaged

2.3 Project Location and Accessibility

The proposed project site is administratively located at Kiongozi village, Maisaka ward in Babati Town Municipal- Manyara Region and is bordered by individual owned farm to the West, South and East, However in North the proposed site is bordered by Babati Arusha Road and there is seasonal river, crossing at the middle of the proposed land.

The proposed site is accessible through Babati Arusha Road 14km from Babati Town toward Arusha in Kiongozi Village with coordinate -4.201839, 35.75090

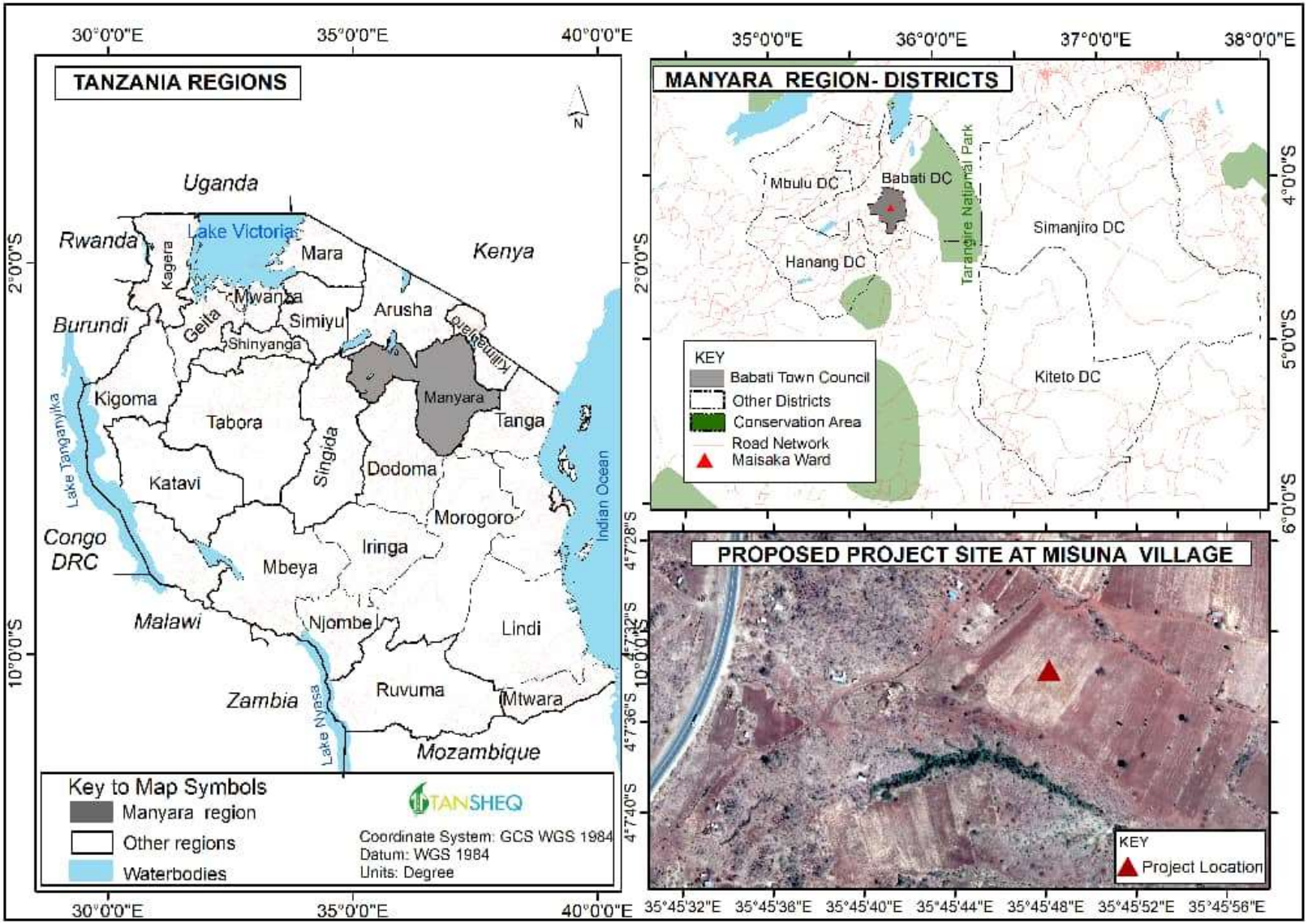

Figure 2-1: The proposed project location (Source, Tansheq, 2022)

2.4 Current Situation in vicinity proposed site

2.4.1 Proposed site

The proposed site is within mixed agricultural areas and it is the Greenfield site as it is not disturbed and no any development within the site.

2.4.2 Surroundings

The proposed project site is administratively located at Kiongozi village, Maisaka ward in Babati Town Municipal- Manyara Region and is bordered by individual owned farm to the West, South and East, However in North the proposed site is bordered by Babati Arusha Road and there is seasonal river, crossing at the middle of the land

Figure 2-2: Scenery of the project site

2.5 Project Planning and Design

The school design consists of required infrastructure package based on the school construction and maintenance strategy (e.g. number of classrooms/students, adequate WASH facilities, especially important for girls; multi-purpose science labs, electricity, etc.). MANYARA region school will be having both ordinary and advanced level with student capacity between 1000 and 1100 students. The construction package will involve the following facilities:
The peoject will be accomadating both students including the physical challenged people
It is anticipated during construction not less than 50 workers will be employed who will be coming from nearby area and therefore no camp site is envisaged

2.5.1 Classrooms

The classrooms are designed following Education Bulletin number 1 of 2007 which directs capacity of each classroom level, 30 students for advance and 40 students for ordinary level. However schedule of materials indicating each classroom will be having capacity of 40 students. Construction will be undertaken in two phases. The first phase will involve construction of 12 classrooms within six blocks followed by the second phase which will involve the construction of six classrooms. The proposed project development will adhere to the fire and rescue force directives for public premises. There will also be a facility(ies) for the ease access to the physically challenged people.

The Education Global Practice Africa Region report prepared by World Bank provides the following directives; Student classroom ratios of 50:1 or less, student to functioning latrine ratio of 25:1 for girls

and 30:1 for boys, at least one multipurpose science laboratory, student textbook ratios in mathematics and science subjects of 1:1, teacher: teacher guide availability of 2:1. Figure 1-1 showing the proposed classroom design.

2.5.2 Administration blocks

The bulletin indicates for the school having capacity of 1000 student plus need to have not less than 40 teachers excluding other staffs such as school bursar, secretary etc.

2.5.3 Laboratories

Education Bulletin number 1 of 2007 explain the capacity and set up of laboratory building for each level is 40 students, The scheduling of materials for MANYARA will adhere the bulletin as required the following laboratory rooms will be constructed

- Physics and geography lab
- Chemistry and biology lab,

2.5.4 Toilets

- The proposed toilet facility will comprise of one block with 16 holes to be constructed standalone as scheduling shows, nevertheless, some of classrooms will be having sanitary rooms as designed, dormitory, and dining hall will be having sanitary also.

2.5.5 Generator

This will be alternative source of power at school and the incorporated premises such as staff quarters. One generator room will be constructed.

2.5.6 Dining hall

The Dining hall is a pivotal gathering space on School's campus and is emblematic of The Family Boarding School ideal. The school will be having enough dinning space to all students since it is boarding school, meal will be served. According to the designs of the dining hall, it has the capacity of 2000 students.

2.5.7 Teachers' house

The teachers' houses were designed to attract teachers out to the countryside, as well as to increase teachers morally to perform their duties unlike if they are coming far from the school. The design considers the staff house to have one (1) master bedroom, two (2) bedrooms with Public toilet, Sitting room/dining, Kitchen and Store.

2.5.8 Dormitories

These dormitories are the place where students stay. The student housing must also aim to provide healthy and acoustically pleasant environments for the protection, comfort, and productivity of the students. Each dormitory will accomadate 40 to 50 students

2.5.9 Library

The library is important because it affects cultures, it affects innovation and it affects individuals. Because of all this, library architecture has the responsibility to enhance these effects by providing a knowledge center that is inspirational and conducive to good communication and teaching interactions. According to designs the library to be constructed will accommodate 52 students for reading and the computer learning room will accommodate 8 students.
Other components that will be constructed within school compounds area Water tunnel, Waste incinerators, Water tank (hippo) and its pillars), Manhole and gully trap, Walkway & Paving. Table 2-1 below show the summary of buildings that will be constructed.

Table 2-1 summary of buildings to be constructed

	CONSTRUCTION		
No	**Buildings**	**No. of Buildings**	**No. of rooms**
	First construction phase		
1	Building with 2 classrooms	2	4
2	Building with 2 classrooms and one office	3	6
3	Building with 2 classrooms and 2 toilets	1	2
4	Building with Physics laboratory and Geography room	1	2
5	Building with Chemistry and Biology laboratory	1	2
6	Administration Building	1	1
7	Toilet building for students (girls)	1	16
8	Generator Room	1	1
9	Dining Hall	1	1
10	Teacher's house (3 rooms)	1	
11	Teacher's house (2 in 1)	1	
12	Dormitories @ 120	5	
surrounding activities			
1	Water Tunnel (1050m)	1	1
2	Waste incinerators	1	1
3	Waste incinerators	2	2
4	Underground water storage tanks (32,000 liters)	2	2
5	Water tank (hippo) and its pillars)	2	2
6	Manhole and gully trap	1	
7	Walkway & Paving		
second construction phase			
1	building with 2 classrooms	2	4
2	Building with 2 classrooms and 1 office,	3	6
3	ICT Room	1	1
4	Library	1	1
5	Master's Houses (3 Rooms)	4	
6	Dormitories @ 120 Students	4	

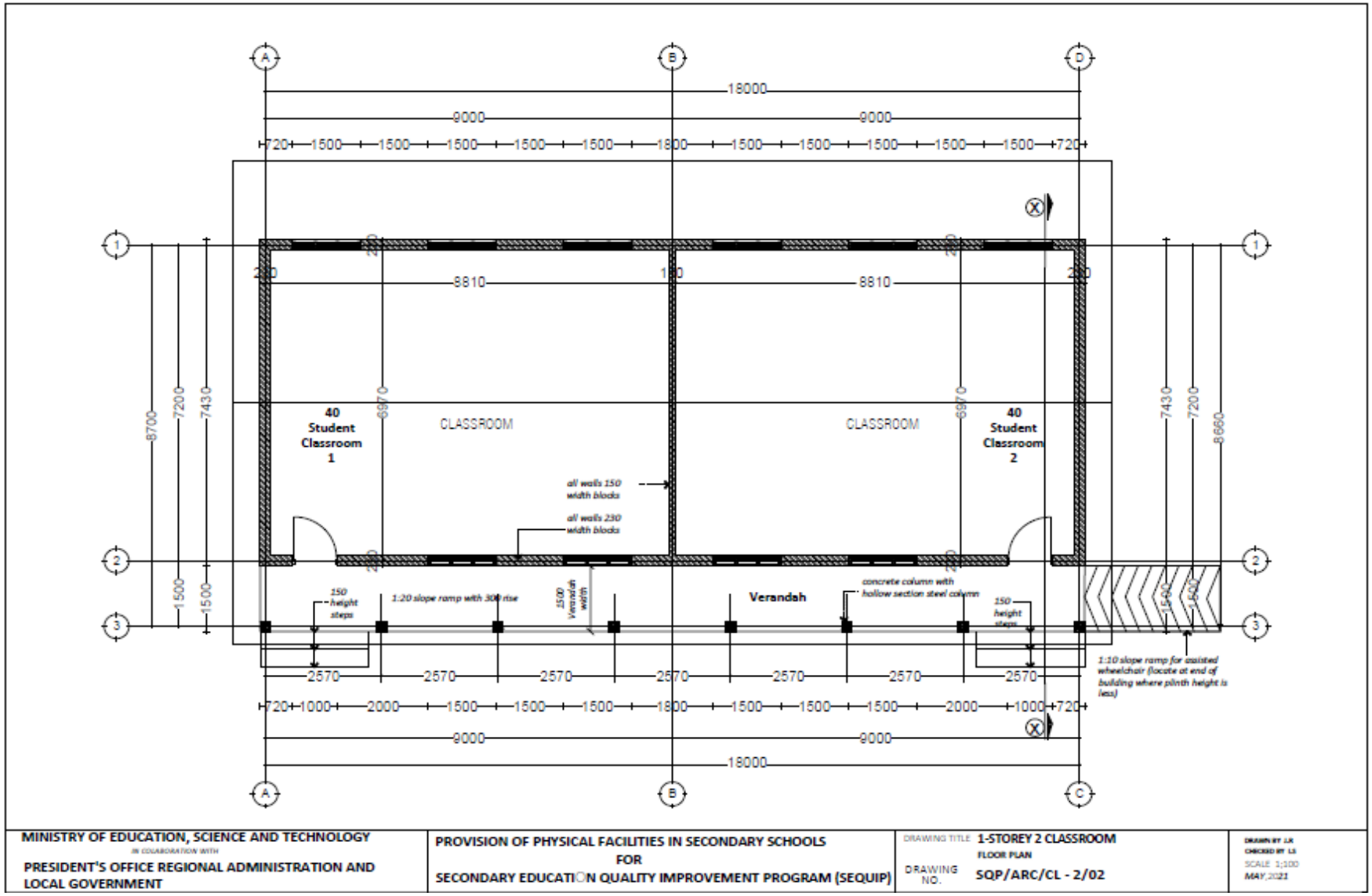

Figure 2-3: classroom design

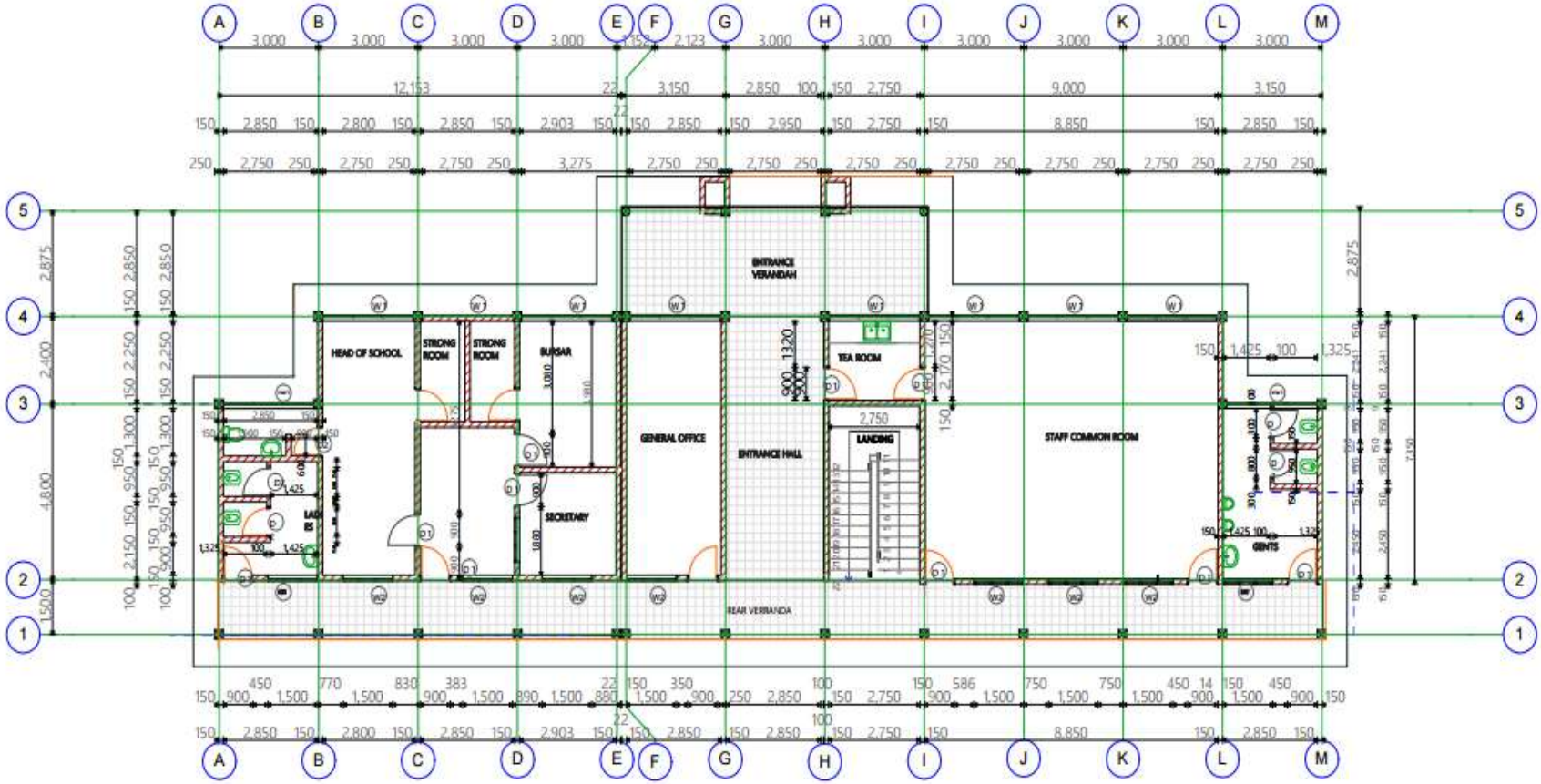

Figure 2-4: Pproposed Design for School Administration block

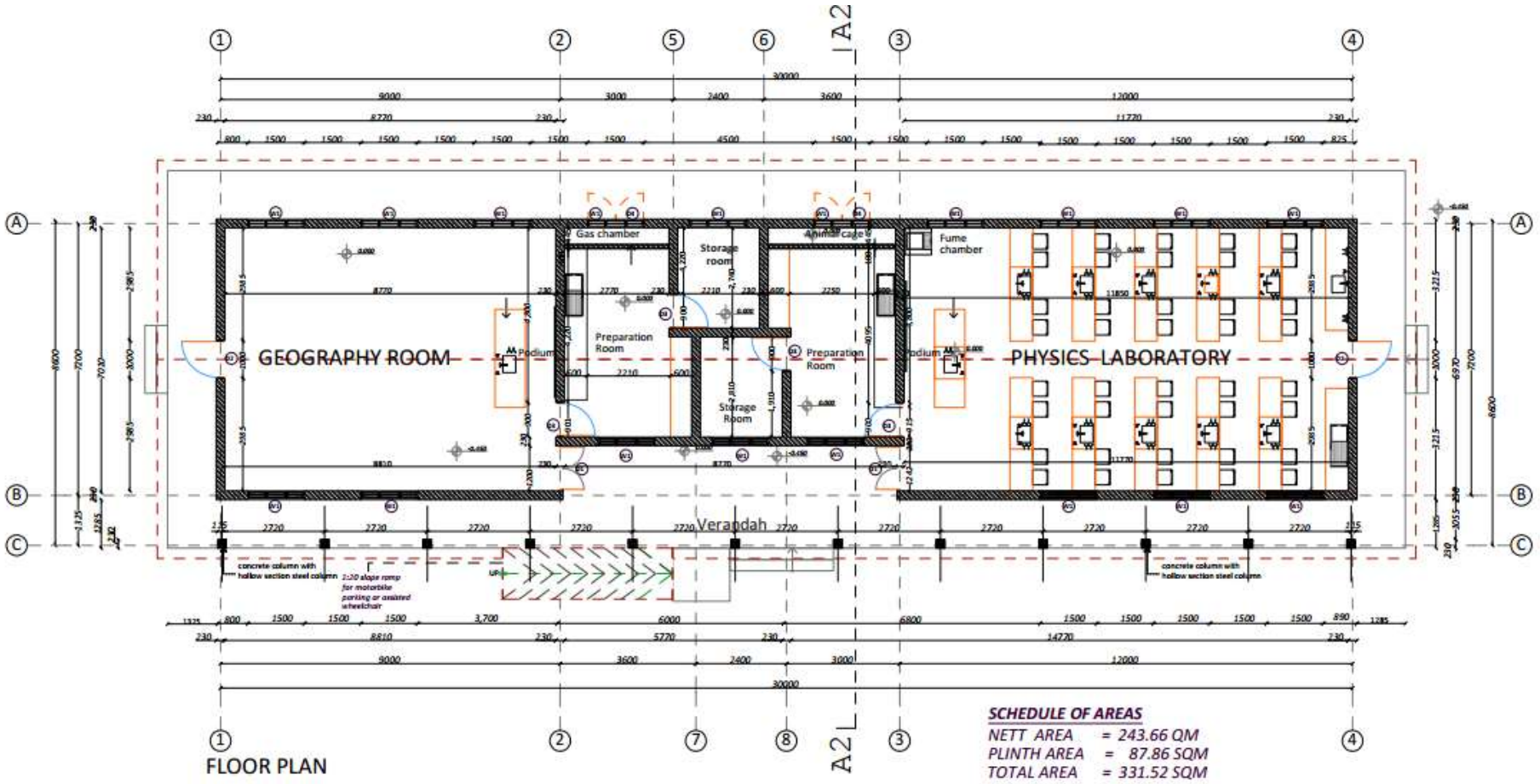

Figure 2-5: Proposed layout of the Laboratory room to be constructed

Figure 2-6: Various Facilities to be constructed with the General layout in 3D

2.6 Project Activities

The envisaged project activities can be broadly categorized in three phases as listed in **Error! R eference source not found.**

- Mobilization and Construction
- Operational phase
- Decommissioning phase

Table 2-2 Project activities

Project Phase	Activities
Mobilization Phase	• Bush clearing. • Site levelling • Site marking • Temporary camp/shed for office
Construction phase	• Excavation of trenches for foundation • Alignment of blocks for Foundation • Concrete mixing • Setting up main door frame and other room door frames • Wall construction until window frame base • Setup ventilators for exhaust fans, bathroom ventilators if needed

Project Phase	Activities
	• Slabs formworks for Floors • Bar bending work for beams and roof • Electric pipes setup inside roof • Clear any blockage in the roof pipes • Laying electric pipes in the walls and setup electric boxes • Tiles laying on the floors and bathroom walls • Plastering of roof and walls indoors and outdoors • Finishing outside and plumbing work and tank • Painting • Electric wiring and switches setup • Compound wall/fence • Firefighting system installation • Water drainage system • Air cooling system installation
Operation phase	• Teaching services • Movement within dormitories, classrooms, dinning, laboratory, offices and washrooms • Meeting and Conferences • Health. Safety and security as well as social issues.
Decommissioning phase	• Expansion and maintenance

2.6.1 The mobilization phase of the project

The mobilization phase of the project, which is estimated to take average of one month and maximum three months, will entail the following activities:

- Establishment of construction of camp. The following activities will be involved during establishment of the camp;
    - Design finalization
    - Equipment and labor mobilization
    - Workers/security temporally house construction
    - Bush clearing,
    - Construction of Material and equipment storage areas,
    - Construction of sanitation facilities,
    - Installation of electrical infrastructure,
    - Installation of water and wastewater infrastructure,
- Identification of sources of construction material (borrow pits and quarry sites),
- Identification of sources of water for domestic and construction works.

2.6.1.1 Materials Required During Mobilization Phase

The following materials will be required during mobilization phase of the project:

- Cement, sand, and aggregates for block and concrete works,
- Water for general construction works and dust abatement,
- Timber, galvanized iron sheets, paints, nails, etc. for roofing,
- Electrical works: conduits, cables, fittings,

Cement, galvanized iron sheets, nails, fence wire, electrical and plumbing utilities will mainly be obtained from either Dar es Salaam, while sand, aggregates, and timber will be obtained locally.

2.6.1.2 Equipment Required During Mobilization Phase

The major equipments which will be required during mobilization phase of the project will include:

- Bulldozers/motor graders, excavators for site clearing, excavation, and grading of the storage facilities construction at site,
- Light duty vehicles and trucks for the transport of construction materials, small machines and staff,
- Water pumps, block making machines, stationery concrete mixers and trans mixers, etc. for making of blocks and concrete mixes for concrete works,
- Electric power generator(s).

2.6.1.3 Wastes Generated During Mobilization Phase

Mobilization phase of the project will generate the wastes shown in below Table 2-3

Table 2-3: Wastes likely to be generated During Mobilization Phase

Aspect	Solid Waste	Liquid Waste	Gaseous Waste
Site clearing and excavation	Earth, green cutting	None	Generation of air pollutants (dust)
Construction of foundation(s): block/concrete works	Concrete, blocks, hessian cement bags	Water slurry, wash-down water	None
Construction of the main Storage room	Cement bags, mortar, steel reinforcements, nails, timber, iron sheet wastes, etc.	Concrete slurry	Paint
Installation of electrical infrastructure	conduit pipes, cables	None	None
Installation of water infrastructure	PVC and GS pipes	None	None
Labor force	Plastic bottles/bags, food Wastes	Sanitary wastes	None
Servicing of construction equipment	Used batteries, used tyres, used metals parts, used oil and fuel filters, empty oil drums	Waste oil	None

2.6.1.4 Treatment and Disposal of Wastes Generated During Mobilization Phase

The treatment methods for the wastes generated during mobilization phase shall be based on re-using, re-cycling, burying, or burning, and on-site treatment.

- During site clearing, topsoil and green cutting shall be dispose of in old borrow pits or other areas approved by the Engineer
- Concrete and cement blocks wastes shall be disposed of in borrow pits during their reinstatement as approved by the Engineer.
- Metal wastes such as GS pipes, nails, reinforcement bars, and used equipment parts shall be disposed of by recycling. They will be collected and stored; until enough quantities are obtained before being disposed of by the Contractor. The metal scraps disposing companies shall be approved by the Engineer.
- Degradable materials such as paper cement bags and paper boxes shall be treated on-site by either controlled burning.
- Non degradable wastes such as plastic, PVC pipes, and plastic bottles shall be collected and transported and given freely to plastic factories where they will be recycled.

• Used batteries, empty metals drums, used oil filters shall be disposed of through approved disposing companies.

- Temporary pit latrines shall be constructed at active mobilization sites (campsites) for the disposal of sanitary wastes.

2.6.2 Construction Phase

The construction phase of the project, which is estimated to take 12 months for each of the phase one and will encompass following major activities:

- Earthworks to facilitate widening and re-alignment of existing road. Earthworks will entail the following activities:

  a) Clearing and grubbing (clearing of vegetation, including trees).

• Extraction of occurring construction materials. This will include:

  a) Excavation and transport of natural sand, gravel, and sub-base materials to construction sites

  b) Stone quarrying (including blasting), crushing and transport of crushed aggregates to construction sites

  c) Transport and handling of fuel, lubricants etc. from their sources to the project site

• Transport of construction materials from their sources to the project site such as roof, steel, woods, nails, rope etc.

The project will be implemetend under the FORCE ACCAOUNT mode, therefore local “fundi” will be employed. Gender balance is given priority for this project the expected number of workers is between 50 to 70 depending on the contract. The number of working hours will be 8 hours per day according to OSHA act 2003

2.6.2.1 Materials Required During Construction Phase

During the project construction, the following materials as presented in Table 2-4 will be required

Table 2-4: Materials required During Construction Phase

No	Material	Usage	Possible Source	Quanity
1.	Ordinary Portland Cement(OPC) and Pozzollana Portland Cement (PPC)	For construction purposes.	Twiga cement (Dar es salaam), Tanga cement (tanga), and Mbeya cement (Mbeya)	50 tonnes approximately
2.	Sand	Production of mortar and general concrete works	Stone crusher dust and sand pits (to be established by Contractors)	45,000 M^3
3.	Crushed aggregate	Concrete works (Structural works) and construction	Local available	5,000 M^3
4.	Steel Reinforcement bars	Reinforced concrete works	Dar/imported	40 Tonnes
5.	Steel shutters and Form works	Concrete works	Dar	30 Tonnes
6.	Soft timber	Production of	Locally	2000 PCs
7.	Nails	Nails for fixing	Dar es salaam	1000 kg

8	Water	Drinking, concrete works, dust suppression	Rivers, streams, BAWASA and boreholes	100,000 Lt

2.6.2.2 Wastes Generated During Construction Phase

The wastes generated during construction phase of the project will result from operation of construction and equipment maintenance. The wastes which will be generated during construction phase of the project are shown in Table 2-5.

Table 2-5: Wastes likely to be generated during Construction Phase

Aspect	Solid Waste	Liquid Waste	Gaseous Waste	Hazardous Waste
Operations of Campsite				
	Paper	Sanitary waste	-	-
	Litter	-	-	-
	Toner, cartridges	-	-	-
	Paper litter	Sanitary waste	-	-
	Plastic bottles/bags	-	-	-
	Aluminium cans	-	-	-
	Food wastes	-		
				Biohazard wastes (medical wastes)
	Electrical and Electronic			
Machinery and equipment Maintenance				
	Plastic and glass (containers), used tyre, metal (used parts), plastic and cable parts, used lead-acid batteries,	Waste oil and grease, battery acid (dilute sulphuric acid)	-	Gases that are compressed, liquefied, or dissolved under Pressure may be hazardous. Flammable liquids including oil, grease and Petroleum compounds are also hazardous. Used lead-acid batteries, plastic containers
	-	Lubricant, coolants (radiator fluid), hydraulic fluid,	-	Lubricants, hydraulic fluid

2.6.2.3 Treatment and Disposal of Wastes Generated During Construction Phase

The treatment methods for the wastes generated during construction phase will depend on whether they are degradable, non-degradable, hazardous, or non-hazardous. Depending on the nature of the wastes, the wastes will either be re-used, re-cycles, buried, or burnt. This will include Electrical and Electronic

2.6.3 Operation phase

The maintenance activities of the Overall, SEQUIP will contribute to increasing total enrolment in secondary school by 1.8 million students and increase the number of girls graduating from both secondary schools and alternative secondary education pathways.

2.6.4 Decommissioning Phase

After completion of construction, all the utilities which were used shall be reverted to the District Director who will decide on their future use. The main activities during demobilization phase, will engross the following:

- Collection and disposal of storage facilities such as pallets, packing, boxes,
- Collection and disposal of construction materials and wastes such as waste oil, sewage, solid wastes(plastics, wood, metal, papers, etc.) at the workshop, site office etc. to authorized dumpsite,
- Restoration of material borrows areas to safer condition.

2.6.4.1 Materials Required During Demobilization Phase

Materials required during demobilization phase will include fuel for the operation of equipment, soils and tree seedlings for reinstatement of borrow pits. During this phase, labor, water, and energy will also be required.

2.6.4.2 Equipment Required During Demobilization Phase

The equipment required during demobilization phase will include vehicles and trucks for transport of wastes and remaining materials to be transported.

2.6.4.3 Wastes Generated During Demobilization Phase

The following wastes will be generated during demobilization phase of the project:

- Hazardous waste such as used lubricants (oil and grease), used lead-acid batteries, empty plastic bottles, etc.,
- Plastic and paper packing,
- Used equipment parts.
- Electrical and Electronic

2.6.4.4 Treatment and Disposal of Wastes Generated During Demobilization Phase

The treatment methods for the wastes generated during construction phase will depend on whether they are degradable, non-degradable, hazardous, or non-hazardous. Depending on the nature of the wastes, the wastes will either be re-used, re-cycles, buried, or burnt. This will include Electrical and Electronic

2.6.4.5 Lifespan of the Project

The Project Lifecycle is the sequence of phases through which a project progresses. It includes initiation, planning, execution, and closure therefore this project will take 12 months.

2.6.4.6 Decommissioning of Individual Components of the Project

Individual components of the project may be rendered redundant due to wear and tear or become obsolete due to technological advancement.
These shall be removed after an environmental audit is conducted and a device appropriate environmentally friendly way (Environmental Management Plan, EMP) to deal with them. Emphasis shall be on repairing so that parts can be reused or recycled of materials from defunct components to salvage important metals.

2.7 Project Associated Facilities

The ESF define associated facilities as facilities that are not funded as part of the project and that would not have been constructed or expanded if the project did not exist and without which the project would not be viable. The SEQUIP school construction project has identified the following as associated facilities;

- Water connection
- Energy (electricity, gas or charcoal)
- Personal protective equipment (PPE)
- Access roads

2.7.1 Water supply system

The project will require water for different activities for the projectWater will be required for construction activities such as concrete works, earthworks, lying of some of the pavement layers, dust suppression, as well as for domestic purposes at the camps. The amount of water required during construction of the project estimated to be 18,000 litres per day.

During operation phase, Water will be used for domestic uses, cleaning and for sanitation which which will depend on the number of the student to be admitted to school at the specific time. Water for construction works will be obtained from Babati Urban Water Supply and Sanitation Authority (BAWASA) and boreholes.

2.7.2 Power supply

The proposed project will source the electricity from the National grid (TANESCO). Also a standby generator will be installed. This will be used in case of main electricity interruption.Emission level of generation will be considered during installation to make sure the generator produce low emission

It will necessitate Contractor to install dedicated diesel driven generators to supply power to site and for the operation of electrically operated equipment at work sites. Generator room will be constructed as source of power during project operation.

2.8 Description of Sources and levels of project emission

Heavy construction is a source of dust emissions that may have substantial temporary impact on local air quality. Emissions during the construction of a building are associated with land clearing, drilling and blasting, ground excavation, cut and fill operations (i.e., earth moving), and construction of a particular facility itself. Table below shows the emission generating activities

2.9 Environmental and Social Management Framework

The ESF instruments that have been prepared for SEQUIP incorporate measures for project site Selection and to ensure designs and school construction align with the ESF requirements.

It has been agreed that civil works will follow building standards acceptable to the World Bank and required under the ESF; taking into account structural safety, universal access, changes in the standard drawings, water source availability and quality, efficient use of materials (wood) to reduce pressure on natural resources, Water and Sanitation for Health (WASH) and solid waste management at the schools, among other risks identified as part of the due diligence process.

Site selection for school construction is very important to avoid possible direct and indirect environmental and social impacts and lack of water sources for construction and during operation.

2.9.1 Health and Safety

As the ESMF directives, the campaign has been conducted with the utmost regards for occupational health and safety requirements of local authorities, management system, and of recognized industry

standards. As a rule, all activities that present a risk to employees, contractors, and or neighboring communities are planned and controls are implemented to limit exposure.

In addition, a Permit to Work system is in effect for risk-specific activities that is working at height. All EHS incidents, observations, near misses, etc. will be reported and investigated to prevent recurrence during construction phase and the proper way of reporting and registration during the operation phase will be employed as well. Regular emergency evacuation drills will be connected to test the training and response capacity of the workforce at the site during all phases of the project.

Occupational health and safety issues for further consideration in multi-storey office building construction and operation phases includes; Fire and collapse and Slippery

2.9.1.1 Fire

The project shall be designed, constructed, and operated according to standards for the prevention and control of fire hazards.

The most effective way of preventing fires is to avoid any source of fires in inside the building, store reasonable weight of equipment and instruments at the top floor of the building such as water storage tanks should designed according to the construction standards and considering building materials fire detector alarms should be placed in all buildings

The following types of fire extinguishere shall be used depending of the source of fire

1. **Class A - Ordinary Combustibles:**
    - **Type of Fire Extinguisher:** Water (H2O), Foam (AFFF, FFFP).
    - **Use:** Effective for fires involving ordinary combustible materials such as wood, paper, cloth, and certain plastics.
2. **Class B - Flammable Liquids and Gases:**
    - **Type of Fire Extinguisher:** Foam (AFFF, FFFP), Carbon Dioxide (CO2), Dry Chemical (BC, ABC).
    - **Use:** Suitable for fires involving flammable liquids (gasoline, oil, grease) and gases.
3. **Class C - Electrical Fires:**
    - **Type of Fire Extinguisher:** Carbon Dioxide (CO2), Dry Chemical (BC, ABC).
    - **Use:** Designed for fires involving energized electrical equipment. The non-conductive agents help avoid electrical shock.
4. **Class D - Combustible Metals:**
    - **Type of Fire Extinguisher:** Dry Powder (specifically designed for metal fires).
    - **Use:** Effective for fires involving combustible metals, such as magnesium, titanium, and sodium.

2.9.1.2 Collapse

The result analysis showed that the major factors responsible for building collapse are usage of substandard building materials, non-involvement of relevant and qualified professionals, defective design, and poor maintenance culture Poor Workmanship/Supervision Natural Occurrences.
The remedies to mitigate the problems are but not limited to the professional bodies through their government regulatory bodies need to ensure effective monitoring to control quackery and ensure violators are punished, building and construction permit should be adhered, ensure the use of professional people during construction etc

2.9.1.3 Floods

There is big chance for the food to occur due to existence of season creek on the proposed land site which is crossing at the middle of the site

2.9.2 Emergency assembly

Having a well-defined and well-communicated emergency assembly point is a critical aspect of emergency preparedness, promoting a safe and organized response to unforeseen events Emergency assembly refers to the designated area where individuals gather in the event of an emergency, such as a fire, natural disaster, or other hazardous situations

2.9.3 First Aid Kit

A first aid kit is a crucial tool for providing initial care in the event of injuries, accidents, or sudden illnesses. Here are the essential items commonly found in a basic first aid kit:

- Adhesive Bandages (Assorted Sizes):
- Adhesive Tape:.
- Antiseptic Wipes or Solution:.
- Scissors and Tweezers:
- Pain Relievers (Aspirin, Ibuprofen, Acetaminophen):
- Instant Cold Compress:
- First Aid Manual:
- Burn Cream or Gel:.
- Eye Wash Solution:.
- Emergency Blanket:
- Triangle Bandage:
- Safety Pins:.
- Emergency Contact Information:

A list of emergency phone numbers, including local emergency services, family contacts, and healthcare providers.

2.10 Project Cost

Total Project Cost is four billion Tanzanian shillings

CHAPTER THREE

3 POLICY, LEGAL, AND ADMINISTRATIVE FRAMEWORK

3.1 Introduction

The objective of this chapter is to describe the policy, legal and administrative framework within which the project takes place and identify any laws and regulations that pertain to environmental and social matters relevant to the project. This includes regulations about environmental and/or social impact assessments to which the project must adhere as well as laws implementing host country obligations under international law. Explain the requirements of any co-financing partners, if applicable. Where pertinent, consider account legal frameworks for promoting gender equality. Flag any areas where the project might fall short on compliance.

3.2 The Constitution of Tanzania, 1977-1995 (as revised)

The Constitution of the United Republic of Tanzania 1977 - 1995 (revised 1997) recognizes the basic rights and equality entitled, without any discrimination, protection, and equality of all persons before the law. The United Republic of Tanzania is committed to the conservation of the country's natural environment as is evident through the Constitution and various Mission Statements.

Article 21 of the Constitution reads:

- "Take part in matters related to governance of the country, every citizen of the United Republic is entitled to take part in matters pertaining to the governance of the country, either directly or through representatives freely elected by the people, in conformity with the procedures laid down by, or in accordance with, the law.
- "Every citizen has the right and the freedom to participate fully in the process leading to the decision on matters affecting him, his well-being or the nation."
- Article 24 of the Constitution reads:
- "Subject to the provisions of the relevant laws of the land, every person is entitled to own property, and has a right to the protection of his property held in accordance with law."
- Article 27 of the Constitution reads:
- "Every person has the duty to protect the natural resources of the United Republic, the property of the state authority, all property collectively owned by the people, and also to respect another person's property."
- "All persons shall be required by law to safeguard the property of the state authority and all property collectively owned by the people, to combat all forms of waste and squander, and to manage the national economy assiduously with the attitude of people who are masters of the destiny of their nation."

3.3 National Five-Year Development Plan 2021/22–2025/26

This third national five-year development plan (FYDP III) for the period 2021/2026 is a nationwide multisector document aiming at achieving the goals set in the national development
To increase the resilience of livelihoods to disasters, main interventions shall be:

(i) strengthen environmental conservation and protection to mitigate adverse effects of climate change
(ii) social development, including health and education, human settlements, clean and safe water, and environment, paying attention to equitable access, gender and people with disabilities
(iii) strengthen sustainable use and management of oil and natural gas
(iv) develop renewable energy sources for cooking to mitigate climate change
(v) conserve marine and freshwater fisheries protected areas
(vi) develop and implement strategies to combat poaching, illegal trade and illegal harvesting of wildlife, forest, bee and antiquities resources in the country

3.4 National Development Vision 2025

The document has three main objectives;

(i) To achieve quality and good life for all
(ii) To achieve good governance and the rule of law
(iii) To build a strong and resilient economy that can effectively withstand global competition

This objecrtives will aid in establishing programs and mechanisms for management, monitoring and assessment of water and wastewater quality as well as strengthening conservation and protection programs of water resources and water sources.

3.5 Relevant Policies

3.5.1 National Environmental Policy (2021)

The overarching governing Tanzania's environmental management are the National Environmental Policy (NEP) of 2021 and the Environmental Management Act, Cap. 191.

The NEP enables sectoral and cross-sectoral policy analysis to mainstream environmental considerations into all aspects of planning and development. The proponent will adhere to the policy.

3.5.2 Education and Training Policy 2014

This Education and Training Policy of 2014 is the result of the revitalization and finally the cancellation of the Education and Training Policy(1995), Policy on Vocational Education and Training (1996), Policy on National Higher Education (1999) and Information Technology Policy and Communication for Primary Education (2007). The vision of this policy is having an educated Tanzanians with knowledge, skills, competencies, abilities and positive attitudes to be able to contribute in bringing about the development of the Nation.

The specific objectives of the Policy are to have:

- System, structures and flexible procedures to enable Tanzanians develop themselves in various ways in academic and professional streams;
- Education and training with quality standards recognized nationally, regionally and internationally;
- Availability of various educational opportunities and training in the country;
- Increase of human resources according to priorities of the Nation;
- Effective management and operation of education and training in the country;
- Sustainable education funding system and training in the country; and
- Education and training system based on issues cross.

3.5.3 The National Research and Development Policy, 2010

These policies focused on the promotion of the private sector as a major contributor to the national economy, singly or through public-private partnership. The increasingly globalized world requires nations to create an enabling environment that will facilitate active participation of the private sector in improving their respective economies.

3.5.4 ICT Policy for Basic Education 2007

The achievement of the objectives of Tanzania's education policies and education development programmes. As stated in the education policy of1995, the overall aims of education in Tanzania are, among other things:

"*To promote the acquisition and appropriate use of literary, social, scientific, vocational, technological, professional and other forms of knowledge, skills and understanding for the development and improvement of man and society*."

In 2001, the education sector development programme (ESDP) was launched, to realize the objectives of education policies by addressing critical issues, including ICT. The main objectives of this programme include: to decentralize management of educational institutions; to improve the quality of education, both formal and non-formal; to promote access and equity to basic education; and to promote science and technology. Special mention is made of the need to improve and expand girls' education, to ensure access to education by special social and cultural groups, to give appropriate education to children with disabilities, and to provide education facilities to disadvantaged areas.

3.5.5 The National Biotechnology Policy, 2020

The general objective of this policy is to ensure that Tanzania has the capacity and capability to capture the proven benefits arising from health, agriculture, industry and environmental applications of biotechnology while protecting and sustaining the safety of the community and the environment.

3.5.6 Cultural Policy, 1997

Section 3.2.1 of the Cultural Policy stipulates that "all land development shall be preceded by Cultural Resource Impact studies. Furthermore, Section 3.1.5 states that "mechanisms shall be established to enable the nation to identify, own and preserve national treasurers e.g. art, objects, natural resources minerals as well as archaeological, paleontological and botanical remains"..

3.5.7 Antiquities Policy of 2008

Antiquities Policy 2008 section defines Physical Cultural Resources as any tangible material that represent contemporary, historic, and pre-historic human life ways. Section 2. 1 of the Antiquities Policy points out that already discovered Physical Cultural Resources shall be preserved and conserved in the National Museum of Tanzania as stipulated in Museum Act of 1980. Furthermore, the Antiquities Policy of 2008 sections 4.2.1 to 6 elaborates on how stakeholders including government institutions, private sectors and the public should be involved in all activities of conservation and management of Physical Cultural Resources.

3.5.8 National Forest Policy, 1998

The overall goal of the National Forest Policy (1998) is to enhance the contribution of the forest sector to the sustainable development of Tanzania and the conservation and management of her natural resources for the benefit of present and future generations.

The Policy, among other aspects, recognizes the high value of forests due to the high potential for royalty collection, export, and tourism earnings as well as the recycling and sequestering of carbon and conservation of globally important biodiversity.

Furthermore, the policy emphasizes on biodiversity conservation; describes the importance of forest ecosystems for maintaining biodiversity and the threats to biodiversity. One of the main objectives envisaged in the policy focuses on ensured ecosystem stability through conservation of forest biodiversity, water catchments, and soil fertility.

3.5.9 National Water Policy, 2002

The main objective of the Policy is to develop a comprehensive framework for sustainable development and management of the nation's water resources. Specifically, on the environment the objective is to have a water management system that protects the environment, ecological system, and biodiversity. The policy emphasizes that water related activities will have to be planned to enhance or to cause least detrimental effects on the environment. To protect ecological systems and biodiversity which, together, are important part of sustainable water resources system the policy provides a guide for determining water for the environment, in terms of quantity and quality, and levels, for both surface and groundwater resource. The policy emphasizes the use of best available scientific information for both temporal and spatial water requirements to maintain the health and viability of riverine and estuary ecosystems, and

associated flora and fauna. Public awareness on good land-use practices is insisted to contain the erosion problem.

3.5.10 Sustainable Industrial Development Policy, 1996 (SIDP)

The Policy provides for sound environmental management to ensure promotion of environmentally friendly and ecologically sustainable industrial development. The Policy insists that environmental audit and appropriate mitigation measures should be enforced for all industrial projects at pre-implementation stage.
To ensure industrial development activities that are environmentally sound and ecologically sustainable, this policy stipulates the following conditions:
• The government will ensure adequate awareness among the public of environmental issues, which includes the right of people to a safe environment, land and wildlife conservation.
• The Tanzania Investment Act (1997), No. 7 will provide clear mechanisms for promoting investments that embody antipollution initiatives.
• EIA and appropriate mitigation measures will be incorporated and enforced for all projects.
The policy also recognizes the private sector as a principal vehicle in carrying out direct investment in industry, the government commits to putting in place an environmental protection regime that will attract private sector investment.

3.5.11 The National Energy Policy, 2015;

The Policy, among others, focuses on utilization of various energy resources in a sustainable and environmentally friendly manner. The Policy recognizes that energy is a prerequisite for the proper functioning of all sub-sectors of the economy. The Policy stresses the use of renewable and alternative energy sources such as wind, solar, and mini-hydropower generators and use of liquefied petroleum gas (LPG) as well as natural gas. The use of alternative energy sources such as biogas, briquettes both for domestic and industrial uses is encouraged to minimize the use of charcoal and firewood to prevent massive deforestation.

3.5.12 National Transport Policy, 2003

The main objective of this Policy is to enhance transport systems and promote environmental protection. The mission is to develop safe, reliable, effective, efficient and fully integrated transport infrastructure and operations that was to meet the needs of travel and transport by improving levels of services at lower costs. Ultimately, the development of a reliable transport network should drive human development in a manner that is economically and environmentally sustainable.

3.5.13 Construction Industry Policy, 2003

The Construction Industry Policy is a deliberate and managed process to improve the capacity and effectiveness of the construction industry to meet the national economic demand for buildings and other physical infrastructure facilities. The Policy is aimed at meeting the goals of the National Development Vision 2025.

The objectives of the Policy include:

a. To improve the capacity and competitiveness of the local construction enterprises (Contractors, consultants and informal sector);
b. To develop an efficient and self-sustaining roads network that is capable of meeting the diverse needs for construction, rehabilitation and maintenance of civil works for trunk, regional, district and feeder roads network;
c. To improve the capacity and performance of the public sector and private sector clients so as to ensure efficient, transparent and effective implementation and management of construction projects; and

To ensure application of practices, technologies and products which are not harmful to both the environment and human health.

3.5.14 National Health Policy, 2007fgh

The overall objective of the National Health Policy, 2007 is to improve the health and well-being of all Tanzanians. In line with environmental health, Policy seeks to protect community health by enhancing sustainable environmental health. The Policy emphasizes on community adherence to environmental health standards; Improvement of waste management systems including disposal of hospital wastes; educating health service providers on the importance of environmental health in their working areas and putting in place laws and procedures for conservation and protection of the environment in the health sector.

3.5.15 Occupational Health and Safety Policy 2009

The main objectives of OHS Policy are to reduce the number of work-related accidents and diseases in Tanzania. This required the adoption and implementation of a culture to prevent OHS hazards by Government, Employers and Employees. The effective prevention of work - related accidents and ill-health will have enormous social and economic benefits. These include improvements in productivity and competitiveness and the quality of life of the working population. The effective management of many safety hazards will contribute to improved levels of public health and safety. The effective control at source in workplaces of hazardous substances will improve levels of public health and minimize environmental pollution, the policy emphasizes on Sustainable safe and healthy working conditions and environment at all workplaces for the entire diversity of the workforce contributing to broad based economic growth.

3.5.16 National Water Policy, 2002

The main objective of the Policy is to develop a comprehensive framework for sustainable development and management of the nation's water resources. Specifically, on the environment the objective is to have a water management system that protects the environment, ecological system, and biodiversity. The policy emphasizes that water related activities will have to be planned to enhance or to cause least detrimental effects on the environment. To protect ecological systems and biodiversity which, together, are important part of sustainable water resources system the policy provides a guide for determining water for the environment, in terms of quantity and quality, and levels, for both surface and groundwater resource. The policy emphasizes the use of best available scientific information for both temporal and spatial water requirements to maintain the health and viability of riverine and estuary ecosystems, and associated flora and fauna. Public awareness on good land-use practices is insisted to contain the erosion problem.

3.5.17 National Land Policy, 1995

The National Land Policy of 1995 aims at developing a coherent and comprehensive framework that defines land tenure and enables proper management and allocation of land in urban and rural areas.

Among other things, the Policy advocates the protection of land resources from degradation, for sustainable development. The policy addresses several environmental issues such as land use planning, which take into consideration the land capability, ensures proper management of land resources, promotes resource sharing and multiple land use techniques in areas of conflicting land use, and involve community in resource management, land use and conflict resolution.

3.5.18 National Human Settlements Development Policy, 2000

The Policy stresses on the need for ensuring that human settlements are kept clean and pollution effects of solid and liquid wastes do not endanger the health of residents. The policy advocates for a set of environmental quality standards of gaseous emissions from industries and vehicles.

3.6 Legal Framework

3.6.1 Environmental Management Act, Cap.191;

The Environmental Management Act Cap. 191 is the principal legislation governing environmental management in the country. The Environmental Management Act (EMA) recognizes "…the right of every citizen to a clean, safe and healthy environment, and the right of access to environmental resources for recreational, educational, health, spiritual, cultural and economic purposes."

Thus, the EMA "provides a legal framework for coordinating harmonious and conflicting activities by integrating those activities into overall sustainable environmental management systems by providing key technical support to Sector Ministries."

Section 81, subsection 1 in Part VI of the EMA requires a project proponent to undertake an Environmental Impact Assessment (EIA) at his/her own cost prior to commencement or financing of a project or undertaking.

The EMA prohibits any development to be initiated without an Environmental Impact Assessment (EIA) Certificate. PO-RALG through undertaking this study complies with the requirement of the law.

3.6.2 The Education Act, Cap. 353

The act aims to provide a legal framework for the development, management, and regulation of education in Tanzania, with a focus on promoting quality education, inclusivity and equitable access for all.

The project complies with the act as it has ensured the designs and construction of the school facilities meet the standards and requirements specified for educational institutions such as providing adequate classrooms, laboratories, libraries and other necessary infrastructure to support the educational needs of the students.

Furthermore, the project aligns with the objectives of the act of "promoting gender equality" by constructing a girls secondary school thereby addressing gender differences in access to education and creating supportive and inclusive environment for girls to pursue their education.

3.6.3 Water Resource Management Act, Cap.331;

The Water Resource Management Act 2009 is a new principal legislation dealing with the protection of water resources and control of water extraction for different uses.

According to section 39 (1) of this Act, owner or occupier of land on which any activity or process is or was performed or undertaken, or any other situation exists which causes has caused or is likely to cause pollution of a water source, shall take all reasonable measures to prevent any such pollution from occurring, continuing or recurring.

It is stated under section 39 (2) that a Basin Water Board may direct any person who fails to take the measures required under subsection (1) to:

- Commence taking measures before a given date;
- Diligently continue with those measures; and
- Complete the measures before a given date.

3.6.4 The Land Act, [Cap. 113 R. E. 2019].

The Land Act, provides basic legal requirements in relation to land other than village land (see Village Land Act, 1999 below), the management of land, settlement of disputes and related matters.

The following are some of the main principals of the Land Act:

- To recognize that all land in Tanzania is public land vested in the President as trustee on behalf of all citizens;
- To ensure that existing rights in and recognized long standing occupation or use of land are clarified and secured by the law;
- To facilitate an equitable distribution of and access to land by all citizens;
- To regulate the amount of land that any one person or corporate body may occupy or use;
- To ensure that land is used productively and that any such use complies with the principles of sustainable development;
- To consider that an interest in land has value and that value is taken into consideration in any transaction affecting that interest; and
- To pay full, fair and prompt compensation to any person whose right of occupancy or recognized long-standing occupation or customary use of land is revoked or otherwise interfered with to their detriment by the state under this Act or is acquired under the Land Acquisition Act;

It is the duty of the Government Department or the Ministry, local or public authority or corporate body that applied for the way leave to pay the compensation.

3.6.5 The Village Land Act, [Cap 114 R. E. 2019]

The Village Land Act, of 2019 provides for the management and administration of land and matters related thereto in specifically villages. The Village Land Act (in addition to the Land Act) have set clear procedures for compensation while acquiring Land from citizens.

3.6.6 The Land Acquisition Act [Cap 118 R. E.2019]

The Land Acquisition Act, of 1967 (as amended in 1968) stipulates matters pertaining to compensation under part two division b, Section 11 and Section 12. Section 13 address disputes that might arise due to land acquisition.

3.6.7 The Electricity Act, Cap.131;

This Act main objective is to provide for the facilitation and regulation of generation, transmission, transformation, distribution, supply and use of electric energy, to provide for cross-border trade in electricity and the planning and regulation of rural electrification and to provide for related matters.

3.6.8 The Local Government (District Authorities) Act, Cap.287

The Local Government Acts of 2002 form an important legal basis for rural councils and rural authorities, which were reintroduced in the early 1980 and consist of Act No. 7 relating to District Authorities and Act No.8 relating to Urban Authorities.

These Acts establish and regulate district councils, township authorities and village authorities. Important provisions are the subdivision of districts into divisions and wards and the establishment of ward development committees along with procedures for implementation of schemes and programs at ward level.

Section 118 deals with protection and management of the environment in addition to the First Schedule (Section 118 (4)) of Act No. 7. The District Councils are hereby required to take necessary measures to control soil erosion and desertification; to regulate the use of poisonous and noxious plants, drugs or poisons, regulate and control the number of livestock; maintain forests, manage wildlife, ensure public health, and provide effective solid and liquid refuse management.

If construction commences it will be the proponent's responsibility to obtain permission from the District Councils for the disposal of solid and liquid waste. In addition, District council will also oversee and regulate the use and prevent the misuse or waste of, or any interference with, water.

3.6.9 The Local Government (Urban Authorities) Act, Cap. 288.

An Act to establish urban authorities for the purpose of local government, to provide for the functions of those authorities and for the related matters. This Act shall apply to every urban authority established or deemed to have been established under this Act

3.6.10 Occupational Health and Safety Act, Cap.297

The Occupational Health and Safety Act of 2003 deals with the regulation of health, safety, and welfare of workers. Some of the provisions of this Act are relevant to the project. The Act covers economic activities in constructions, agriculture, commerce, and offices. In case of occupational accidents/illness, it is the responsibility of the labour department in the ministry to ensure the victim get compensated by the insurer of the employer. Moreover, the victim may also claim for work-injury benefit should he/she be a member of a social security scheme.

The OSHA is of particular importance for contractors that construct the proposed facility, and they should be aware of their obligations regarding the workforce health and safety measures stipulated in this Act.

There are specific Safety procedures and guidelines to be followed by both workers and their respective employers to ensure a Safe and conducive working environment.

3.6.11 The Public Health Act, Cap.242;

The Act provides for the promotion, conservation, and maintenance of public health with a view of ensuring comprehensive functional and sustainable public health services. The Act also prohibits discharges into a sewer or into drain that may cause malfunctioning of the drainage systems.

3.6.12 The Industrial and Consumer Chemicals (Management and Control) Act, Cap.182;

Comprehensive legislation on management and control of industrial and consumer chemicals. Divided into 6 parts. Part 1 contains preliminary provisions. Part 2 deals with administration. Part 3 regulates control of production, importation, exportation, transportation, storage and dealing in chemicals. Part 4 provides for management of industrial and consumer chemicals. Part 5 contains financial, and Part 6 miscellaneous provisions.

Provisions for management of industrial and consumer chemicals which are of relevance to APT include

- Labelling and safe handling
- Chemical and chemical waste
- Disposal of chemical wastes
- Prevention and management of accidents
- Decommissioning of plants

3.6.13 The Employment and Labour Relation Act, (Cap.366 R.E 2019)

The act mandates that employers:

- Promote equal opportunity in employment and strive to eliminate discrimination in any employment policy or practice"
- Prohibits direct or indirect discrimination by employers, trade unions and employers' associations on several grounds, including gender, pregnancy, marital status or family responsibility, disability, HIV and AIDS, and age
- Requires employers to take "positive steps" to guarantee women and men the right to a safe and healthy environment.

The project will employ skilled and unskilled labour

3.6.14 The Fire and Rescue Force Act, Cap 427

An Act to provide for the better organization, administration, discipline and operation of Fire and Rescue Force, the project will be subjected to fire and rescue act compliance

3.6.15 Water Supply and Sanitation Act, Cap.272

It has provisions to ensure water quality by protecting water works and storage facilities against pollution. It gives mandate to LGA to enact by-laws of water supply and sanitation.

3.6.16 Disaster Management Act No. 7 of 2015

The Act establishes the Disaster Management Department (DMD), disaster risk management, and coordination mechanism for disaster prevention, mitigation, preparedness, response and recovery.

The primary function of DMD is to coordinate of disaster management activities in the country. It seeks to ensure that appropriate response systems, procedures and resources are in place to assist those afflicted in times of disaster.

DMD is also in charge to coordinate disaster preparedness efforts and activities in order to minimize the adverse effects of hazards through effective precautionary measures and to ensure timely appropriate and efficient organization and delivery of emergency.

3.6.17 The HIV and AIDS (Prevention and Control) Act, Cap 431

The HIV/AIDS prevention and control Act (Act No. 28/08) Cap 431, calls for prevention, treatment, care, support and control of HIV and AIDS for promotion of public health in general. It also calls for appropriate treatment, care and support by using available resources to people living with or at risk of HIV and AIDS and to provide for related matters.

3.6.18 The Law of the Child Act, [Cap. 13 R.E. 2019]

An act to provide for reform and consolidation of laws relating to children, to stipulate rights of the child and to, promote, protect and maintain the welfare of a child with a view to giving effect to international and regional convention on the rights

3.6.19 The Workers' Compensation Act, Cap. 263;

An Act to provide for compensation to employees for disablement or death caused by or resulting from injuries or diseases

3.6.20 The Occupier Liability Act, Cap. 64

An Act to prescribe the law as to the liability of occupiers and others for injury or damage resulting to persons or goods lawfully on any land or other property from dangers due to the state of the property or to things done or omitted to be done on such land or property

3.6.21 The Persons with Disabilities Act Cap. 183

An Act to make provision for the health care, social support, accessibility, rehabilitation,education and vocational training, communication

3.6.22 The Engineers Registration Act, Cap. 63

The Engineers Registration Board shall provide professional examinations as an alternative conduit for registration of professional engineers who are registered in the category of Technician Engineers and for those who aspire for registration as professional engineers but whose qualifications are wanting or need to be ascertained.

3.6.23 The Architects and Quantity Surveyors Act, Cap. 267

Act to provide for institutional machinery for the regulation of activities and conducts of architects, quantity surveyors and their firms under the Architect and Quantity Surveyors Registration Board; to provide for qualification for registration, rights and privileges of architects and quantity surveyors and to provide for related matters

3.6.24 The Land Use Planning Act, Cap. 116;

The Act provides for the procedures for preparation, administration and enforcement of land use plans; to repeal the National Land Use Planning Commission and to provide for related matters. Clearly the Act has distinctive authorities of land use planning in Tanzania laid down with their functions and powers. The power vested to authorities which give them teeth to bite is to enforce approved land use plans including taking defaulters to court of law.

Appropriate local Community Societies will plan the project surrounding areas as per the requirement of the Act and regulations.

3.6.25 The Contractors Registration Act, Cap.235;

This Act requires Contractors at any site to abide by labour laws, and occupational health and safety regulations in construction industries. Furthermore, in the execution of the work, the Contractors are obliged to supply materials necessary for the work, and are authorized to exercise control over the type, quality and material used during Construction

3.6.26 The Law of the child act, cap 13 R.E 2019

This act aims to protect and promote the rights and welfare of children in Tanzania. By establishing a girls' secondary school, the project contributes directly to the realization of the Act's objectives.

The National Child Act recognizes the importance of education in the development of children. The construction of a girls' secondary school aligns with this principle by providing a safe and conducive learning environment specifically tailored to the needs of girls. It ensures that girls in the Singida region have access to quality education, empowering them to achieve their full potential.

Furthermore, the act emphasizes the elimination of gender disparities and discrimination against girls. The project addresses this objective by focusing on girls' education, bridging the gender gap and promoting gender equality. By providing equal opportunities for education, the construction of the school contributes to breaking down barriers and creating a more inclusive society.

Additionally, the National Child Act emphasizes the protection of children's rights, including their right to safety, health, and well-being. The construction of a dedicated girls' secondary school ensures that girls have a secure and protected learning environment. It takes into account the specific needs and vulnerabilities of girls, creating a space where they can thrive academically, socially, and emotionally.

The project involving the construction of a girls' secondary school in the Singida region aligns with the National Child Act, Cap. 13 R.E of 2019. It promotes the rights and welfare of children by providing quality education, addressing gender disparities, and ensuring the safety and well-being of girls. By implementing this project, Tanzania takes a significant step towards realizing the objectives set forth in the National Child Act.

3.6.27 Engineers Registration Act, Cap 63;

The Act oversees the process of registration of engineers in Tanzania. The engineering registration Act is overseen by the Engineers Registration Board. The Board has been given the responsibility of monitoring and regulating engineering activities and the conduct of the engineers and engineering consulting firms in Tanzania through registration of engineers and engineering consulting firms. Under the law, it is illegal for an engineer or an engineering firm to practice the profession if not registered with the Board.

The Board has also been given legal powers and has the obligation to withdraw the right to practice from registered engineers if found guilty of professional misconduct or professional incompetence. Registration with the Board is, thus, a license to practice engineering in Tanzania.

Engineering is among the noble professions that have the privilege and responsibility of self-regulation. The Board has worked out a Code of Ethics which aims at regulating the engineering activities and conduct of engineers and engineering consulting firms. The Code thus forms the basis and framework for responsible professional practice as it prescribes standards of conduct to be observed by engineers and engineering consulting firms. The Code is based on broad tenets of truth, honesty and trustworthiness, respect for human life and welfare, fairness, openness, competence and accountability; engineering excellence, protection of the environment and sustainable development.
The Proponent and its Contractors and subcontractors will make use of engineers during construction and operation phases so as to meet the requirement of the law.

3.6.28 The Architects and Quantity Surveyors Act, Cap.267;

Similarly require architects and quantity surveyors (QS) to be registered with the Board before practicing. Institutions shall make sure that this law is obeyed.

3.6.29 Workers' Compensation Act, Cap.263

This is an Act which emphasis compensation to employees for disablement of death caused by or resulting from injuries or diseases sustained or contracted in the course of employment; to establish the Fund for administration and regulation of workers compensation and to provide for related matter.

The PO-RALG must ensure that this Act come into force during the operation of the project since promotes job security by helping employees recover and return to work, while emphasizing the importance of workplace safety and prevention measures.

3.6.30 The Persons with Disabilities Act, Cap 183

This legislation aims to promote inclusivity and equal opportunities for individuals with disabilities in Tanzania, in implementing this project it becomes crucial to consider the accessibility and accommodation needs of students and staff with disabilities.

The Act ensures that the school's design and infrastructure comply with accessibility standards, providing features like ramps, handrails, wheelchair-accessible entrances, and appropriate restroom facilities. Moreover, the Act mandates the provision of special educational services, assistive devices, and reasonable accommodations for students with disabilities, allowing them to fully participate in the educational experience.

The project should comply with the principles of the Persons with Disabilities Act into the construction of the girls' secondary school in order to promote inclusivity, enables equal access to education, and fosters a supportive environment for all students, including those with disabilities.

3.6.31 The Standards Act, Cap 130

This Act aims at the promotion of specifications of commodities and services, re-establish the Tanzania Bureau of Standards (TBS), the designated national standards authority established under the TBS Act 1975 and repealed by this act. TBS is responsible for developing all kinds of national standards, including environmental standards.

The Standards Act has established National Environmental Standards Compendium (NESC) which is a collection of various standards prepared at different times and recognized by EMA 2004. NESC is divided into three parts. Part 1 comprises of standards that require compulsory compliance. Compulsory standards are categorized as generic or specific. Specific standards cover those industries with peculiar effects to the environment while other industries without a specific standard for Tolerance Limits of Emissions discharge including water quality, discharge of effluent into water, air quality, control of noise and vibration pollution, sub-sonic vibrations, soil quality, control of noxious smells, light pollution, and electromagnetic waves and microwaves

Part 2 of NESC contains those standards that may be implemented on voluntary basis. These include guideline standards, codes of practice, and other such standards that may not necessarily be directly enforced, but whose results are implied in some legal requirements. One of such standards include the Environmental Management Systems (EMS) standards, like TZS 701/ISO 14001 whose compliance specifications include the relevant legal requirements. Part 2 thus has important requirements for companies and proponents who wish to demonstrate their commitment to sustainable development by way of self-regulation mechanism. On the other hand, some companies or proponents may be compelled to follow these standards because of requirements from mother companies and for other various reasons like certification requirements by environment friendly banks or tenders. Part 2 also includes standards used in evaluating environmental performance.

Part 3 has the requisite test methods that should be followed when testing for compliance. The test methods included are referred to in at least one of the specification standards appearing under Part 1. Although it is not stated in the Act, in the absence of national standards, project proponents are encouraged to use international standards such as those of the World Health Organisation (WHO), World Bank, British Standards (BS), European Union (EU), American Public Health Association (APHA), United States Environmental Protection Agency (US EPA) etc. Standards set by the relevant sectors, which also make use of the international standards, are also applicable. Such standards include the environmental standards set under the Mining (Environmental Management and Control) Regulations, 1999. Relevant national environmental standards include:

- TZS 860: 2005 Municipal and Industrial Wastewaters – General Tolerance Limits for Municipal and Industrial Wastewaters: This standard provides permissible limits of important environmental parameters such as BOD, COD, pH, colour, temperature range, total suspended solids and turbidity. It also gives permissible limits of a range of inorganic and organic components. All effluents discharged from the project will need to comply with these specifications.

- TZS 845:2005 Air Quality – Specification: This standard gives permissible emission limits of sulphur oxides, carbon monoxide, hydrocarbons (as total organic carbon), dust, nitrogen oxides and lead. The emissions from earth moving equipment, power generation plant and other will include SO_2, CO, dust and NO_X; as such the project will have to observe these limits.

- TZS 983:2007 Air Quality - Vehicular Exhaust Emissions Limits: This standard is mainly derived from EU Directives 96/69/EC, 91/542/EEC and 97/24/EC. This Tanzania Standard gives permissible limits of some common substances found in exhaust emissions of motor vehicles, namely carbon monoxides, suspended particulate matter (PM), oxides of nitrogen, and hydrocarbons. The standard covers all types of vehicles namely, passenger cars, light commercial vehicles, heavy-duty vehicles, and two and four strokes motorcycles and scooters. In order to carry out quarrying activities and processing operations, the project will operate a fleet of heavy duty and light vehicles in addition to hiring other vehicular equipment. As such, the project will need to observe the provisions of these standards.

- TZS 932:2006: Acoustics - General Tolerance Limits for Environmental Noise: This standard focuses on urban environmental noise, and does not cover occupation environment. In the absence of other standards, it may be used to give indication of permissible noise levels in factory/workshop environment.

- TZS 789:2003 - Drinking (potable) water – Specification: This standard prescribes the quality requirements for drinking water other than packaged drinking water. It does not cover the requirements for natural mineral water. It prescribes the quality requirements for drinking water distributed in the food industry, domestic and catering purposes. It applies to bacteriological, biological, virological, physical, chemical and radiological quality criteria. It is intended also to community piped water supplies i.e. those water systems serving cities, municipalities and townships, community standpipes and wells and drinking water distributed by tankers.

3.6.32 The Occupier Liability Act, Cap 64

The Occupier Liability Act establishes the legal framework for determining the duty of care that an occupier owes to individuals who enter their premises. In the context of the school construction project, the act would be relevant in establishing the liability and responsibility of the parties involved in ensuring the safety of the premises.

Under the Occupier Liability Act, the organization or individuals responsible for the construction project would be considered occupiers of the premises during the construction phase. As occupiers, they have a legal duty to ensure that the construction site is reasonably safe for anyone who enters or may be affected by it. This includes the duty to take appropriate measures to prevent potential hazards, provide warnings where necessary, and maintain proper safety standards.

SEQUIP aligns with the Occupier Liability Act, Cap 64, as it emphasizes the legal responsibility of the occupiers to ensure the safety of the premises during construction and operation. Adhering to the provisions of the act will help mitigate risks and safeguard the well-being of all individuals associated with the school

Once the project is completed and operational, the Act will continue to be applicable. The school administration will become the occupiers of the premises, and they will have a duty of care towards the students, staff, and visitors. This duty involves maintaining the premises in a safe condition, addressing any potential hazards promptly, and implementing necessary safety protocols.

3.7 National Regulations

3.7.1 Environmental Impact Assessment and Audit Regulations, 2005 amended in 2018

The EIA process is described under the Environmental Impact Assessment and Audit Regulations No. 349 of 2005 (‘the EIA Regulations’) promulgated in terms of the EMA Sections 82(1) and 230(2) (h) and (q). The objectives of the NEMC are to undertake the enforcement, compliance, review and monitoring of EIA in terms of the EMA, including the facilitation of the public participation process in environmental decision-making.

The regulations provide the basis for undertaking EIAs and Environmental Audits for various activities, which require mandatory EIAs, but also activities that require registration and may or may not require EIA. Part three of the EIA and Audit Regulation, deals with project registration and screening procedures, part four deals with the EIA and part five deals with the Environmental Impacts Statement. If the EIA is found to be satisfactory and the residual environmental impacts of the proposed project acceptable according to part six of the EIA and Audit regulations, NEMC recommends the Minister for Environment to issue an Environmental Certificate for the Project as annotated in part 7 of the EIA and Audit regulations.

Referring to Environmental Management Act Cap. 191, and the first schedule of The Environmental Management (Environmental Impact Assessment and Audit) (Amendment) Regulations (United Republic of Tanzania, 2018) which details types of projects requiring and not requiring EIA, this project falls in Type A which are requiring a mandatory EIA.

Type A Projects are likely to have significant adverse environmental impacts and that in-depth study is required to determine the scale, extent and significance of the impacts and to identify appropriate mitigation. In the list of Type, A Projects.

It should be noted that this assessment will also include a substantial social component and therefore is termed an Environmental and Social Impact Assessment (ESIA). The EMA guides environmental management and is administrated by the National Environmental Advisory Committee, the Directorate of Environment and the NEMC.

At the end of the ESIA process an environmental impact statement (EIS) is produced in accordance with the requirements of section 86 of the EMA and Part IV of the EIA Regulations. The Ministers decision regarding the project was informed by NEMC's recommendations based on the information emerging from this Environmental and Social Impact Assessment (ESIA) process and EIS provided in the final ESIA report

3.7.2 Environmental Management (Water Quality Standards) Regulations, 2007

The objectives of the Water Quality Standards Regulations are to protect human health and conserve the environment; enforce minimum water quality standards prescribed by the National Environmental Standards Committee; enable the National Environmental Standards Committee to determine water usage for purposes of establishing environmental quality standards and values for each usage; and ensure all discharges of pollutants take account of the ability of the receiving waters to accommodate contaminants without detriment to the uses specified for the waters concerned.

During construction and operation phases, water quality was continuously monitored. Water samples was collected and tested periodically to detect any possible contamination and implement remedial measures

3.7.3 Environmental Management (Soil Quality Standards) Regulations, 2007

The objectives of the Soil Quality Standards Regulations are to set baseline parameters on soil limits for soil contaminations; enforce minimum soil quality standards prescribed by the National Environmental Standards Committee; prescribe measures designed to maintain, restore and enhance the sustainable productivity of the soil; prescribe minimum soil quality standards to maintain, restore and enhance the inherent productivity of the soil in the long term; enforce minimum soil standards prescribed by the National Environmental Standards Committee for such purposes as agricultural practices

3.7.4 Environmental Management (Control of Ozone Depleting Substances) Regulations, 2007

The objectives of the Regulations for Control of Ozone Depleting Substances are to eliminate the production and consumption of ozone depleting substances in accordance with the phase out schedule of the Montreal Protocol; to regulate the production, import, export, trade, disposal and use of ozone depleting substances and its products; to control and monitor the amount of ozone depleting substances entering or leaving the United Republic of Tanzania; to provide a system of data collection that will facilitate compliance with relevant reporting requirements under the protocol; to promote measures, strategies, programmes, incentives, equipment and technologies in favor of the use of ozone friendly substances, products and equipment in line with national obligation specified by the Montreal Protocol; and to facilitate the link between the National Ozone Unit and the Ozone Secretariat of the Protocol

3.7.5 The Land (Compensation Claims) Regulations 2001

The Land Regulations 2001 were promulgated in terms of the Land Act, Act No. 4 of 1999 sections 12 & 179. The form of compensation is stipulated in Section 10 (1) of the Land Regulations 2001. Furthermore, the Regulations list the entities that are eligible for compensation and/or resettlement.

If the person does not agree with the amount or method of payment or is dissatisfied with the time taken to pay compensation, he /she may apply to the High Court. The High Court shall determine the amount and method of payment and determine any additional costs for inconveniences incurred.

3.7.6 Other Environmental Regulations

Other environmental regulations, which are enshrining environmental standards and crucial for implementation of environmental management plans, include;

- Environmental Management (Biosafety) Regulation, 2009;
- Environmental Management (Hazardous Waste Management) Regulation, 2009;
- Environmental Management (Solid Waste Management) Regulation, 2009; and
- Environmental Management (Quality Standards for Controlling Noise and Vibrations Pollution) Regulation, 2007: focuses on urban environmental noise, and does not cover occupation environment. In the absence of other standards, it may be used to give indication of permissible noise levels in factory/workshop environment.

3.8 Strategies

The following are relevant sectoral and cross–sectoral policies that provide directives on how projects should be operated in/on concerned natural resources and sensitive ecosystems. The project proponent will consult these policies while designing and implementing the proposed project activities.

3.8.1 National Development Vision 2025

The Tanzania Development Vision 2025 is a multi-sectoral document whose function is to guide at the national level economic and social development efforts up to the year 2025. The document has three main objectives, namely:

- to achieve quality and good life for all;
- to achieve good governance and the rule of law; and
- to build a strong and resilient economy that can effectively withstand global competition

3.8.2 National Five-Year Development Plan 2021/22–2025/26

This third national five-year development plan (FYDP III) for the period 2021/2026 is a nationwide multi sector document aiming at achieving the goals set in the national development vision 2025. To increase the resilience of livelihoods to disasters, main interventions shall be:

(i) strengthen environmental conservation and protection to mitigate adverse effects of climate change
(ii) social development, including health and education, human settlements, clean and safe water, and environment, paying attention to equitable access, gender and people with disabilities
(iii) strengthen sustainable use and management of oil and natural gas
(iv) develop renewable energy sources for cooking to mitigate climate change
(v) conserve marine and freshwater fisheries protected areas
(vi) develop and implement strategies to combat poaching, illegal trade and illegal harvesting of wildlife, forest, bee and antiquities resources in the country
(vii) Promote biodiversity conservation.
(viii) develop climate change adaptation and impacts mitigation measures and reduce land degradation;
(ix) minimize environmental pollution and resultant adverse effects on the environment and human health;
(x) establish programs and mechanisms for management, monitoring and assessment of water and wastewater quality
(xi) Strengthen conservation and protection programs of water resources and water sources

3.8.3 The Tanzania Development Vision (2025)

The National Vision 2025 foresees the alleviation of widespread poverty through improved socio-economic opportunities, good governance, transparency and improved public sector performance. These objectives not only deal with economic issues, but also include social challenges such as education, health, the environment and increasing involvement of the people in working for their own development.

The vision seeks to attain creativity, innovativeness and a high level of quality education in order to respond to development and challenges and effectively compete regionally and internationally by the year 2025. The planned schools will contribute to the realization of the objectives of the vision 2025 by constructing special girl's schools and enhancing creativity, innovation and a high level of quality education in each region.

3.8.4 Water Sector Development Programme (WSDP) (2006 – 2025)

The objective of the WSDP is to alleviate poverty through improvements in the governance of water resources management and the sustainable delivery of water supply and sanitation services. It is designed to address shortfalls in urban and rural water supply infrastructure, to improve water resource management primarily through upgrading the country's nine Basin Water Offices (BWOs), and to strengthen the sector institutions and their capacities. The WSDP comprises of three main components: (i) water resources management; (ii) rural water supply and sanitation, and (iii) urban water supply and sewerage.

3.8.5 National Environmental Action Plan (NEAP) (2013) and new revised NEAP (2020)

The National Environment Action Plan (NEAP) of 2013 (under revision) is the country's effort towards a comprehensive incorporation of environmental concerns into natural resource planning and economic development. NEAP is intended to address pertinent issues significant in combating climate change, land degradation, biofuels, genetically modified organisms (GMOs), Invasive Alien Species (IAS) and promotion of Sustainable land management.

3.9 The World Bank Environmental and Social Framework (ESF)

The proposed project is financed by the World Bank through the Education Program for Results (EPforR). The financing requires the Government to implement material measures and actions so that the Project is implemented in accordance with the World Bank Environmental and Social Standards (ESSs). These measures are detailed in the Environmental and Social Commitment Plan (ESCP) and among other issues is the ESCP required the borrow to prepare Environmental and Social Impact Assessment prior to implementation of each component of the project.

The World Bank Environmental and Social Standards (ESS) are grouped in the World Bank Environmental and Social Framework (ESF)10 which establish the responsibilities of the Borrower countries (in SEQUIP the Government of Tanzania) to plan, evaluate, screen, manage and monitor environmental and social risks and impacts during each stage of the Project implementation. These Standards seek to avoid or mitigate adverse impact to people and the environment; conserve or rehabilitate natural habitat; promote efficient and equitable use of natural resources; promote workers and community health and safety; and to maximize stakeholders' engagement through enhanced consultation, participation and accountability.

- ESS1 on Assessment and Management of Environmental and Social Risks and Impacts;
- ESS2 on Labor and Working Conditions;
- ESS3 on Resource Efficiency and Pollution Prevention and Management;
- ESS4 on Community Health and Safety;
- ESS5 on Land Acquisition, Restrictions on Land use and Involuntary Resettlement;
- ESS6 on Biodiversity Conservation and Sustainable Management of Living Resources
- ESS7 on Vulnerable Groups
- ESS8 on Cultural Heritage; and
- ESS10 on Stakeholder Engagement and Information Disclosure.

3.9.1 The main objectives of the ESF

i. To inform decision makers of the nature of environmental and social risk.
ii. To ensure that Bank-financed projects are environmentally sound and sustainable, and that decision-making is improved through appropriate analysis of actions and of their likely environmental impacts.
iii. To increase transparency and provide mechanism for participation of stakeholders in decision making process for the project.

Table 3-1: The World Bank Environmental and Social Standards (ESS) Applicable to Project and Associated Instruments

S/N	Instrument for project implementation	The Environmental and Social Standards (ESS)	Purpose/Objectives	Reason for its Application in the Project
1.	**Environmental and Social Management Framework (ESMF)**	**ESS1**: Assessment and Management of Environmental and Social Risks and Impacts	Identification of adverse impacts and respective mitigation measures Enable screen and follow-up of remedies achieved through application of prevention, mitigation and compensation measures Enable allocation of responsibilities and resources to implement required mitigation measures	Sets out the Region's responsibilities for assessing, managing and monitoring environmental and social risks and impacts associated with each stage of a project supported by the Bank through Investment Project Financing (IPF), in order to achieve environmental and social outcomes consistent with the Environmental and Social Standards (ESSs).
2		**ESS2:** Labor and Working Conditions	Ensure the healthy and safe working environment during projects implementation. Ensure the provision of fair working conditions.	Recognizes the importance of employment creation and income generation in the pursuit of poverty reduction and inclusive economic growth. Proponent can promote sound worker-management relationships and enhance the development benefits of a project by treating workers in the project fairly and providing safe and healthy working conditions.
3		ESS3: Resource Efficiency and Pollution Prevention and Management	To promote the sustainable use of resources including energy, water and raw materials To avoid or minimize generation of hazardous and non-hazardous wastes.	Recognizes that economic activity and urbanization often generate pollution to air, water, and land, and consume finite resources that may threaten people, ecosystem services and the environment at the local, regional, and global levels. This ESS sets out the requirements to address resource efficiency and pollution prevention and management throughout the project life cycle.
4		ESS4: Community Health and Safety	To manage potential risks to the community during construction and operation of school infrastructures.	Addresses the health, safety, and security risks and impacts on project-affected communities and the corresponding responsibility of the Proponent to avoid or minimize such risks and

				impacts, with particular attention to people who, because of their circumstances, may be vulnerable
5	Resettlement Policy Framework (RPF)	ESS5: Land Acquisition, Restriction on Land Use and Involuntary Resettlement	To avoid or minimize involuntary resettlement and to avoid forced eviction To mitigate unavoidable adverse impacts from land acquisition and restrictions on land use.	Involuntary resettlement should be avoided. Where involuntary resettlement is unavoidable, it was minimized and appropriate measures to mitigate adverse impacts on displaced persons (and on host communities receiving displaced persons) were carefully planned and implemented.
6		ESS6: Biodiversity Conservation and Sustainable Management of Living Resources	The SEQUIP project will avoid adverse impacts on biodiversity, habitats and ecosystem services. When avoidance of adverse impacts is not possible, the Borrower will implement measures to minimize adverse impacts and restore biodiversity in accordance with the mitigation hierarchy provided in ESS1 and with the requirements of the ESS6.	Recognizes that protecting and conserving biodiversity and sustainably managing living natural resources are fundamental to sustainable development and it recognizes the importance of maintaining core ecological functions of habitats, including forests, and the biodiversity they support. ESS6 also addresses sustainable management of primary production and harvesting of living natural resources and recognizes the need to consider the livelihood of project-affected parties, including Indigenous Peoples, who's access to, or use of, biodiversity or living natural resources may be affected by implementation of the project.
7		ESS 7: Sub-Saharan Historically Underserved Traditional Local Communities	To enable VGs to participate in project activities while taking care of their sociocultural interests and hindrances	Ensures that the development process fosters full respect for the human rights, dignity, aspirations, identity, culture, and natural resource-based livelihoods of Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities. ESS7 is also meant to avoid adverse impacts of projects on Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities, or when avoidance is not possible, to minimize, mitigate and/or compensate for such impacts.

8		ESS8: Cultural Heritage	To enhance conservation of cultural heritage in both forms; tangible and intangible cultural heritage. To conserve ecological and socially sensitive places from possible impacts of project implementation.	Recognizes that cultural heritage provides continuity in tangible and intangible forms between the past, present and future. ESS8 sets out measures designed to protect cultural heritage throughout the project life cycle.
9		ESS9: Financial Intermediaries	To set out how the FI will assess and manage environmental and social risks and impacts associated with the subprojects it finances To promote good environmental and social management practices in the subprojects the FI finances.	Recognizes that strong domestic capital and financial markets and access to finance are important for economic development, growth and poverty reduction. FIs are required to monitor and manage the environmental and social risks and impacts of their portfolio and FI subprojects, and monitor portfolio risk, as appropriate to the nature of intermediated financing. The way in which the FI will manage its portfolio will take various forms, depending on a number of considerations, including the capacity of the FI and the nature and scope of the funding to be provided by the FI.
10	Stakeholder Engagement Plan	ESS10: Stakeholder Engagement and Information Disclosure	To develop a systematic approach to stakeholder engagement to develop good relationships and gather their views on issues that could affect them. To provide stakeholders with a mechanisms through which to raise grievances.	Recognizes the importance of open and transparent engagement between Proponent and project stakeholders as an essential element of good international practice. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation.

3.10 Other World Bank Instruments Applicable for SEQUIP

Environmental and Social Framework - Guidance Notes for Borrowers11; The World Bank has developed several Guidance Notes to ensure the governments (borrowers) comply with the World Bank Environmental and Social Standards. This guidance are public documents that be accessed in the World Bank website12.

3.11 International Agreements, Conventions and Treaties

Tanzania has ratified or acceded to many international treaties and conventions. Among those the following are relevant to the project.

3.11.1 The 1991 Bamako Convention

On the ban of the Import in Africa and Control of Trans boundary Movement and Management of Hazardous wastes within Africa was ratified in 1993.

3.11.2 The 1989 Basel Convention

On Control of Trans-Boundary Movements of Hazardous Wastes and their Disposal. The project shall adhere to both Bamako and Basel conventions to ensure that the ships do not bring into the country hazardous wastes by strictly abiding to the cargo declaration formalities.

3.11.3 1996 Convention on Biological Diversity

Proponent must cooperate with other related contracting parties for the conservation and sustainable use of biological diversity. Article 14 of the Convention concerns impact assessments and minimizing adverse impacts.

3.11.4 ILO Minimum Age Convention (C138), 1973

The Convention is concerned with minimum age for admission to employment. The minimum age stated in Article 2 (3) of the Convention is not less than 15 years or 18 years' dependent on the nature of the work. The Convention prohibits child labor with a view to achieving the total abolition of child labour worldwide. Members of the Convention are committed to pursuing national policies that have been designed to ensure effective abolition of child labour and to increase progressively the minimum age for admission to employment or work to a level consistent with the fullest physical and mental development of young persons. During construction and implementation of SEQUIP project the Contractor will abide by the provisions of this Convention.

3.11.5 Labour and Working Conditions

- To establish, maintain and improve the worker-management relationship.
- To promote the fair treatment, nondiscrimination and equal opportunity of workers, and compliance with national labour and employment laws.
- To protect the workforce by addressing child labour and forced labour.
- To promote safe and healthy working conditions, and to protect and promote the health of workers.

3.11.6 Resource Efficiency and Pollution Prevention

- To avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities
- To promote more sustainable use of resources, including energy and water
- To reduce project-related GHG emissions

3.11.7 Community, Health, Safety and Security

- To anticipate and avoid adverse impacts on the health and safety of the affected community during the project life from both routine and no routine circumstances
- To ensure that the safeguarding of personnel and property is carried out in accordance with relevant human rights principles and in a manner that avoids or minimizes risks to the affected communities

3.11.8 Land Acquisition and Involuntary Resettlement

- To avoid or, when avoidance is not possible, minimize displacement by exploring alternative project designs
- To avoid forced eviction
- To anticipate and avoid or, where avoidance is not possible, minimize adverse social and economic impacts from land acquisition or restrictions on land use by (i) providing compensation for loss of assets at replacement cost and (ii) ensuring that resettlement activities are implemented with appropriate disclosure of information, consultation, and the informed participation of those affected
- To improve, or restore, the livelihoods and standards of living of displaced persons
- To improve living conditions among physically displaced persons through the provision of adequate housing with security of tenure at resettlement sites

3.11.9 Biodiversity Conservation and Sustainable Management of Living Natural Resources

- To protect and conserve biodiversity
- To maintain the benefits from ecosystem services
- To promote the sustainable management of living natural resources through the adoption of practices that integrate conservation needs and development priorities

3.11.10 Indigenous Peoples

- Indigenous people must be identified and treated in the manner that their well-being is not affected by the project.

3.11.11 Cultural Heritage

- To protect cultural heritage from the adverse impacts of project activities and support its preservation
- To promote the equitable sharing of benefits from the use of cultural heritage

3.12 International Convention

3.12.1 Convention against Discrimination in Education (1960) ratified by United Republic of Tanzania in 1978-12-08

Article 2 (a) of convention stated the establishment or maintenance of separate educational systems or institutions for pupils of the two sexes, if these systems or institutions offer equivalent access to education, provide a teaching staff with qualifications of the same standard as well as school premises and equipment of the same quality, and afford the opportunity to take the same or equivalent courses of study.

3.12.2 International Covenant on Economic, Social and Cultural Rights, 1966

Article 13 (2)(a) of this convention emphasizes that ”Primary education shall be compulsory and available free to all; and (2)(b) Secondary education in its different forms, including technical and vocational secondary education, shall be made generally available and accessible to all by every appropriate means, and in particular by the progressive introduction of free education”.

3.12.3 Universal Declaration of Human Rights, 1948

Article 26 of this declaration states that “Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Technical and professional education shall be made generally available and higher education shall be equally accessible to all based on merit”.

3.12.4 Convention on the Rights of the Child, 1989

The Convention recognizes the right of the child to education and with a view to achieving this right progressively and based on equal opportunity. Where in Article 28(1) (a) of the convention stated that “Make primary education compulsory and available free to all”. Also, this convention emphasizes in international cooperation in education sector stated in Article 28 (3) promote and encourage international cooperation in matters relating to education, in particular with a view to contributing to the elimination of ignorance and illiteracy throughout the world and facilitating access to scientific and technical knowledge and modern teaching methods.

3.12.5 Convention on the Rights of Persons with Disabilities, 2006

Article 28 (2) (a) of the convention emphasizes the right of persons with disabilities to education which stated, “Persons with disabilities are not excluded from the general education system on the basis of disability, and that children with disabilities are not excluded from free and compulsory primary education, or from secondary education, on the basis of disability”.

3.13 Sustainable Development Goals (SDGs)

The Sustainable Development Goals (SDGs) are a set of global goals for fair and sustainable health at every level from planetary biosphere to local community. The aim is to end poverty, protect the planet and ensure that all people enjoy peace and prosperity, now and in the future. Table 3-2 below shows the Sustainable development goals which are relevant to this project

Table 3-2: Sustainable Development Goals (MDGs

Goal	Target
Goal 1: End poverty in all its form everywhere	Target 1.1 By 2030, extremely eradicate poverty to all people everywhere, currently measured as people living on less than $ 1.25 a day Target 1.4 By 2030, ensure that all women and men, in a particular the poor and the vulnerable have equal rights to economic resources, as well as access to basic services, ownership and control over land and other form of property, inheritance natural resources, appropriate new technology and financial services include microfinance
Goal 3: Ensure health lives and promote for all at all stage	Target 3.5. Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol.
Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunity for all	Target 4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and Goal-4 effective learning outcomes Target 4.5 By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations
Goal 5 : Achieve gender equality and empower all women and girls	Target 5.1 End all forms of discrimination against all women and girls everywhere

Goal	Target
	Target 5.2 Eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation
Goal 6: Ensure access to water and sanitation to all	Target 6.1 By 2030, achieve universal and equitable access to safe and affordable drinking water for all Target 6.2 By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations
Goal 7: Ensure access to affordable, reliable, sustainable and modern energy for all.	Target 7.1 By 2030, ensure universal access to affordable, reliable and modern energy services
Goal 13: Take urgent to combat climate change and its impact	Target 13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries Target 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning
Goal 14: Conserve and sustainably use of oceans, seas and marine resources	Target 14.1 By 2025, prevent and significantly reduce marine pollution of all kinds, in particular from land-based activities, including marine debris and nutrient pollution
Goal 15: Sustainable manage forest, combat, desertification, halt reserve land degradation, halt biodiversity loss	Target 15.2 By 2020, promote the implementation of sustainable management of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally Target 15.3 By 2030, combat desertification, restore degraded land and soil, including land affected by desertification, drought and floods, and strive to achieve a land degradation-neutral world

3.14 Institutional Framework

Authorities, institutions and sectors directly or indirectly related to the project development have been identified geographically by political boundaries as well as through regulations, institutional mandates and structures. These entities are adequately consulted in the ESIA process as prescribed through the institutional framework for environmental management. The relevant institution for handling EIA requirements is the NEMC with input from the District Environment Management Committees; Ward Committees and Street Committees.

According to the EMA of 2004 the institutional set-up for environmental management from a national level to village level includes:

- Minister Responsible for Environment;
- Director of Environment (DOE);
- National Environmental Management Council (NEMC);
- Sector Ministries;
- Regional Secretariats;
- Local Government Authorities, District, and Town Councils;

- Township, Village, Ward; Neighborhood (Kitongoji); and
- Street (Mtaa).

The DOE and NEMC are the main regulatory bodies for environmental management in Tanzania whilst the other sector ministries and agencies, play an important role in implementing and enforcing environmental decree. The environmental management functions of each institution are outlined in the Environmental Management Act.

3.14.1 Minister Responsible for Environment

The Minister is overall responsible for matters relating to environment and in that respect be responsible for articulation of policy guidelines necessary for the promotion, protection and sustainable management of environment in Tanzania.

The Minister may issue general guidelines to the Sector Ministries, Government Departments, the Council, National Environment Advisory Committee, City, District or District Environmental Management Committee, agency or any other public or private institution necessary for the purposes of implementation of or giving effect to the provisions of EMA. The Minister may designate and shall, where appropriate, direct any of the before mentioned institutions and within specified time, to perform any function or do any activity or desist from performing any function or doing any activity as a result of which the environment or part of it is or may be seriously endangered or detrimentally affected.

3.14.2 Director of Environment (DOE)

The DOE heads the Office of the Division (Directorate) of Environment under the Office of the Vice President and is responsible for coordination, monitoring and assessment of various environmental activities. The DOE is responsible to coordinate various environment management activities being undertaken by other agencies and promote the integration of environment considerations into development policies, plans, programmes, strategies, projects and undertake strategic environmental assessment with a view to ensuring the proper management and rational utilization of environmental resources on a sustainable basis for the improvement of the quality of human life in Tanzania.

3.14.3 National Environment Management Council (NEMC)

The object and purpose for which the Council is established is to undertake enforcement, compliance, review and monitoring of environmental impact assessment and in that regard, shall facilitate public participation in environmental decision making, exercise general supervision and coordination over all matters relating to the environment assigned to the Council, under the EMA or any other written law.

The Director General of NEMC is appointed by the President. The Council and the Board of Directors consist of:

- A Chairperson appointed by the President;
- The Director of Environment;
- Seven members appointed by the Minister; and
- The Secretary to the Council (Director General).

3.14.4 Sector Ministries

An environmental sector sits within each Ministry. The duties of the sector include:

- Responsibility for ensuring compliance by the sector Ministry with the requirements of this Act;
- Responsibility for ensuring all environmental matters contained in other written law falling under sector ministry are implemented and report of their implementation is submitted to the Director of Environment; and
- Liaising with the Director of Environment and the Council on matters involving environment and all matters with respect to which cooperation or shared responsibility is desirable or required under this Act.

3.14.5 Regional Secretariats

The Regional Secretariat is responsible for co-ordination of all advice on environmental management in their respective regions and liaison with the Director of Environment and the Director- General on the implementation and enforcement of this Act. The Regional Secretariats are headed by a Regional

Environment Management Expert. The expert is responsible for advising the local authorities on matters related to the implementation and enforcement of the EMA. Furthermore, the expert links the region with the Director of Environment and Director General of NEMC.

3.14.6 Local Government Authorities

A local government Environmental Management Officers are designated or appointed at each City, District, District and Town Council. The responsibilities of the Environmental Management Officers among others, include:

- Ensuring enforcement of EMA;
- Advising the Environment Management Committee on all matters relating to environment;
- Promoting environmental awareness relating to protection of the environment and the conservation of natural resources;
- Gathering and managing information on the environment and the utilization of natural resources;
- Preparing periodic reports on the state of the environment;
- The preparation, review and approval of environmental impact assessments for local investment by-laws on environmental management and on sector specific activities related to environment; and reporting to the Director of Environment and the Director General on the implementation of the EMA.
- The Environment Management Committee is responsible for functions set out under the Local Government Act. In addition, they perform functions as prescribed by the EMA and they may be assigned by the Minister to carry out directives related to the promotion and enhancement of sustainable management of the environment.

The Township Environment Management Committees are responsible for:
The proper management of the environment in respect of the area in which they are established;

- Performing duties as assigned under EMA or by the Minister or Council;
- Carrying out directives given by the Minister to promote and enhance sustainable management of the environment; and
- Performing any functions as set out under the Local Government (District) Authorities Act.

3.14.7 Ward/Mtaa/Kitongoji Level

The District Council designates an Environment Management Officer for each administrative area of a township, ward, village, Kitongoji (neighborhood/hamlet) and Mtaa (street). The Environmental Management Officers are responsible for coordinating all functions and activities related to the protection of environment within their designated areas.

CHAPTER FOUR

4 BASELINE CONDITIONS

4.1 Introduction

The purpose of this Chapter is to provide a brief description of the environment in the project site which could potentially be affected by positive and negative impacts of the project discussed in Chapter 2. Impacts of lesser importance were screened out during scoping phase to ensure that the ESIA is focused on the potentially significant impacts.

The process of environmental baseline investigations included the combination of some/all the following tasks:

- An appropriate combination and balance of desktop studies, field surveys, site information collection and technical consultation with stakeholders.
- Consideration of all available documentary records, research papers and other relevant information.
- Use of recognized survey and analysis techniques.
- Identification and provision of appropriate (preferably quantitative) descriptions of the baseline environmental conditions.
- Identification of key environmental features that may enhance, constrain, or limit the direction and rate of environmental change.
- Explanation of links, interactions, and dependencies between environmental components.
- Verification of desktop and other information by systematic field surveys.
- Acknowledgement of the implications of gaps and limitations in information and data.

4.2 Project Core Area and Accessibility

This project will be implemented in Manyara region, Babati Town Council in Maisaka ward at Kiongozi village. Manyara Region, of which Babati town is the capital, came into being in 2002 when part of Arusha region was split to form a new region. It is one of Tanzania's 31 administrative regions. The region lies in the north-eastern quarter of mainland Tanzania, between latitude 3_40' and 6_ South of the Equator and longitudes 33_ and 38_East of the Greenwich Meridian. It is bordered by Arusha Region on the North, Kilimanjaro and Tanga Regions on the East, Dodoma Region on the South and Singida and Shinyanga Regions on the West.

Administratively, Manyara region is divided into five (5) districts namely Babati, Hanang', Mbulu,Simangiro and Kiteto with seven (7) Local Government Authorities (LGAs) of Babati Town, Babati,Hanang', Mbulu Town, Mbulu, Simamnjiro and Kiteto Councils, with 27 divisions, 142 wards, 449 villages, 35 streets and 2030 hamlets.

Babati town is one of the five districts of Manyara Region in United Republic of Tanzania located at the end of Tarangire National Park and at the base of Lake Babati. The Town developed as a transportation node along the Arusha-Dodoma stretch of the Great North Road. The dominant tribes in Babati town are Fyomi, Rangi and Iraq. Apart from being the Regional Administrative and Economic Centre of Manyara region, Babati town is a key engine of social and economic development due to its prominence in agricultural production

Administratively, Babati Town Council is divided in to 8 wards where by six wards such as BAGARA, BABATI, NANGARA, SIGINO, MAISAKA and MUKUTA are found in BABATI DIVISION, and two wards such as BONGA and SINGE are located in GOROWA DIVISION. Babati Town Council is accessible through Arusha-Dodoma and Arusha-Singida-Mwanza highways which also attracts people from different localities.

4.3 General Conditions

4.3.1 Current Uses and Activities at the Proposed Project Site

The proposed 30 acres land area which is proposed for school construction of Manyara Girls region schools at Kiongozi village was once used for agricultural activities and crops plantation by the community and the land was once belongs to some people of Kiongozi villagers and with the agreement of Kiongozi Local government they have willingly decided to give it to region authority for schools construction. However, currently there is no agricultural activities proceeding in the area, hence it is characterized by grasses and bushes as figure 4.1 showing bellow

Figure 4-1: Economic activities at proposed area

4.3.2 Displacement and Relocation

No people or activities shall be relocated to leave right way for school construction as no human settlements or activities were found in the project location during site visit.

4.3.3 Neighboring Residences (Location and Distance from the Proposed Project)

The proposed project site is administratively located at Kiongozi village, Maisaka ward in Babati Town Municipal- Manyara Region and is bordered by individual owned farm to the West, South and East, However in North the proposed site is bordered by Babati Arusha Road and there is seasonal river, crossing at the middle of the land

The proposed site is accessible through Babati Arusha Road 20km from Babati Town toward Arusha in Kiongozi Village with coordinate -4.201839, 35.750908

4.4 Socioeconomic Baseline

4.4.1 Background

A development envelope (Area of Interest - AOI) is situated at Kiongozi Village, Maisaka Ward, Babati Town Council, Manyara Region. Details of the study area for the Social Impact Assessment (SIA) are presented in Figure 4-1.

Table 4-1: Study Areas for the ESIA

Study Area	Definition	Areas included for this project
Site-specific study area	Area likely to experience impacts associated with project infrastructure and activities	The project footprint, excluding the access roads, etc. (to be defined at the conclusion of the scoping phase)
Local study area	Areas likely to experience impacts related to population influx, etc.	The neighboring settlements in Maisaka ward and Kiongozi Village
Regional study area	Area likely to experience economic impacts of the project	Babati Town (since most of the development envelope falls within this district). This is set against the backdrop of Manyara Region and Tanzania as a whole

4.4.2 Administrative Set up

The proposed project fall under Kiongozi village headed by Village Executive Officer (VEO) and village chairperson, in, Maisaka ward headed by ward executive officer (WEO) and ward council, in Babati Town Districts headed by District commissioner (DC) and District Executive director (DED) in Manyara Region under Region Administrative Secretary (RAS).

Administratively, Manyara region is divided into five (5) districts namely Babati, Hanang', Mbulu, Simangiro and Kiteto with seven (7) Local Government Authorities (LGAs) of Babati Town, Babati ,Hanang', Mbulu Town, Mbulu, Simamnjiro and Kiteto Councils, with 27 divisions, 142 wards, 449 villages, 35 streets and 2030 hamlets.

4.4.3 Demographic Condition

Manyara Region is one of Tanzania's 31 administrative regions of the United Republic of Tanzania located in the north-eastern quarter of Tanzania Mainland. The region has five (5) districts and two towns covering an area of 50,921 square kilometers. The Babati Town council as the area of interest consists of 8 Wards with 2,804 households as shown in Table.

Table 4-2: Population Distribution by Sex, Sex Ratio, Number of Households, and Average Household Size by Ward, Babati Town Council; 2022 PHC

Council/Ward		Population			Sex Ratio	Number of Households	Average Household Size
		Both Sexes	Male	Female			
Babati Town Council		**129,572**	**65,114**	**64,458**	**101**	**33,593**	**3.9**
1.	Babati	21,618	10,945	10,673	103	5,785	3.7
2.	Mutuka	5,993	3,137	2,856	110	1,277	4.7
3.	Nangara	10,479	5,312	5,167	103	2,545	4.1
4.	Bagara	39,116	18,984	20,132	94	11,294	3.5
5.	Sigino	12,457	6,471	5,986	108	2,771	4.5
6.	Maisaka	20,759	10,537	10,222	103	5,301	3.9
7.	Singe	7,624	3,852	3,772	102	1,816	4.2
8.	Bonga	11,526	5,876	5,650	104	2,804	4.1

*Source: National Beaure of Statistics (*NBS) (2022)

4.4.4 Distinctive Ethnic Groups

The main ethnic groups are Iraqw, Maasai, Barbaig, Mbugwe, Rangi and Gorowa of which constituting distinctive ethnic groups with unique social-cultural ways of living.

The main indigenous ethnic groups are Iraqw, Maasai, Barbaig, Mbugwe, Rangi and Gorowa of which constituting distinctive ethnic groups with unique social-cultural ways of living.

The Iraqw of Mbulu and their cousins the Gorowa of Babati, Mbungu of Lushoto as well as the Alawa and Burunge of Kondoa form unique groups in Tanzania. The only similar ethnic groups are found far away in Ethiopia and Eritrea among the Oromo as well as Tutsi of Rwanda and Burundi.

The Hadzabe/Hadza of Yaeda valley in Mbulu District who number only about 1,500 are also distinctive in that as a group they have the smallest stature in Tanzania. They still live on hunting and collecting wild honey, wild fruits and roots. The only similar ethnic group is the Bushmen of the Kalahari Desert in Namibia.

The Region is also home to the mainland's greatest concentration of the Nilotic tribes the Barbaig, Ndorobo/Akea and Maasai who are historically known to be warrior ethnic groups. The Akea are neither livestock keepers no farmers. Their home is the forest where they engage in hunting and gathering of wild honey, wild fruits and wild roots. Their culture is diminishing due to assimilation into the Maasai ethnic group.

They currently, number about 500 in the whole of Manyara Region. Another 2,500 Ndorobo/Akea are found in Arusha Region. Part of the reason for in the diminishing numbers is that their life style-which is similar to that of the Hadzabe, is now no longer sustainable within the ever-changing environment.

Table 4-3: Ethnic Group by District

District	Ethnic Group	
	Main/broad classification	Detailed classification
Babati TC/DC	Wabantu	Warangi, Wachagga, Wapare
	NiloHamites	Wagorowa, Wa-Iraqw, Maasai, Barbaigw
Hanang' DC	Wabantu	Wanyiramba, Warangi, Wanyatur
	NiloHamites	Wabarbaigw, Wa-Iraqw
Mbulu TC/DC	NiloHamites	Wa-Iragw, Wabarbaigw, Wahadzabe
Kiteto DC	Wabantu	Wagogo, warangi,wakaguru, wasambaa
	NiloHamites	Wamaasai, Waburunge, Wa-Akea (Ndorobo)
Simanjiro DC	Wabantu	Wabantu Wanguu, Wachagga, Wapare, Warangi
	NiloHamites	Wamaasai, Wa-Akea

4.4.5 Indigenous People

The concept of indigenous people (IP) is developed in conjunction with the guidance of ESS 7 which refer exclusively to a distinct social and cultural group. IP are Self-identification as members of a distinct indigenous social and cultural group with collective attachment to a distinct geographical habitat, ancestral territories, language or areas of seasonal use or occupation, as well as to the natural resources in these areas; customary cultural, economic, social, or political institutions that are distinct or separate from those of the mainstream society or culture.

The Environmental and Social Framework describes IP engagement process and a requirement to conduct stakeholder analysis and engagement planning, disclosure of information, and meaningful consultation, in a culturally appropriate and gender and inter-generationally inclusive manner.

In the case that project may affect the lands, territories, and resources that Indigenous Peoples customarily own, occupy or otherwise use in view of their collective rights to self-determination and to their lands, territories, natural resources, and related properties then Free, Prior and Informed Consent (FPIC) must be attained.

4.4.6 Methodology

The ESIA study team utilized the baseline literature as well as interview with official and historical individual to identify and ensure that key information pertaining to Indigenous Pastoralist and livestock keepers are collected in a manner that is culturally appropriate. The consideration of culturally appropriateness was paramount in the entire process; specific methodologies utilized are detailed in the following sections.

4.4.6.1 Key Informant Interviews

Key informants were held with individuals and ward leaders from different backgrounds including Community Based Organizations (CBOs) representatives present and local government officials (Ward Executive Officers, Ward Councilors, Village Leaders).

Discussions with key informants were guided by a checklist with key questions covering IP and Livestock related matters in a culturally appropriate manner were administered.

4.4.6.2 Document Reviews

A review of relevant documents, including project documents such as ESMF, Manyara Social Economic Profile, the Babati Town Council Social Economic Profile, Stakeholder Engagement Plan (SEP) as well as VGPF development for SEQUIP.

4.4.6.3 Observations and site visits

The ESIA team visited the site as part of the methodology for assessment/ baseline data collection for the presence of IP in the respective sites. The site visit confirmed that no indigenous people nearby the proposed site.

4.4.7 Confirming the absence of Indigenous People in the project area

The employed methodologies including key informant interviews and observation as well as site visit confirm that the selected project area is free from the Indigenous people.

However due to the fact that the project is located in Manyara hence there is a possibility of interaction between the project and the IP it is then considered in this study that issues related to IP will be incorporated in the ESMP with the exception of consideration of their availability

4.4.8 Economic Activities

The dominant economic activities in Manyara Region are agricultural production, livestock keeping and mining activities. Other economic activities which are practiced to the lesser extent are tourism, fishing, manufacturing and irrigation farming.

4.4.8.1 Agriculture

Agricultural production, livestock keeping and mining are the main economic activities in Manyara Region. The major food crops and cash crops that are cultivated by small farmers (peasants) includes Maize, food beans, pigeon peas, sunflower, onions, garlic, coffee, paddy and finger millet.

Maize, beans, pigeon peas, wheat and sunflower are the major contributors to the region's economy. However, commercial crop farming is practiced in a few places like wheat at Basuto in Hanang' and pigeon pea in Babati and Hanang'.

Kiru valley -the flood plain area between lakes Babati and Manyara, is the most fertile area in Manyara region. In this area, big farmers who own large estates grow various crops including sugar cane. This area has been a reliable source of crops since the colonial era and by mid-1930's it was occupied by re-known millionaire settlers from Europe comprising Swedish barons, Russians, Americans, and Germans.

4.4.8.2 Livestock

As part of its economy, livestock resource in Manyara Region is the second most important economic activity after crops farming, employing 11% of the Manyara residents. However, largely, livestock keeping is traditional and involves mostly indigenous breed. Over 98% of cattle for instance are of indigenous breed, mainly Tanzania Shorthorn Zebu (TSZ) which are known for their ability to survive and productive even under harsh environmental conditions.

However, the small stock of goats, sheep, chicken, pigs and ducks are considered less important in most pastoralist/agro-pastoralist communities, but they are important, especially in contributing to food security and for providing a stable source of income for women.

The regional livestock population was estimated to be 5,439,437 in 2017 with its1.8 million large cattle population, 547 goats and 373,399 sheep ranking Manyara region the 4th in Tanzania after Shinyanga, Mwanza and Tabora regions.

This is 8% of the national herd of cattle, 9% of the national herd of goats and 1% of all sheep in the country The land designated for livestock production is approximately 2.4 million ha. The land designated for ranches is 9,248ha which can optimally accommodate approximately 13,000 cattle. Distribution of livestock in local government areas and slaughtering houses are shown Table 4.3 and 4.4 respectively

Table 4-4: Summary of Livestock Population in Manyara Region and its Distribution for Year 2016/17

Types of Livestock	Babati TC	Babati DC	Hanang' DC	Kiteto DC	Mbulu TC	Mbulu DC	Simanjiro DC	Total Livestock
Cattle	22,987	224,228	248,689	487,107	70080	297,764	437,925	1,788,771
Goats	21,077	183,995	187,687	423,423	45033	179,468	396,452	1,441,095
Sheep	5,365	79,507	98,799	168,329	29,838	29,311	225,003	635,152
Pigs	2,437	8,153	9,634	4,260	47,776	21,292	896	94,448
Hare	-	-	9,270	168	218	27	-	9,656
Donkey	1,818	7,165	26,913	7,092	2,047	4,373	21,867	71,271
Chicken	29,185	228,598	269,156	144,526	277,547	73,911	94,429	1,136,352

Source: Compiled data supplied by the Council Directors' offices, Manyara Region, in January 2018

4.4.8.3 Irrigation Farming

Manyara region is blessed with enormous water resources potential constituting lakes (Manyara, Babati, Gedabi, Balangda, and Bassoutu), rivers (Fahel, Kiongozi and Pangani), waterfalls (Gocho and Magara) and natural springs in Kiru, Endagaw, Tumati and Bashay valley used for irrigation and other purposes. Irrigation schemes with varying degrees of potentiality in the region is exceptionally high in Babati DC (with 15,460 ha), followed by Simanjiro (with 10,550 ha), Mbulu DC (6,457 ha), Hanang' (3,000 ha), Kiteto (895 ha), Mbulu TC (360 ha) and Babati TC with only 160 ha.

However, only 31.8% of the total 36,882 ha is currently under traditional and improved irrigated agriculture, being utilized to irrigate paddy, maize, sugarcane, vegetables and leguminous crops either by water channels (surface irrigation) or irrigation portable pumps.

This is due to the fact that these areas are in densely populated mountain slopes where a large amount of water is available and utilized and the fact that an increasing number of people who are gradually being forced by population pressure to move downhill and settle in lowland areas are using an increasingly large amount of water for irrigation farming for paddy and vegetables.

4.4.8.4 Wildlife

MANYARA Region is endowed with a variety of wildlife species from big games to small antelopes. Wildlife in Manyara region is distributed in different categories of wildlife protected areas from Open Area, Game Controlled Areas (GCAs), Wildlife Management Areas (WMAs) and National Parks. Tarangire and Lake Manyara National Parks for instance, are where wild animals such as lions, cheaters, monkeys, mongooses, baboons, caracals, honey badgers, dik-dik, gazelles, wildebeests,

zebras, impala, water bucks, buffaloes, elephants, giraffes, leopards, hippos, crocodiles, wild dogs, more than 550 bird species and many more wild animals can be found.

Moreover, the potential Simanjiro Plains where thousands of wildebeests and zebras from Tarangire and Lake Manyara National Parks are dispersed - especial during wet season, is an Open and Game Controlled Areas. Other areas that have substantial number of wildlife include NOU forest and YaedaChini in Mbulu district but this is far from the project location

4.4.8.5 Tourism

Manyara region is endowed with many other incredible tourist attractions that can offer memorable experience to tourists. Such attractions are; Mount Hanang' and Kwaraa- for Mountain climbing and photographing, Visiting hot spring in Lalaji and Masware villages ,Lake Babati, Burunge and Balangda salt lake (in Hanang') for boat driving and viewing, Eastern arc rift valley escarpment (viewing parachuting and photographing), Lake Manyara national park, Tarangire national park, cultural tourism (Iraqwi, Fyome, Maasai, Hadzabe, Barbaig, Ndorobo tribes)

4.4.8.6 Fisheries and Aquaculture

Manyara region has seven (7) lakes where fishing is a main economic activity of the surrounding community. Fishing activities are mostly practiced in Lake Manyara, Babati and Burunge (in Babati district), Bassoutu, Balang'dalalu and Basodesh (in Hanang' district) and Tlawi (in Mbulu district) as well as Ruvu/Pangani Fahel, Kiongozi and Tarangire rivers and Nyumba ya Mungu dam (in Simanjiro district). During dry seasons, this lake acts as a source of salt for the people and their livestock.

Lake Babati provides fishing opportunity using local canoes within the view of floating hippos. The lake is 18 km squares long and is rich in tilapia, catfish, and fresh water prawns different species of birds and is estimated to hold over 200 hippos.

In Hanang' district fishing is possible in the fresh water lakes of Bassotu and Basodesh. There is also Lake Tlawi in Mbulu district and the Ruvu River in Simanjiro district. Apart from the mentioned lakes and rivers, the region also has several man-made small dams where aquaculture practices are done. Collectively, these water bodies are sources of different types of fishes such as tilapia and catfish to the nearby communities

4.4.8.7 Mining

Manyara region is endowed with precious stones/minerals in various areas in the region that include Simanjiro (Tanzanite One and Tanzanite Africa-under operation, Platinum Graphite-under construction) but not well developed in the region.

However, small mining, quarrying and/or crushing activities are done by artisanal miners using poor technologies which impair the processing recovery rate. Mineral types include Tanzanite, Graphite, Limestone, Ruby, Red garnet, Rhodelite, Tsavorite, Tremolite ,Gemstone, Anzonight, Green garnet, Green tourmaline, Copper, white quartz, marble, gold, salt, gravel ,sand and metallic minerals, but no clear data in the region regarding the existing mineral deposits in terms of quantity and quality.

4.4.8.8 Industry and Trade

Manyara has a total of 2,400 enterprises, most of them being micro scale industries (86.13%), followed by small scale industries (12.71%), medium scale industries
(0.58%) and large-scale industries (0.58%). Simanjiro and Babati are the only districts found with large scale industries.

These include: (i) Minjingu Phosphate Fertilizers Company Limited (fertilizers manufacturing industry located at Babati DC), (ii) Tanzanite One and Africa Tanzanite (Tanzanite processing industries at Mererani in Simanjiro district), (iii) Manyara Sugar Factory (Sugar manufacturing Company in Babati DC) and (iv) SIERA Industry (essential oil extraction factory) in Babati DC.
Other large-scale industries include:

- New Hanang' Cotton Mill (a ginnery) with full infrastructure at Magugu in Babati DC which is expected to start production soon.
- Another large scale factory is at last stage of construction at Meralani, Simanjiro district and it is anticipating starting production in year 2018. The factory will be processing graphite for export and it has an installed capacity of processing 1500 tonnes of rock soil per day.
- The region has also a number of clusters which were established by SIDO under the auspices of
- Swedish International Development Agency (SIDA). These include;
    - Honey in Babati DC,
    - Rice in Magugu area-Babati DC,
    - Garlic in Mbulu DC,
    - Maize in Hanang' DC and Mbulu DC,
    - Sunflower in Babati TC and Kiteto DC.
    - Others are footwear and leather goods' clusters distributed almost in all district Councils in the region.

4.4.9 Economic infrastructure

Economic infrastructure is very vital for any economic development to take place. Growth in agricultural and industrial production, trade, national defence, administration and even political integration all depend on efficient and smooth operation of communication, transport and energy resources then following are the infrastructure in Manyara

4.4.9.1 ROAD TRANSPORT

Manyara as one of the country's northern zone regions, together with Arusha in the North West, Kilimanjaro in the North and Tanga to the north east they are joined by a ring of roads. Manyara region is crucially placed to play a key role in the development of such a ring network around the Northern tourist circuit. Already an all-weather tarmac trunk road connects Manyara to Moshi via Arusha. The southern wing to Singida and soon Dodoma will be developed to tarmac standards.

Manyara is strategically connected to central mainland by a trunk road to Tanga through Arusha and Moshi also branches to Nairobi at Arusha via Namanga border. The road to Singida connects to Dodoma and Dar – es – Salaam to the South East, and also connects to Shinyanga and Mwanza to the south west. All these roads are tarmac. The internal road network is dominated by regional, district and feeder roads which mostly are gravel.

4.4.9.2 ENERGY

Electricity is the power source for industries, commercial premises, service institutions and even domestic premises. The region is connected to the National grid of electricity supplied by TANESCO. The Region has the opportunity to utilize this energy in all districts.

4.4.9.3 POST AND TELECOMMUNICATION

Tanzania Telephone Communication Limited (TTCL) is the land based telephone service provider for the region. In addition there exist e-mail services and cellular telephone services provided by a number of private and semi-private telecommunication companies such as Vodacom, Airtel, Zantel, TIGO and Halotel. However, land based telephones are still operating. POSTAL SERVICES are also provided in the region through the Tanzania Posts Corporation Limited (TPC)

4.4.10 Cultural Heritage

There is cultural inheritance, archaeological and historical sites in MANYARA Region such as cultural activities and artifacts carried out by Maasai, Hadzabe, Barbaig, and Ndorobo ethnic groups. A heritage cultural centre has been established at Hydom in Mbulu district. The centre features traditional houses, a museum with traditional arts and crafts that belong to nearby ethnic groups, namely: Iraqwi, Datoga, Hadzabe and Nyaturu/Nyisanzu. Each year, the ethnic groups conduct a cultural festival that comprises traditional dances, games, barbeque, presentations etc. in the region and contributes to the tourism sector.

4.4.11 Health Status

The vision of the health sector is to raise the health and well-being of the people, especially those who are more at risk of being affected by diseases by promoting and strengthening the system of providing health services that will meet the needs of the people.

Manyara Region has 230 health facilities including 12 Hospital, 29 Health centers and 185 dispensaries which are managed by government, religious institutions and private groups. Common disease in the region are curable diseases such as malaria, typhoid, eye diseases and amoebasis etc.

4.4.12 Education Status

Manyara region has 669 primary schools and 172 secondary schools which are operated by the government, religious institutions and private actors.

4.4.13 Sources of Energy

Energy supply is vital for the provision of power to facilitate operation of the other sectors. The level of affluence of a society depends on its dependence on supplies of energy to fuel industry, modern lifestyles and transportation. Indeed, modern development cannot continue to rely on wood and other bio-fuels, so it is necessary to use added amounts of fossil fuels and hydropower. The, main sources of energy in the district include firewood, charcoal and gas for cooking and electricity, kerosene and solar for lighting.

However, for cooking purposes, firewood is the most dominant source followed by charcoal, gas and electricity. Electricity from TANESCO grid is mainly used in urban areas and at village centers. It is of disadvantage that, the most dominant source of energy for cooking is firewood which is not environmentally friendly energy as it contributes towards deforestation of the area.

4.4.14 Sanitation and water supply

Babati Urban Water Supply & Sewage Authority – BAWASA is the water authority in MANYARA region. Babati Water Supply and Sanitation Authority (BAWASA) has two major water sources; ground and surface water. The ground water source consist of twenty three (23) boreholes while the surface water source consist of twelve (12) river and spring intakes. The combined installed water production capacity for all water sources is 29,240 cubic meters per day

4.4.15 Waste Management

Refuse disposal is the discharging or destroying of garbage, sewage, or other waste matter or its transformation into something useful or innocuous. The disposal of human excreta and household refuse are of prime importance in rendering the environment around household compounds safe from contamination.

In MANYARA region pit latrines are the most popular excreta disposal structures although flush toilets also do exist to some extent. For household waste the use of refuse bins in towns to facilitate collection by a centralized system is often supplemented by refuse pits even in urban areas. For rural areas it is the refuse pit that is popular where action is taken to collect and dispose household garbage, otherwise it is collected and disposed of by throwing it within or outside the household compound.

4.4.15.1 Liquid Waste Management

The existing sewerage services covers about small area of sewerage disposal facilities. The sewerage system mainly serves educational institutions and several commercial.

4.5 Physical- Geographical Environment

4.5.1 Climate and meteorological conditions

Manyara region receives an average rainfall between 450mm and 1,200mm per year, with two rainy seasons. The short rain begins in October and ends in December while the long rainy season starts in January with dry spell during February and ends in May. Also the region has an average temperature ranging from 13ºC to 33ºC depending on altitude and season. The region is usually cool during June through September and warm from October to April. Some areas along the rift valley experience sub temperate type climate as a result of agro-ecological zone's influence

The region is endowed with three distinct agro-ecological zones. The land use pattern in region is highly influenced by three distinct agro-ecological zones based on altitude, soils and climate. These include: Rift Valley Highlands zone is characterized by moderately high rainfall with annual rainfall that ranges between 800 mm and 1000 mm per annum and temperature ranges of 20ºC and 25ºC

Semi-Arid Midlands zone is characterized by elevated to flat areas in low altitudes that experiences moderately low rainfall with averages between 450mm and 700mm per annum of short and unreliable regimes while The Bushed Maasai Steppe The zone is the modification of classic open grassland Maasai steppe of Monduli district in which semi-arid midlands slowly merge into a bush land (the arid grassed plain mixed with bushes). The zone receives short and unpredictable amount of rainfall, ranging from 350mm to 400mm per annum.

4.5.2 Geological Conditions

4.5.2.1 Landscape

Manyara region has an area of 50,921 square kilometers that include 49,576 square kilometers of dry land and 1,260 kilometers covered with water bodies. The region is endowed with an area of 1,348,300 ha of arable land, out of which 440,197 ha are under agriculture (cultivation). Moreover, the slot of 2,814,494 ha is under forest and wildlife reserves, 2,981,800 ha covered by grasslands and rangelandswhile36, 882 ha representing potential areas for irrigation with 11,715ha being irrigated.

4.6 Biological Environment

4.6.1 Flora and Fauna

Tarangire National Park is the sixth largest national park in Tanzania located in Manyara region. The park covers an area of approximately 2,850 square kilometers (1,100 square miles.) The landscape is composed of granitic ridges, river valley, and swamps. Vegetation found in the park is a mix of *Acacia* woodland, *Commiphora-Combretum* woodland, seasonally flooded grassland, and *Baobab* trees.

The dominant fauna species found in the park are Elephants, Zebra, Wildebeest, Cape buffalo, Waterbuck, Giraffe, Dik dik, impala, Eland, Grant's gazelle, Velvet monkey, banded mongoose, olive baboon, snakes and bird species. Predators in Tarangire National Park include African lion, leopard, cheetah, caracal, honey badger, and African wild dog.

4.6.2 Air Quality within the Project Area

4.6.2.1 Ambient air quality data

The consulting team conducted the actual monitoring of air quality at the project site using an Aeroqual Outdoor Air Quality Test Kit. This is a complete outdoor air monitoring kit for the measurement of criteria air pollutants and VOCs.

Features Aeroqual's proven Series 500 portable monitor with interchangeable sensor heads, measuring particulate matter ($PM_{2.5}$, PM_{10}), four gas pollutant gas sensors (NO_2, O_3, CO, VOCs), and a combined temperature and relative humidity sensor.

Suitable for use during wide area air quality surveys, personal exposure monitoring, and as part of a short-term fixed monitoring network. The equipment and collected data are shown in **Error! Reference s ource not found.** respectively.

Figure 4-2: Ambient Air Quality Monitoring equipment used at the project

Table 4-5: Ambient Air Quality data measured from different station in the vicinity of the project site

LOCATION	**CO ppm**	**NO_2 ppm**	**O3 ppm**	**VOC ppm**	**SO_2 ppm**	**$PM_{2.5}$ ppm**	**PM_{10} ppm**
Project Site	0.00	0.036	0.00	0.00	0	0.001	0.001
Monitoring Station 1	0.00	0.016	0	0.00	0	0.012	0.010
Monitoring Station 2	0.00	0.011	0	0.00	0	0.001	0.002
Monitoring Station 3	0.00	0.011	0	0.00	0	0.000	0.001
Monitoring Station 4	0.00	0.08	0	0.07	0	0.002	0.002
Tanzania Standard [TZS 845:2005]	**20**	**0.1**	**0.0**	**10**	**0.05**	**0.05-0.08**	**0.05-0.116**

All data monitored were below standards with low detectable level so are of no significant. However, the data measured will be used for monitoring project intrusion during project implementation so as to trace how the project has affected the air quality.

4.6.2.2 Noise and Vibration

The noise and vibration survey was conducted in terms of the provisions of International Finance Corporate Guidelines of 2007 (The measurement and rating of environmental noise with respect to annoyance and to speech communication) as well as Environmental Management (Noise and Vibration Standards) Regulations of 2015.

The following instruments were used in the noise and vibration survey as they are displayed in

- Sound Level meter – Lutron SL 4033SD Class 1;
- Free field microphone – Electric Condenser Microphone; and
- Sound Calibrator (94/114dB) – SC – 942.
- Vibration meter – VB8206SD

On taking measurements, the meter was set to the “A” weighed measurement scale, which enables the

meter to respond in the same manner as the human ear. The “A” scale is applicable for workplace compliance testing, environmental measurement, and workplace design and law enforcement.

For, noise measurement the meter was held approximately 1.5 m above the ground surface and at least 0.5 m away from hard reflecting surfaces such as walls. A set of four readings were taken per point for averaging. The equipment used and data collected are shown in Table 4-6.

Figure 4-3: Noise and vibration level meters used to collect data on the project site

Table 4-6: Results on Noise and Vibration levels within the project site

Station Name	**Noise Level [dBA]**	**Vibration [mm/s]**
Project Site	44	1.7
Monitoring Station 1	43	1.2
Monitoring Station 2	35	1.6
Monitoring Station 3	32	0.5
Monitoring Station 4	37	0.8
Tanzanian Standards (TZS: [1471: 2015])	**60-70**	**5**

The noise and vibration level survey was executed during the day on the 23rd September 2022 at 1200hrs. In this survey, 06:00 to 22:00 represented the daytime period and 22:00 to 06:00 the night time.

The Noise level was measured over a representative sampling period, exceeding 30 minutes at a point for different location in the vicinity of the proposed site.

CHAPTER FIVE

5 STAKEHOLDERS IDENTIFICATION AND INVOLVEMENT

5.1 Introduction

This chapter describes the main stakeholders that have been identified and contacted to date as well as their main concerns regarding the proposed development.

ESS10: Stakeholder Engagement and Information Disclosure pinpoint the involvement of stakeholder in the project sustainability

Stakeholder engagement is an inclusive process conducted throughout the project life cycle. Where properly designed and implemented, it supports the development of strong, constructive, and responsive relationships that are important for successful management of a project's environmental and social risks. Stakeholder engagement is most effective when initiated at an early stage of the project development process, and is an integral part of early project decisions and the assessment, management, and monitoring of the project's environmental and social risks and impacts

Stakeholders are identified as "those people and institutions that have an interest in the successful design, implementation and sustainability of the project and will either be negatively, positively or not at all impacted by the proposed development". Section 89 of the (Environmental Management Act, Cap. 191 provides directives on public participation and its importance to ESIA. Furthermore, section 17 of the EIA Regulations provides details and procedures for public participation in the ESIA process.

Stakeholder participation aims to involve processes whereby all those with a stake in the outcome of a project actively participate in decisions on planning and management. Stakeholders may share information and knowledge, and contribute to the project, to enhance the success of the project and hence ultimately their own interest.

5.2 Stakeholder Engagement Process

The Constitution of United Republic of Tanzania recognizes the sovereignty of the people and that people possess the power to guide development within their areas either directly or indirectly. The public should therefore be involved in the evaluation process because the Environment Management Act (2004) demands it to be so.
The main objectives of the stakeholder engagement process are to:

- Inform the stakeholders about the proposed project and provide opportunities for influencing/amending the plans;
- Collect stakeholders' views on the proposed project including potential positive/negative impacts the stakeholders may associate with the project
- Get an idea of Stakeholders' preferred approaches to implementation of the project;
- Get local knowledge on any sensitive areas within the project area of influence (physical, environmental, cultural or proposed facilities); and
- Get expert advice on land use/ area zoning, water availability and supply, power and road infrastructure

Stakeholder consultation is initiated mainly during the scoping phase as various stakeholders are identified and then proceed throughout the EIA process. There are different levels of public participation.

Table 5-1 shows the categories of public participation according to the goals.

Table 5-1: Levels of Public Participation

LEVELS OF PUBLIC PARTICIPATION GOALS	
Inform	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.
Consult	To obtain public feedback for decision-makers on analysis, alternatives and/or decisions.
Involve	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered in decision-making processes.
Collaborate	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.
Empower	Inclusion of the public in the decision-making processes.

The team put in place a stakeholder engagement process, which helps to:

- Identify and involve all potentially affected stakeholders
- Generate a good understanding of the project amongst those that was affected
- Identify issues early in the project cycle that may pose a risk to the environment, project or its stakeholders
- Ensure that mitigation measures are appropriate (implementable, effective, and efficient)
- Establish a system for long-term communication between the project and communities that is of benefit to all parties.

The primary goal of the Stakeholder Engagement Process is to ensure **transparency and involvement** of individuals, groups and organizations affected by and/or interested in the project (to be called as stakeholders) in assessing and managing the potential environmental and social impacts of the project, and to provide relevant, timely and accessible information in an appropriate and understandable format (e.g., Project Information Document).

We discuss the different steps to be taken in the next sections. The process was reported in the stakeholder engagement plan.

The **Stakeholder Engagement Plan** is the public document, which presents plans for stakeholder engagement, consultation, and disclosure, and is to be updated for each phase of the project. Parts of the report need to be published through ESIA (public involvement and disclosure). The main purpose of this document is to:

- Define the consultation approach for stakeholders,
- set up a process to address public views and/or concerns,
- Identify resources and responsibilities for implementation and monitoring of the consultation program, and
- Set up a grievance mechanism for local stakeholders.

It consists of the following information:

- Introduction (project information, project program, summary of potential environmental and social impacts);
- National and international requirements;
- Consultation undertaken to date;
- Stakeholders.
- Disclosure of information and public consultation.
- Grievance management;
- Resources and responsibilities;
- Reporting; and
- Annexes: comment/complaint form; complaint action form

The purpose of the **SEP** is to engage with organisations and people who may be affected by the project(s) or who may be interested in the Project, as mentioned above. Each stakeholder will need a

different level of engagement. Throughout the process, we will make clear the level for the respective stakeholder and take the necessary steps.

5.3 Stakeholder

Stakeholders are individuals or groups who are affected or likely to be affected by the project (project affected parties PAP) and who may have an interest in the project and/or the ability to influence its outcome, either positively or negatively (other interested parties OIPs).

The identification of stakeholders under project will be based on (a) their roles and responsibilities; (b) possible influence/interest on the project; and (c) their circumstances they may be disadvantaged or vulnerable in different ways from each other. Stakeholders' analysis involves identifying the stakeholder groups that are likely to affect or be affected by proposed project components and sorting them according to the potential impact the activities will have on them. The preliminary stakeholder analysis has identified the various interests of stakeholder groups and the influence these groups may have on the project. The analysis also shaped the design of stakeholder consultation events and how to engage them. Stakeholders' interest is determined based on the extent to which they may be involved in implementing elements of the project, likelihood in being impacted (positively or negatively) or in which they may benefit from components

5.4 Stakeholder Identification and Consultation

Tansheq team started with stakeholder consultations in September 2022. The below bullets capture the process undertaken to date:

- Introductory meeting with RC (Region Commissioner) RAS, (Region Administrative Secretary) Region Education Officer, (REO), REMO,(Region Environment Management Officer)
- District Executive Director (DED) in Babati Town, DEO, DEMO
- Initial meeting with village government, Ward officials including WEO at MaisakA village, Maisaka ward
- Meeting with communities around the proposed project area.

Each representative had an opportunity to state their understanding of what is proposed, and they fully support the project and said that they welcomed the team to undertake the requisite study.

5.4.1 Institutional Stakeholders

Institutional stakeholders were identified based on their involvement in decisions that might affect the proposed development or the stakeholder.
The Institutional stakeholders include:

- Ministry of Home Affairs (Tanzania Fire and Rescue Force- MANYARA Office)
- Ministry of Labour and Employment (Occupational Safety and Health Authority, OSHA- Manyara Office)
- Government Chemist Laboratory Authority (GCLA- MANYARA Office)
- Regional Government Regional Commissioner (RC- MANYARA) RAS, (Region administrative Secretary) and District Commissioner (DC-Babati Town); and
- Local Government (Maisaka Ward/ Maisaka Villages).

5.5 Main Concerns and Comments of Stakeholders

The comprehensive list of all stakeholders consulted and concerns and comments from the consultation process raised by stakeholder to date are in

Table 5-2.

Table 5-2: Stakeholder Consultation Views

Name of Stakeholders	Place	Dates	Comments, views and concerns from the stakeholders
Halfani O. Masukira (REO)	Manyara Regional Office	29/09/2022	• On behalf of the Manyara officials, they only wait for the project to start. • The project is very good, and she is calling the project team in Municipal to please ensure everything goes smoothly and the school starts on time • A social worker should make sure there are no grievances during construction and the area and around the school.
Machota Kora (RAO)	Manyara Regional Office	29/09/2022	• They need the project and the eagerly wait for it.
Dominic Mbwette (A.G. RAS)	Manyara Regional Office	29/09/2022	• Waiting for the construction to start and they will make sure it will be completed within time and budget.
Qwendo Muna (Farmer)	Kiongozi villager	28/09/2022	• They like the project and they are willing to provide their farm to the region for the construction for the region school.
Fante Horray (Farmer)	Kiongozi villager	28/09/2022	• They like the project and they are willing to provide their farm to the region for the construction for the region school.
Aloyce Dawite (Farmer)	Kiongozi villager	28/09/2022	• They like the project and they are willing to provide their farm to the region for the construction for the region school.
Heke Horay (Farmer)	Kiongozi villager	28/09/2022	• They like the project and they are willing to provide their farm to the region for the construction for the region school.
Chini Muna (Farmer)	Kiongozi villager	28/09/2022	• They like the project and they are willing to provide their farm to the region for the construction for the region school.
Barani Muna(Farmer)	Kiongozi villager	28/09/2022	• They like the project and they are willing to provide their farm to the region for the construction for the region school.
Thomas L. Duwe (Chairperson)	Kiongozi villager	28/09/2022	• They like the project and they are willing to provide their farm to the region for the construction for the region school.
Nicodemus J. Shalua (Chairperson)	Kiongozi villager	28/09/2022	• They like the project and they are willing to provide their farm to the region for the construction for the region school.
Muna Qwendo Yahhi	Kiongozi villager	28/09/2022	• They like the project and they are willing to provide their farm to the region for the construction for the region school.
Jumanne Horay Tlagwe (Farmer)	Kiongozi villager	28/09/2022	• They like the project and they are willing to provide their farm to the region for the construction for the region school.
Matambo Muna Qwendo (Farmer)	Kiongozi villager	28/09/2022	• They like the project and they are willing to provide their farm to the region for the construction for the region school.
Sallah Muna Qwendo (Farmer)	Kiongozi villager	28/09/2022	• They like the project and they are willing to provide their farm to the region for the construction for the region school.
Samsoni Hilonga Sulle (Farmer)	Kiongozi villager	28/09/2022	• They like the project and they are willing to provide their farm to the region for the construction for the region school.

Name of Stakeholders	Place	Dates	Comments, views and concerns from the stakeholders
Anna E Fisso (AG TD)	Babati Town Council	27/09/2022	• The project is good and it will enhance education growth and development among the cattle breeding • community, and will motivate young girls to attend school
Pascalina H. Lowekolo (TSEO)	Babati Town Council	27/09/2022	• Very good project for the education in Tanzania and Manyara Region.
Timothy V. Maendaenda (SLO SEC)	Babati Town Council	27/09/2022	• Very good project for the education in Tanzania and Manyara Region.
Fausta W. Akaro (TAEO –Town Adulthood Education Officer)	Babati Town Council	27/09/2022	• Very good project for the education in Tanzania and Manyara Region.
Mathias Mkumbo (TUPO –Town Urban Planning Officer)	Babati Town Council	27/09/2022	• Very good project for the education in Tanzania and Manyara Region.
Nuwagi Karengi (Economist)	Babati Town Council	27/09/2022	• Very good project for the education in Tanzania and Manyara Region.
Modestus Ponsian (Ag:TE)	Babati Town Council	27/09/2022	• Very good project for the education in Tanzania and Manyara Region.
Christina U. Kangele (SWO)	Babati Town Council	27/09/2022	• Very good project for the education in Tanzania and Manyara Region.
Osward Macha (Technician)	Babati Town Council	27/09/2022	• Very good project for the education in Tanzania and Manyara Region.


Table 5-3: Consultation and site visit in Maisaka village

5.6 Way Forward

Issues raised by stakeholders shall be assessed on their genuineness and included in environmental and social impacts assessment. During the Environmental and Social Impact Assessment process, all stakeholders including public and community participated accordingly. All issues raised during consultation will be detailed responded in the stakeholder engagement plan.

From the consultations, it can be concluded that people are positive about the project as it will generate more employment, enhance business opportunities, education development and social development. Stakeholder Engagement Plan shall be prepared and implemented through all phases of the project

CHAPTER SIX

6 ASSESSMENT OF IMPACTS AND IDENTIFICATION OF ALTERNATIVES

6.1 Introduction

This section includes expected environmental and social impact assessment during the entire lifecycle of the school construction project. Methods used for impact assessment, as well as quantitative and qualitative criteria were developed to unify and standardize the assessment system, which ensures the objectivity of the assessment. Impact assessment methodology preparation was based on the recommendations of the World Bank and other International Financial Institutions (EBRD, IFC, and ADB). The following scheme will be used for environmental and social impact assessment of the planned activities:

Step I: Determination of basic impact types
Determination of the impact is based on general analysis of activities, which may be important for these types of projects. This is incorporated in Chapter 2 in Page.

Step II: Study of the environmental baseline – search and analysis of the existing information
Analysis of the socioeconomic and environmental status quo of the project affected. This shall also involve identification of the receptors, which are expected to be affected by the planned activities, determination of sensitivity of the receptors

Step III: Characterization and assessment of the impact
Impact character, probability, significance other characteristic determination by considering the sensitive receptors, description of the expected changes in the environment and assessment of their significance. This is covered in this Chapter.

Step IV: Determination of the mitigation measures
Significant impact mitigation, prevention, or compensating measure determination. This is detailed in subsequent Chapter 7.

Step V: Residual impact assessment
Determination of the expected value of change in the environment after implementation of the mitigation measures

Step VI: Monitoring and management strategy development
Monitoring the effectiveness of the mitigation measures is needed to ensure, that the impact must not exceed the predetermined values, effectiveness of the mitigation measures must be confirmed, or the necessity of the corrective measures must be identified.

Table 6-1 : Sources, Receptors and Magnitude of Environmental Impact all Planned Phases

Phase / Receptor	Construction	Operation	Maintenance	Decommissioning
Air				
Soil				
Water				
Flora				
Fauna				
Protected area				
Landscape & visual impact				
Land ownership				
Infrastructure				
Traffic flow				
Cultural heritage				
Socioeconomic				

Key

Negative	Positive

Table 6-1 gives information about sources, receptors and magnitude of environmental impact for construction and operation phase of the proposed school structures.

6.2 Impact Receptors and their Sensitivity

Implementation of the works may cause such qualitative and quantitative characteristic changes of socioeconomic, physical and biological resources in the impact area, such as:

- Socioeconomic baseline
- Air quality and acoustic background of the environment.
- Soil stability and quality.
- Capacity and quality of surface and groundwater.
- Visual changes of the landscapes.
- Flora and fauna baseline.

The population, which may be impacted by the planned activity, includes people living, working, or involved in other activities (e.g., vocation, travel) nearby the designed facility. Facility staff is considered as a potential sensitive receptor.

Receptor sensitivity is related to the impact volume and ability of the receptor to counteract the change or restore after the change, as well as with its relative ecological, social, or economic value.

6.2.1 Impact Characterization

To estimate environmental impact major impact factors are identified for mobilization, commissioning, decommissioning, and demobilization phases. Anticipated impact is assessed according to the following classification:

- **Character** – positive or negative, direct, or indirect.
- **Magnitude** - insignificant, low, medium, high or very high.
- **Likelihood** – low, medium, or high risk.
- **Impact area** – working site, project area or region.
- **Duration** – short, mid, or long-term.
- **Reversibility** – reversible or irreversible.

That is, for both project phases and for each potential impact has been determined anticipated alteration of environment and its character, area and duration of impact, reversibility, and likelihood of occurrence; based on this information has been defined significance.

Some impact types were estimated quantitatively. Assessment of impact on environmental elements is based on relevant environmental quality standards, whenever appropriate. If qualitative assessment was impossible impact was estimated based on its characteristics and elaborated criteria

Environmental impacts assessed in this Chapter are those changes to the environment, whether adverse or beneficial, wholly or partially resulting from activities of the proposed undertaking. Likely sources for both negative and positive impacts are presented. The process and criteria for determination of significance of impacts was conducted using the Leopold Matrix.

The assessment of impacts was done using the Leopold Matrix, its plan presented in Figure 6-1. The Leopold matrix proposes a three-step process to estimate the impact:

- **First step**:
  For all the interactions considered significant by the authors, the first step is to mark the corresponding boxes in the matrix with a diagonal line.

- **Second step** :

Once the boxes with supposed significant interactions are slashed, the author evaluates each box by applying a number from 1 to 10 (1 is the minimum and 10 the maximum) to register the magnitude of the interaction. This number is transferred to the upper left hand corner. It represents the scale of the action and its theoretical extent.

- **Third step** :
  The final step for this method is to mark (from 1 to 5), in the lower right hand corner, the real importance of the phenomenon for the given project. It then gives an evaluation of the extent of the environmental impact according to the assessor's judgment.

Figure 6-1: Leopold Assessment Plan (Leopold Structure, 2013)

Table 6-2: Significance Rating Guidelines

				Rating +/-	Social	Environmental	Health & Safety	Policies Legal& Treaties
Severity	Extent	Limited to site	Limited to view	1				
		Localized impact	Municipality/area	3				
		Regional Impact	Region	5				
		National impact	Tanzania	7				
		International Impact	Neighboring Nations to Worldwide	9				
	Intensity	Low – effect	Slight	1				
		Medium – modified	Not permanent	3				
		High - altered	Altered permanently	5				
Probability	Improbable – Historical		Never occurred	1				
	Probable – possible		Could occur	3				
	Highly probable		Will occur	5				
Mitigation	Low		Some measures	-1				
	Medium		Can improve with measures	-3				
	High		All possible measures	-5				
	Measures include training, technology and procedures							

The significance of impact shall be evaluated by adding up all of the above score:

- Positive impact -2 and less
- Low significance 2 to -2
- Medium significance 3 to 8
- High significance 9 to 21+

Legal aspect has to be added to the applicable environmental/social/health and safety aspect

- Positive Impact = Negative Value
- Negative Impact = Positive Value

Impacts in different phases of the project i.e., site selection, mobilization and construction; operation and decommissioning are detailed in sections below. Mitigation measures shall be developed for negative impacts with high and moderate significance. Mitigation measures for impacts with low significance may be developed if they are within economic constraints.

6.3 Mobilization and construction phase

6.3.1 Air Pollution from Mobilizing Vehicles

Construction materials such as cement, steel, wood, sand, stones, and aggregates etc. will be brought from different sources. The trucks and earth moving equipment will emit dust, noise and exhaust fumes which are unwanted atmospheric pollutants.

Atmospheric pollutants from engines of vehicles include (SO_2, NO_x, CO_2 and articulate matters) and. Emission factors of vehicles for the above gaseous emissions are estimated to be:

CO_2 (grams)	NO_2 (grams)	SO_2 (grams)	PM (grams)
9,175,269.6	165,427.9	2,853,975.6	3,704

Mobilization of construction material, equipment and machinery will be a one – off event. Emissions from trucks will not give rise to significant reduction in the air quality except in the immediate vicinity of the road in circumstances where the wind is still. Vehicle emissions will therefore make negligible contribution to local and global air quality issues.

The extent of this impact is localized with a low intensity. It is likely that the impact may occur. The impact can be highly be improved/eliminated with mitigation.

Therefore, the impact is negative and of Low Significance.

6.3.2 Generation of solid waste

Construction process of Regional school buildings will generate different type of wastes that include food waste, plastic bags and residual for construction materials such as broken blocks. This is estimated to 856kg per week which were estimated by using standard generation rate 1.1kg/capita/day which depends on number of people at the site and activities taking place.

The impact is negative, but will be mitigated by proper handling of waste as per Babati Town Dc District Council by laws.

6.3.3 Generation of wastewater

The amount of wastewater to be generated depends on the facilities to be used as well as number of people this gives the amount of water expected to be used per day (4860L/day). 80% of water consumed will be come out as wastewater this estimated to be 3890L/day.

6.3.4 Health hazards associated with construction work

During construction the project is expected to employ a significant number of skilled, semiskilled and unskilled laborers mainly from Babati Town Dc Municipality and in Ulembwe Ward. Construction work may contribute to the sustenance of other petty business such as food vendors etc. However, if food vendors are not done in hygienic condition, the service may turn out to be a health hazards to those that will be using them. There will also be generation of solid as well as liquid waste. These, if not disposed of safely they may result in health hazards and degrade environmental aesthetics.

Also, health hazards and safety to construction workers may result from the dust that will be generated during excavation and noise and vibration that is expected from earth-moving equipment and other construction machinery such as concrete mixer, trolley etc. Injuries also may occur due to lack of protection gears.

The extent of this impact is localized; however its intensity is high. It is likely that the impact will occur. The impact can be highly improved/eliminated with mitigation.

Therefore, based on the criteria above, the impact is negative and of Medium Significance.

6.3.5 Noise and Vibration from construction activities

Noise and vibrations are expected from earth-moving equipment such as trucks and other construction machinery. This may disturb local setup especially the habitat Fauna of the site location and surroundings. However, the construction of the building will use small number of machines and the majority of construction works will be done manually.

The extent of this impact is localized with a low intensity. It is likely that the impact may occur. The impact can be highly improved/eliminated with mitigation.

Therefore, the impact is negative and of Low Significance.

6.3.6 Change in Scenic Quality

Debris will be generated during site clearing and construction of the Building. Also substantial amount are expected during maintenance and repair and during demolition of structures when winding up the project. If not properly disposed, heaps of spoil material can remain a long – term aesthetic impact affecting the scenic quality of the area.

This will disturb additional natural areas and the sitting of these stockpiles will be critical to prevent their disturbance by vehicles or other site activities. The decommissioning and closure phase will include the demolition of infrastructure and rehabilitation of all disturbed areas. The remaining stockpiled soils, not used in progressive rehabilitation, will be spread over disturbed areas, ripped and vegetated further impacting negatively on scenic value of the site.

Furthermore, the presence of several trucks and vehicles at the site compounded by the solid waste collector in weekly basis at the building will negatively affect the in-view shed of the site as one approaches it from outside. In addition the dust and noise produced by vehicle will also have significant visual impact to the area. The erected structures to the site will alter the appearance of the area on a permanent basis until closure of the Building.

The extent of this impact is localized with a medium intensity. It is likely that the impact may occur. The impact can be highly improved/eliminated with mitigation.

Therefore, the impact is negative and of Low Significance

6.4 Operation phase

Most of the environmental problems associated with this project activities and actions should under normal circumstances be addressed in the design stage of the project. Environmental and social impacts, which could arise during operations, may be due to inadequacies in the institutional, operational, maintenance, management and monitoring aspects of the project systems e.g. availability of resources such as water supply, energy etc.; management of solid waste, wastewater and storm water drainage etc., inadequacies in maintaining high standards of hygiene, safety and security; and maintenance of good neighborliness' and relations with different stakeholders.

6.4.1 Negative Impacts due to the proposed project Operation activities

6.4.1.1 Oil spills from cars and during refilling and maintenance of the generator

During operation of the constructed Regional School Buildings will be using a generator in case of electricity interruption and also have a car parks which will be used for parking cars (capacity of carrying more than 20 cars) leakages for parked car can occur and also Generator will maintained after every three months by the qualified technician.

Spillage of oils may happen during such oil diesel exchanging in the generator as part of maintenance. Also spillage may occur during refilling of the generator.

This impact is considered negative, long term and of high significance

6.4.1.2 Noise Pollution

The location of the proposed project was titled for educational buildings purposes only. However, the area will expect to have some raised noise level compared to the normal existed due to the presence of students and for the surrounding community there will be movement of people that will increase noise level.

This impact is however significant negated in a way due to the presence of sensitive receptors in the area, such as institution i.e. nearby school and other surrounding building. It is therefore estimated that the noise levels will increase significantly though will not have any impact to the surrounding community

Also Potentially noisy items of equipment such as the generator should be located in separate unmanned areas. There may be some noise and vibration from moving cars however they are expected to be below the OHS Act noise zone limit (i.e. <85 dBA).

Although noise and vibration levels are not expected to the significant, it is part of any occupation health assessment on a new installation to assess and possibly test noise levels once equipment is up and running.

The extent of this impact is localized with medium intensity. It is likely that the impact may occur. The impact can be highly improved/eliminated with mitigation.

Therefore, the impact is negative and of Low significance.

6.4.1.3 Change in habitat and species diversity

The likelihood of losing vegetation and habitat for the existing vegetation cannot be neglected. The building will be constructed on the Greenfield area. Though clearance to be done during the construction will cause permanent loss of vegetation (Native grasses and trees). Clearing the site result to loss of some plant species and changes to some wildlife habitat (lizards and rats).

The extent of this impact is localized; however its intensity is low. It is likely that the impact will occur. The impact can be highly improved/eliminated with mitigation.

Therefore, based on the criteria above, the impact is negative and of Low significance.

6.4.1.4 Change in surface and ground water quantity

Water supply during construction and operation phases of the proposed project will be pumped from RUWASA. Approximately about 5000 litters of water shall be needed per day for full capacity in order to meet the demand of the building during operation.

Reduced discharge of surface sources particularly in area which are very close to the building is expected to be severe prolonged drought years with far reaching impacts on ecological functioning and processes. The impact will be direct and long term.

The extent of this impact is localized; however its intensity is low. It is likely that the impact will occur. The impact can be highly improved/eliminated with mitigation.

Therefore, based on the criteria above, the impact is negative and of Low significance.

6.4.1.5 Pollution of Land and Water resources

Oil spoilage, chemicals and detergents will be used and stored within the storage room and building premises. Pollution also could be created by poor planning, management and designing of waste water and sewage disposal system during the construction and operation phases.

Experience has shown that excessive rainfall can result into the overflow of sewerage system that causes devastative environmental impacts on the land and surface water. The following mitigation measures are recommended to be considered by the Proponent and the contractor:

The extent of this impact is localized; however its intensity is low. It is likely that the impact will occur. The impact can be highly improved/eliminated with mitigation.

Therefore, based on the criteria above, the impact is negative and of Low significance.

6.4.1.6 Solid Waste

The operation of the building will generate solid waste from food remains, glass, bottles, plastics, papers, and tins which approximated to be 856 per week. Such waste must be handled properly as it contradicts within existing regulations that advocates on best practices on environmental management.

All type of solid waste generated will be collected by District Council to the dump site. The transferred solid waste could cause significant negative impact on the environment and the health of the people. The following mitigation measures are proposed to address this problem:

The extent of this impact is localized; however its intensity is low. It is likely that the impact will occur. The impact can be highly improved/eliminated with mitigation.

Therefore, based on the criteria above, the impact is negative and of Medium significance.

6.4.1.7 Generation of wastewater

The amount of wastewater to be generated depends on the facilities to be used as well as number of people this gives the amount of water expected to be used per day (60,000L/day). 80% of water consumed will be come out as wastewater this estimated to be 48,000L/day.

6.4.1.8 Change in quality of life and life style

The employed teachers at the Regional School shall be receiving wages that will enable them change their living standard and life style. This is expected to have multiplier effect to the families that the workers belong as they will be able to meet school fees for their dependents, as well as purchasing assets for home use such as TVs, Music Systems, Satellite Dishes as well as other domestic appliances. These benefits can be ensured through implementation of the following enhancement measures:

- Encourage workers to initiate SACCOS while creating awareness to the workers on other available serving schemes within their vicinity.
- Provide on job training to workers while emphasizing on effective financial management mechanisms.
- Provide education and awareness to workers on initiating income generating activities.

6.4.1.9 Spreading of HIV/AIDS and other STIs

The Operation of the Regional School in the area may add a business activity in the area and may attract more people in the neighborhood thus facilitating interaction of people of different sex relationships and eventually spreading of HIV and other Sexually Transmitted Infections. However, the students will be within the school compound only.

This is considered negative, long term and of low significance

6.4.1.10 Risk of fire

The possibility of an explosion is also there since the building uses electricity and standby generators in case of electricity interruption. There will be specific designed location for fire extinguishers and Hose Reels.

The extent of this impact is localized with high intensity. It is likely that the impact may occur. The impact can be highly improved/eliminated with mitigation.

Therefore, the impact is negative and of high significance.

6.4.2 Positive impacts of the project

6.4.2.1 Creation of Employment Opportunities

The proposed Regional Buildings are expected to provide temporary employments of more than 50 Tanzanians during Construction phase while about 60 people (Teachers) are expected to be employed during operation phase on permanent basis, with its counter multiplier manifested to opportunities for local economy to benefit from the sale of goods and services for the Building Development.

Most of the workers are expected to be recruited from Tanzania and their earnings in-term of wages shall have significant positive impact as this income will go back to the communities to support larger and bigger population. In order to ensure benefits are sustained, the following enhancement measures are recommended for the proposed development:

- Capacity building to workers for on job and out job trainings so as to acquire skills to be used during their employment period.
- Recruitment of employees should mainly be restricted to local communities unless the required skill is not available.
- There should be gender consideration on all employments however; equal opportunities for both genders should be encouraged.
- Government to strengthen the enforcement of labour laws and Circulars that compel investors to employ local staff with relevant qualifications.

6.5 Decommissioning Phase

Decommissioning of the entire building is expected as the area is titled, so can be changed from the current use by demolishing the developed building; then decommissioning of the facility shall be done. Then the project shall ensure minimal impact to the environment and the social setup as per prevailing laws and regulations.

6.5.1 Abandoned infrastructure

It is not envisaged that there will become a time when the site will be abandoned. Since construction is done by using materials which are easy to assemble and all roofing materials are iron sheets which can be sold.

The extent of this impact is localized with a low intensity. It is likely that the impact may occur. The impact can be highly improved/eliminated with mitigation.

Therefore, the impact is negative and of Medium significance.

6.5.2 Dust and noise pollution from demolition works

In the event of future rehabilitations and upgrading, the structure may need to be demolished. These activities will produce substantial amount of dust and noise and necessitating disposal of demolition waste.

The extent of this impact is localized with a medium intensity. It is likely that the impact may occur. The impact can be highly improved/eliminated with mitigation.

Therefore, the impact is negative and of Medium significance.

6.5.3 Electronic waste

During this phase of the project electronic waste are expected in large quantity compared to all phases of the project, all useless computer related equipment and electronic kitchen related waste and Air conditioners found during demolition of the building.

However health problems have been reported in the last few years, including diseases and problems related to the skin, stomach, respiratory tract and other organs. Workers suffer high incidences of birth defects, infant mortality, tuberculosis, blood diseases, anomalies in the immune system, malfunctioning of the kidneys and respiratory system, lung cancer, underdevelopment of the brain in children and damage to the nervous and blood systems due to mismanagement of e-waste.

The extent of this impact is localized; however its intensity is low. It is likely that the impact will occur. The impact can be highly improved/eliminated with mitigation.

Therefore, based on the criteria above, the impact is negative and of Low significance.

6.6 Enhancement of Positive Impacts

6.6.1 Employment Opportunities during Construction

To enhance this impact, Project Implementing Team (PIT) should ensure that majority of construction works will be done manually as a strategy to provide employment to the local community. Employment opportunities during construction work will increase the income, skills and knowledge to local labour force.

6.6.2 Benefit to Local Producers and Suppliers of Construction Materials

Another enhancement measure is to ensure that materials are available locally are not imported Supply of materials from local sources is a positive aspect of the project, as it will reduce the cost of the project and benefit local producer and suppliers.

Also the Contractor and crew will depend on other local supplies and services (food, accommodation, medicals) and employment of casual and semi-skilled labour

6.6.3 Improved Aesthetic of Project Site

According to the design it is proposed that all areas, which are not occupied by buildings and other project facilities, will be landscaped by Planting trees, grass and ornamental Plants. This will preserve the aesthetic integrity of the area.

6.7 Residual Impact

The impacts that remain once mitigation has been put in place will be described as residual impacts adversely affects one or more environmental and social receptors. The identified residual negative impacts were subjected to a critical assessment and review and ensure that they meet the residual impacts acceptability threshold.

The assessment of impacts was conducted in the identified categories these categories were subjected to all stages of project development from mobilisation, construction, operation, and decommissioning (where applicable).

The identified residual impacts are presented with respect to the specific development stage as derived from the interaction matrices. Table below presents the identified residual impacts.

Table 6-3 Identified Residual Impacts

N	Stage	Nature	
		Positive	**Negative**
1	Mobilization		• Biodiversity loss • Habitat loss and/or alteration • Habitat fragmentation
2	Construction		• Change in landscape and aesthetics
3	Operation	• Employment creation • Provision of education • Minimization of vulnerability to girls	
4	Decommissioning		• Loss of employment

6.8 Cumulative Impact(s)

Cumulative residual environmental effects are defined as the sum of residual environmental and social effects from all past, current, and reasonably foreseeable projects and/or activities on the physical, biological, and socio-economic components of the environment. These include not only residua risks and impacts associated with this project but also arising from other projects implemented or planned to be implemented in the Project Area of Influence.

The Project will implement mitigation measures to limit incremental environmental effects that might occur however, as noted above, implementation of mitigation measures is expected to result in minor changes to the biophysical and socio-economic environments from the Project relative to baseline conditions.

Therefore, the Project implementation arrangement should consider collaboration with other projects in the area to reduce the effect of the residual impacts in ways that are possible and feasible. Focusing on the development of a site-specific mitigation measures that will result to further reduce the potential cumulative residual risks and impacts.

SEQUIP project is implemented under series of works and in phases therefore cumulative impacts will occur, these cumulative impacts include:

- Loss and creation of job opportunity
- Creating expectation in the community
- Generating tax revenue
- Increase of pressure on the provision of public services
- Changes in land value and increase in the collection of property taxes
- Changes in noise level,
- Changes in air quality

6.9 Ergonomics impacts

Ergonomics is the way you use your body to work and fitting the job or task to you to reduce your risk of injury. These musculoskeletal injuries develop slowly over time and occur in the soft tissues of your body like the nerves, tendons, muscles, ligaments, and joints.

Generally, the greater the exposure to a single risk factor or combination of risk factors, the greater the probability of an ergonomic injury or illness, also called Work-Related Musculoskeletal Disorders (WMSD). The big three ergonomic risk factors are:

- Force (how much you lift/push/pull),
- Repetition (how often you perform the task), and
- Posture (body position).

Other potential ergonomic risk factors include vibration, contact stress, sustained exertions, and cold temperatures Examples of these injuries are low back strain, carpal tunnel syndrome, and tendonitis. These injuries are called musculoskeletal disorders or MSDs.
This impact is likely to occur to all phases of the project cycle, mobilization, implementation and decommissioning phases

6.10 Activity Risk Assessment.

Risk Assessments are elaborated for all tasks performed at the work fronts, detailing the steps and frequency of the task, the known hazards and the appropriate precautionary measures, procedures/work releases, controls, environmental and industrial hygiene methods, collective and personal protective equipment to minimize or eliminate hazards.

The purpose of the Risk Assessment is to make it a routine to verify the safety items before the start of any activities, assisting with the detection and prevention of risks of accidents and with task planning. Table 6.17 show the risk assessment criteria.

Table 6-4: Risk Assessment

N	Impact &Aspect Description Mobilization/Construction phase	Nature	Magnitude	Extension	Duration	Significance of Impact	Probability of Occurrence	Risk
1	Loss of biodiversity due to bush clearing	Direct	High	DIA	Long-term	Major	Definite	Significant Risk
2	Air pollution due the emission of exhaust gases and dust from vehicles	Direct	Very low	IIA	Long-term	Moderate	Probable	Low Risk
4	Soil pollution due to bush clearance	Direct	Very low	RIIA	Short-term	Minor	Probable	Low Risk
5	Climate change due to vehicle movement, bush clearance	Indirect	Very low	NIA	Long-term	Minor	Probable	Low Risk
6	Waste generation (solid and liquid waste) from construction materials, bush clearance and sanitary facilities	Direct	High	DIA	Short-term	Major	Definite	Significant Risk
7	Employment Opportunities (activities will require man power)	Direct	High	NIA	Short-term	Major	Definite	Negligible Risk
8	Conflict due to landownership	Indirect	Very low	DIA	Short-term	Minor	Probable	Low Risk
9	Safety of the workers due to heavy duties	Direct	Medium	DIA	Long-term	Major	Probable	Significant Risk
10	Public health and hazard (due to emission of dust and performance of heavy duties	Direct	Medium	NIA	Long-term	Major	Probable	Significant Risk
11	Noise and vibration pollution due to the transportation of material and equipment use	Direct	Low	DIA	Short-term	Minor	Probable	Low Risk
	Construction Phase							
1	Loss of biodiversity due to site clearing	Direct	Medium	IIA	Long-term	Major	Definite	Significant Risk
2	Air pollution due the emission of exhaust gases and dust from vehicles and earth work	Direct	High	DIA	Short-term	Major	Probable	Low Risk
3	Noise and vibration from vehicle movement, equipment and material use	Direct	Low	DIA	Short-term	Minor	Probable	Low Risk
4	Safety of the workers due to heavy duties	Direct	High	DIA	Long-term	Major	Definite	Significant Risk
5	Public health and hazard (due to emission of dust and performance of heavy duties	Direct	Medium	IIA	Short-term	Moderate	Probable	Low Risk

N	Impact &Aspect Description	Nature	Magnitude	Extension	Duration	Significance of Impact	Probability of Occurrence	Risk
6	Employment Opportunities (activities will require man power)	Direct	High	NIA	Long-term	Major	Definite	Negligible Risk
7	Waste generation (solid and liquid waste) from construction materials, site clearance and sanitary facilities	Direct	High	DIA	Short-term	Major	Definite	Significant Risk
8	Unemployment due to decommissioning of construction activities	Indirect	Medium	NIA	Short-term	Moderate	Definite	Low Risk
	Operation Phase							
1	Employment Opportunities	Direct	High	NIA	Long-term	Major	Definite	Negligible Risk
2	Waste generation from sanitary facilities ,classrooms, offices, Dormitories and dining	Direct	High	IIA	Long-term	Major	Definite	Significant Risk
3	Health and safety (due to fire outbreak and housekeeping)	Direct	Medium	DIA	Long-term	Moderate	Probable	Significant Risk
5	Benefit to the government (economic and man power)	Indirect	High	NIA	Long-term	Major	Very low	Negligible Risk
	Decommissioning Phase							
1	Abandoned infrastructure due to decommissioning of construction activities	Indirect	Medium	DIA	Medium-term	Minor	Probable	Low Risk
2	Unemployment due to decommissioning of construction activities	Direct	High	NIA	Short-term	Minor	Definite	Negligible Risk
3	Solid waste due to dismasting of buildings	Direct	Low	DIA	Long-term	Minor	Very low	Low Risk

CHAPTER SEVEN

7. IDENTIFICATION OF ALTERNATIVES

7.1 Introduction

The EMA EIA regulations of 2005 requires that alternatives be identified during the scoping process. An important function of the Scoping Phase is to screen alternatives to derive a list of feasible alternatives that need to be assessed in further detail in the ESIA Phase.

The environmental impact statement shall contain an assessment of impacts of the identified alternatives. According to the EMA EIA regulations, analysis of alternatives includes project site, design and technologies and reasons for preferring the proposed site, design, and technologies. An alternative can be defined as a possible course of action, in place of another, that would meet the same purpose and need.

7.2 Project Site Alternative

The selection criteria for the location depends on the availability/ease access and ownership of the proposed land parcel for Manyara region. In that regards various economic considerations which include the feasibility of the project in terms of financial and technical perspectives have been considered to select the project location.

Furthermore, the location shall not require demolition of property (houses and other infrastructure) to pave way for the construction and accessibility of the project site. In that regards, alternative location shall not be further considered in the EIS. Alternatives analysis in this project considered the following:

a) No-Go alternative,
b) Design and technological considerations
c) Location

7.2.1 No-Go alternative

The assessment of alternatives must always include the “no-go” option as a baseline against which all other alternatives must be measured. The option of not implementing the activity must always be assessed and to the same level of detail as the other feasible and reasonable alternatives.

The no-go will see the status quo activities persist without the construction on the proposed site. The “no-go” option is taken to be the existing rights on the property, and this includes all the duty of care and other legal responsibilities that apply to the owner of the property.

7.2.2 Design and technological considerations

The schools design will consider several aspects which were previously not part of the school design system. The current design which will be implemented will utilize the standardized updated design from the MoE which will be customized when implemented.

The designs prepared so far are prototypes to be utilized in specific site in this case the school to be constructed in Upendo Street-Bombambili ward. The utilization of prototype will involve the fit in exercise to include all experts in the respective district.

7.2.3 Energy Alternative

The proposed project will use electricity from national grid supplied by TANESCO and generator (diesel) in case of electricity interruption as the sources of energy for lighting, warming/heating and running the office

accessories. Since these sources are very reliable and all machines/equipment/accessories use the kind of these energy only. The school is advised to implement use of solar energy as a backup source of energy for lighting during electricity cut-off and disturbances by installing solar panels.

The proposed project will cook by using firewood and charcoal due to availability and cost of them. However, natural gas is advised for environmental friendly reasons, though it will be used for cooking in teachers' houses.

7.2.4 Water and waste Management Alternative

The proposed project has two alternatives to source water apart from drawing water from GEUWASA. The project will abstract water from the borehole located at Waja Schools but apart from that the project is advised to install rain water harvest materials during operation phase so as to prevent water costs and ensure conservation of water for water scarcity periods.

7.2.5 Location

The selection of project location was conducted prior to conducting ESIA this has been identified as a limitation in this study however the same was conducted utilizing a checklist developed by the clients safeguard team in the same line for projects which were not developed. The consulting team had a chance of raising issues for alternation of the selected site. The site selection was conducted while considering the following:

- Location of the site
- School character such as **Estimated number of students, Estimated number of classrooms Estimated number of teachers needed, Will the school have**
- Environmental character such as water, vegetation, terrain fauna
- Social character Land Tenure, Land Use, Who are the neighbors of this plot of land, Vulnerable Groups
- Type of community Urban
- Geographical location
- Demand of water per total estimated number of students: (l/s/day)
- Materials Use and Need
- The site is located within a protected area, designated by government (national park, natural reserve, world heritage site etc.)?

In conclusion, both options are of uttermost importance for the aim of minimizing the social and environmental impacts that could arise but for this project the option of location, design and technological consideration were among the factors to be put into action before project implementation and were both analyzed by Babati Town Council before proposing the project area to PO-RALG.

CHAPTER EIGHT

8. ENVIRONMENTAL MITIGATION MEASURES

8.1 Introduction

This chapter provides a summary of mitigation measures of those impacts which are considered of moderate to high significance, by matching the predicted impact, possible mitigation measure, the target levels, responsible entity and approximate cost. It also presents a detailed plan to monitor the implementation and success of the mitigation measures.

For each impact identified assessed in this study, mitigation measures will be proposed to reduce and/or avoid negative impacts and enhance positive impacts. Typical mitigation measures are detailed in Table 6-5.

Table 6-5: Impact Mitigation Measures

Approach	Example
Avoid	Change of site details, to avoid important ecological or archaeological features
Reduce	Filters, precipitators, noise proof, dust, enclosures, visual screening, wildlife corridors, and changed time of activities
Minimize	Minimize emissions and waste generation
Replace	Regenerate similar habitat of equivalent ecological value in different location
Restore	Site restoration after construction

These mitigation measures will be incorporated into an Environmental Management Plan (EMP) to facilitate implementation during the mobilization, construction, operational and decommissioning phases.

The EMP forms part of the final ESIA report as its forms part of the authorization and thus its implementation will become binding on the project applicant and any contractors, should this project be authorized.

8.2 Mobilization/Construction Phase

8.2.1 Loss/disturbance of biodiversity

i. Implementation of measures such as habitat restoration and reforestation programs in areas where vegetation has been cleared during the school operation.
ii. The council shall involve its experts for advice and for potential flora stocks for re-generation of disturbed vegetation in plant areas

8.2.2 Disruption of air quality and effect on human health due to emissions of exhaust and fugitive gases

i. Implementing effective dust control measures, such as applying water or dust suppressants on unpaved roads, stockpiles, and construction sites.

ii. Promoting the use of cleaner fuels and emission control technologies for construction machinery such as generators and vehicles.
iii. Regular monitoring of air quality during the construction phase is important to identify any potential exceedances of air quality standards and promptly address the sources of pollution.

8.2.3 Communication interference, stress, fatigue due to increased noise levels from construction vehicles and machinery

i. The contractor should adhere to relevant noise regulations and guidelines set by the authorities.
ii. Limiting the duration and intensity of noisy activities during sensitive hours.
iii. The contractor should also consider scheduling noisy activities during periods when they would cause the least disruption to nearby residents and businesses.

8.2.4 Public Health from poor housekeeping and waste management

i. Implementing dust control measures such as water spraying or covering loose materials to minimize dust emissions.
ii. Using low-emission equipment and vehicles can help reduce air pollution
iii. Scheduling and managing construction activities to minimize disruptions and noise levels during sensitive hours, particularly in close proximity to residential areas
iv. Furthermore, the contractor should prioritize regular monitoring and assessment of air quality and noise levels to ensure compliance with relevant standards and guidelines.
v. Prepare site waste management plan prior to commencement of construction works
vi. Designate appropriate waste storage areas,
vii. Develop collection and removal schedule,
viii. Institute system for supervision and monitoring, and
ix. Unusable construction waste to be disposed of at an approved dumpsite.

8.2.5 Injuries and fatal accidents due to occupational health and safety issues

i. The contractor should implement proper safety protocols, including providing personal protective equipment (PPE) to workers and ensuring its proper use.
ii. Regular inspections of the construction site should be conducted to identify and address any safety concerns promptly.
iii. Effective communication and engagement with workers and contractors are crucial to fostering a culture of safety.
iv. Furthermore, the contractor should have clear emergency response procedures in place to handle any accidents or incidents that may occur during the construction phase.

8.2.6 Road accidents from moving trucks

i. Designation of proper access routes to the construction site, ensuring clear signage and road markings, and establishing appropriate speed limits.
ii. Construction vehicles should be operated by trained and licensed drivers who adhere to safe driving practices.
iii. The contractor should also consider implementing safety protocols such as regular vehicle maintenance, inspections, and monitoring to ensure that the construction vehicles are in good working condition and meet safety standards.
iv. Adequate lighting and visibility measures should be in place, especially during nighttime construction activities, to enhance road safety.

8.3 Operation Phase

8.3.1 Disruption of air quality and effect on human health due to emissions of exhaust and fugitive gases

i. The school can adopt renewable energy sources, such as solar panels and gas to meet the energy needs of the school such as lighting and cooking.
ii. The school should prioritize energy-efficient designs and equipment within the school. This can involve the use of energy-efficient lighting systems, insulation materials, and energy-saving appliances.
iii. The school can promote sustainable transportation options such as organizing carpooling initiatives for their staffs.
iv. Develop a comprehensive cleaning program that includes regular dusting, vacuuming, and cleaning of surfaces to minimize dust, allergens, and contaminants. Use environmentally friendly and non-toxic cleaning products.
v. Regular monitoring of air quality and implementation of appropriate air pollution control measures should also be undertaken.

8.3.2 Noise emissions

i. Installation of soundproofing materials in classrooms and common areas to reduce internal noise transmission.
ii. Strategic planning of school facilities, such as locating noisy areas away from residential areas or utilizing buffer zones, can help minimize the impact on nearby communities.
iii. Proper maintenance of equipment and facilities within the school premises can also contribute to noise reduction.
iv. Regular monitoring of noise levels and compliance with relevant noise regulations and standards should be prioritized. This can involve periodic assessments and inspections to ensure that noise pollution levels remain within acceptable limits.

8.3.3 Waste Generation

i. Establishment of waste segregation systems, encouraging composting initiatives for the kitchen waste, and providing sufficient waste bins and collection points throughout the school premises.
ii. The school should establish dedicated storage areas for hazardous waste such as laboratory chemicals, faulty electrical appliances, ensuring they are secure, properly labeled, and equipped with appropriate safety measures.
iii. The school should also establish partnerships with authorized entities to ensure the waste is handled and disposed of in compliance with environmental regulations.
iv. Designate bins specifically for the disposal of sanitary pads. These bins should be placed in female restrooms and other private areas, and they should have lids to maintain hygiene and provide privacy.
v. Recycling or re-use of the ash obtained after incineration of waste especially the sanitary pads after testing and analyzing the chemical components of the ash such as use in construction or soil amendments.

8.3.4 Wastewater Generation

i. Proper separation and segregation of different types of liquid waste should be implemented to ensure appropriate treatment and disposal. This can involve separate systems for black water (from toilets), greywater (from sinks and showers), and other liquid waste streams such as water from laboratories.
ii. Construction of water channels for the control of storm water within the school premises
iii. Regular analysis of waste water from laboratories

8.3.5 General health and safety

i. Establishment of a comprehensive health and safety policy.
ii. Conducting regular inspections to identify and mitigate any potential hazards, such as faulty electrical systems, structural weaknesses, or unsafe equipment within the school premises.
iii. Adequate emergency preparedness plans should be in place, including fire safety measures, first aid provisions, and clear evacuation procedures.
iv. The school should prioritize maintaining a clean and hygienic environment to prevent the spread of diseases and ensure the availability of adequate sanitation facilities.
v. Promoting health and wellness among students should also be a focus, with initiatives like health education programs, access to clean drinking water, and appropriate waste management practices.
vi. Implement security measures such as fencing of the school premises. Establish anti-bullying policies and procedures to address and prevent bullying incidents.

8.4 Decommissioning Phase

8.4.1 Abandoned infrastructure

i. PO-RALG and other project stakeholders should develop a comprehensive demolition plan that includes proper disposal or recycling of materials, as well as strategies for repurposing or redeveloping the vacant spaces that will be created.
ii. Creating initiatives to transform the abandoned structures into community assets, such as recreational areas, community centers, or affordable housing projects.

8.4.2 Unemployment

i. Ensuring that all staff are members of the National Social Security Fund and the employees should ensure that the developer's contributions are made.

8.4.3 Safety hazards

i. Effective communication and coordination among project stakeholders, including contractors, workers, and relevant authorities, are vital for maintaining a safe working environment.
ii. It is crucial for the contractor to prioritize safety measures and adhere to strict guidelines and regulations by implementing comprehensive safety protocols, providing appropriate personal protective equipment (PPE), conducting thorough risk assessments, and ensuring proper training for workers to significantly reduce the likelihood of accidents and injuries during the demolition activities.

CHAPTER NINE

9. ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

9.1 Overview

The following sections describe measures that shall be followed by the contractor/ project implementing team to ensure that the anticipated environmental and social impacts are avoided, abated, or remediated.

T h i s layouts the systematic plans packaged as the environmental management plan (EMP). The goal of the EMP developed is to address the key impacts identified in the preceding Chapter as well as setting the relevant policies and actions plans needed to achieve an environmentally sound and sustainable project venture.

Table 6-6: Impact Mitigation Measures

Approach	Example
Avoid	Change of route or site details, to avoid important ecological or archaeological features
Replace	Regenerate similar habitat of equivalent ecological value in different location
Reduce	Filters, precipitators, noise barriers, dust, enclosures, visual screening, wildlife corridors, and changed time of activities
Restore	Site restoration after construction
Compensate	Relocation of displaced communities, facilities for the affected communities, financial compensation for the affected individuals etc.

These mitigation measures will be incorporated into an Environmental Management Plan (EMP) to facilitate implementation during the planning, construction, operational and decommissioning phases. The EMP forms part of the final ESIA, as such its forms part of the authorization and thus its implementation will become binding on the project applicant and any contractors, should this project be authorized.

The EMPs for the project should consists of the following:

- Management Policies;
- Management Plans; and
- Decommissioning Plan

9.2 Environmental Management Policy

The environmental policy developed should be one that enables project implementers and Project management and sustainable utilization of environmental resources therein. The policy should therefore cover the following, among other issues:

- Ensure that all Project activities operate within legal requirements of all relevant national legislation covered in Chapter Four;
- That there are continuous environmental improvement and performance through monitoring of Project activities;
- Ensure that utilization of natural resources is optimal with measures in place to ensure resource availability for future generation;
- Awareness creation to the surrounding community regarding sustainable utilization of natural resources, protection of sensitive ecosystems and bio-diversity maintenance for communal livelihood; and
- Balancing between natural resource use, environmental conservation, and economic development.

9.3 Occupational Health and Safety Policy

The Occupational Health and Safety Policy developed for the Project should enable establishment of appropriate measures that ensure that the health, safety and welfare of all users is cared for as well as the health requirements of the local community in which the project is located. The policy should highlight on the following, among others:

- Medical examination of workers;
- Sanitation in the Project area;
- Proper liquid and solid waste management and disposal;
- Emergency preparedness;
- Fire safety;
- Necessity and availability of personal protective equipment
- Safety measures for cold storage equipment;
- Appropriate safety and rescue equipment are availed to Project users;
- Risk minimization of accidental damage, community, and environment; and
- Training in safety.

Preventive and protective measures should be introduced according to the following order of priority:

- Eliminating the hazard by removing the activity from the work process. Examples include substitution with less hazardous chemicals, using different manufacturing processes, etc.;
- Controlling the hazard at its source through use of engineering controls. Examples include local exhaust ventilation, machine guarding, acoustic insulating, etc.;
- Minimizing the hazard through design of safe work systems and administrative or institutional control measures. Examples include job rotation, training safe work procedures, lock-out and tag-out, workplace monitoring, limiting exposure or work duration, etc.
- Providing appropriate personal protective equipment (PPE) in conjunction with training, use, and maintenance of the PPE.

9.4 Local Community Policy

The Local Community Policy are developed by management of the Project to ensure that the management of the project develops and maintains sound relations with its all users and the local community on mutual respect and active partnership. The policy should highlight on ways the management should:

- Work with the local community and relevant government departments and agencies to achieve sustainability of the project;
- Come up with ways of enhancing information flow from management to the community and Project users, and vice visa;
- Active engagement of the local community in all Project activities that impact on the local community.

9.5 Coordination and Review of the EMP

The EMP forms the basis for environmental management on site. Based on the results of the performance assessment and review process, the EMP may be modified as the project progresses.
Modifications will only be permitted by the District Environmental Officer. Changes to the EMP will only be allowed:

a) If alternative measures with equal or improved outcomes have been identified after the compilation of the report.
b) Prior to non-compliance, therefore requiring pro-active evaluation.

9.6 Reporting

In addition to all reporting requirements identified in the EMP, records shall be kept by the District Environmental Officer of all monitoring results, monitoring reports, incident records, audit reports and management reviews. Minutes of all environmental project meetings shall be submitted to the Environmental officer.

Table 6-7: Summary of Environmental and Socioeconomic Management Plans

Phase	Potential Aspect/Impacts	Management/Mitigation Measures	Responsibility and guiding legal framework	Estimated Costs [TZS]
Mobilization/Construction Phase	Loss/disturbance of biodiversity and threatened species	▪ Minimum vegetation clearance will be ensured by clearing only those areas that are utilized for construction of WSP and layout of networks and the area used to lay down the sewer networks activities. ▪ The municipal shall involve its experts for advice and for potential flora stocks for re-generation of disturbed vegetation in plant areas	Babati Town Council Environmental Management Act, Cap.191	N/A
	Disruption of air quality and effect on human health due to emissions of exhaust and fugitive gases	• Implementing effective dust control measures, such as applying water or dust suppressants on unpaved roads, stockpiles, and construction sites. • Promoting the use of cleaner fuels and emission control technologies for construction machinery such as generators and vehicles. • Regular monitoring of air quality during the construction phase is important to identify any potential exceedances of air quality standards and promptly address the sources of pollution. • Using cars with good conditions. • Responsible usage of tracks e.g. instead of using 3 tons track to carry loads twice is better to use 7 tons track which will only make one trip to reduce amount of carbon emissions.	Babati Town Council along with the Contractor Public Health Act, Cap.242 and Environmental Management (Air Quality Standards) Regulations, 2007	Part of the project cost and contractor's fee
	Communication interference, stress, fatigue due to increased noise levels from construction vehicles and machines	▪ The contractor should adhere to relevant noise regulations and guidelines set by the authorities. ▪ Limiting the duration and intensity of noisy activities during sensitive hours. ▪ The contractor should also consider scheduling noisy activities during periods when they would cause the least disruption to nearby residents and businesses. ▪ Using cars with good conditions, cars with good conditions have the potential of having less noise pollution.	Babati Town Council along with the contractor Public Health Act, Cap.242 and Environmental Management (Quality Standards for Controlling Noise and	Part of the project cost and contractor's fee

Phase	Potential Aspect/Impacts	Management/Mitigation Measures	Responsibility and guiding legal framework	Estimated Costs [TZS]
			Vibration Pollution) Regulations, 2015	
	Public Health from poor housekeeping and waste management	▪ Implementing dust control measures such as water spraying or covering loose materials to minimize dust emissions. ▪ Using low-emission equipment and vehicles can help reduce air pollution ▪ Scheduling and managing construction activities to minimize disruptions and noise levels during sensitive hours, particularly in close proximity to residential areas ▪ Furthermore, the contractor should prioritize regular monitoring and assessment of air quality and noise levels to ensure compliance with relevant standards and guidelines. ▪ Prepare site waste management plan prior to commencement of construction works ▪ Designate appropriate waste storage areas, ▪ Develop collection and removal schedule, ▪ Institute system for supervision and monitoring, and ▪ Unusable construction waste to be disposed of at an approved dumpsite.	Babati Town Council along with the contractor Public Health Act, Cap.242, Environmental Management (Solid Waste Management) Regulations, 2009 as amended in 2016 and Environmental Management (Hazardous Waste Control and Management) Regulations, 2021	Part of the project cost and contractor's fee
	Injuries and fatal accidents due to occupational health and safety issues	▪ The contractor should implement proper safety protocols, including providing personal protective equipment (PPE) to workers and ensuring its proper use. ▪ Regular inspections of the construction site should be conducted to identify and address any safety concerns promptly. ▪ Effective communication and engagement with workers and contractors are crucial to fostering a culture of safety. ▪ Furthermore, the contractor should have clear emergency response procedures in place to handle any accidents or incidents that may occur during the construction phase.	Babati Town Council along with the Contractor Occupational Health and Safety Act, 2003	Part of the contractors' fee

Phase	Potential Aspect/Impacts	Management/Mitigation Measures	Responsibility and guiding legal framework	Estimated Costs [TZS]
	Road accidents from moving trucks	▪ Designation of proper access routes to the construction site, ensuring clear signage and road markings, and establishing appropriate speed limits. ▪ Construction vehicles should be operated by trained and licensed drivers who adhere to safe driving practices. ▪ The contractor should also consider implementing safety protocols such as regular vehicle maintenance, inspections, and monitoring to ensure that the construction vehicles are in good working condition and meet safety standards. ▪ Adequate lighting and visibility measures should be in place, especially during nighttime construction activities, to enhance road safety.	Babati Town Council along with the contractor Public Health Act, 2009 and Occupational Health and Occupational Health and Safety Act, 2003	Part of the contractors' fee
Operation and Maintenance Phase	Disruption of air quality and effect on human health due to emissions of exhaust and fugitive gases	▪ The school can adopt renewable energy sources, such as solar panels and gas to meet the energy needs of the school such as lighting and cooking. ▪ The school should prioritize energy-efficient designs and equipment within the school. This can involve the use of energy-efficient lighting systems, insulation materials, and energy-saving appliances. ▪ The school can promote sustainable transportation options such as organizing carpooling initiatives for their staffs. ▪ Develop a comprehensive cleaning program that includes regular dusting, vacuuming, and cleaning of surfaces to minimize dust, allergens, and contaminants. Use environmentally friendly and non-toxic cleaning products. ▪ Regular monitoring of air quality and implementation of appropriate air pollution control measures should also be undertaken.	School Administration along with Babati Town Council Public Health Act, Cap.242 and Environmental Management (Air Quality Standards) Regulations, 2007	10,000,000
	Increased Noise emissions	▪ Installation of soundproofing materials in classrooms and common areas to reduce internal noise transmission. ▪ Strategic planning of school facilities, such as locating noisy areas away from residential areas or utilizing buffer zones, can help minimize the impact on nearby communities.	School Administration along with Babati Town Council	10,000,000

Phase	Potential Aspect/Impacts	Management/Mitigation Measures	Responsibility and guiding legal framework	Estimated Costs [TZS]
		▪ Proper maintenance of equipment and facilities within the school premises can also contribute to noise reduction. ▪ Regular monitoring of noise levels and compliance with relevant noise regulations and standards should be prioritized. This can involve periodic assessments and inspections to ensure that noise pollution levels remain within acceptable limits.	Public Health Act, Cap.242 and Environmental Management (Quality Standards for Controlling Noise and Vibration Pollution) Regulations, 2015	
	Waste Generation	▪ Establishment of waste segregation systems, encouraging composting initiatives for the kitchen waste, and providing sufficient waste bins and collection points throughout the school premises. ▪ The school should establish dedicated storage areas for hazardous waste such as laboratory chemicals, faulty electrical appliances, ensuring they are secure, properly labeled, and equipped with appropriate safety measures. ▪ The school should also establish partnerships with authorized entities to ensure the waste is handled and disposed of in compliance with environmental regulations. ▪ Designate bins specifically for the disposal of sanitary pads. These bins should be placed in female restrooms and other private areas, and they should have lids to maintain hygiene and provide privacy. ▪ Recycling or re-use of the ash obtained after incineration of waste especially the sanitary pads after testing and analyzing the chemical components of the ash such as use in construction or soil amendments.	School Administration along with Babati Town Council Public Health Act, Cap.242, Environmental Management (Solid Waste Management) Regulations, 2009 as amended in 2016, Environmental Management (Hazardous Waste Control and Management) Regulations, 2021 and Environmental Management (Control and Management of Electrical and	15,000,000

Phase	Potential Aspect/Impacts	Management/Mitigation Measures	Responsibility and guiding legal framework	Estimated Costs [TZS]
			Electronic Equipment Waste) Regulations, 2021	
	Wastewater Generation	▪ Proper separation and segregation of different types of liquid waste should be implemented to ensure appropriate treatment and disposal. This can involve separate systems for black water (from toilets), greywater (from sinks and showers), and other liquid waste streams such as water from laboratories. ▪ Construction of water channels for the control of storm water within the school premises ▪ Regular analysis of waste water from laboratories.	School Administration along with Babati Town Council Public Health Act, Cap.242, Environmental Management (Water Quality Standards) Regulations, 2007 and Environmental Management (Hazardous Waste Control and Management) Regulations, 2021	15,000,000
	General Health and Safety	▪ Establishment of a comprehensive health and safety policy. ▪ Conducting regular inspections to identify and mitigate any potential hazards, such as faulty electrical systems, structural weaknesses, or unsafe equipment within the school premises. ▪ Adequate emergency preparedness plans should be in place, including fire safety measures, first aid provisions, and clear evacuation procedures. ▪ The school should prioritize maintaining a clean and hygienic environment to prevent the spread of diseases and ensure the availability of adequate sanitation facilities.	School Administration along with Babati Town Council Public Health Act, 2009 and Occupational Health and Safety Act, 2003	10,000,000

Phase	Potential Aspect/Impacts	Management/Mitigation Measures	Responsibility and guiding legal framework	Estimated Costs [TZS]
		▪ Promoting health and wellness among students should also be a focus, with initiatives like health education programs, access to clean drinking water, and appropriate waste management practices. ▪ Implement security measures such as fencing of the school premises. Establish anti-bullying policies and procedures to address and prevent bullying incidents.		
Decommission phase	Abandoned infrastructure	▪ PO-RALG and other project stakeholders should develop a comprehensive demolition plan that includes proper disposal or recycling of materials, as well as strategies for repurposing or redeveloping the vacant spaces that will be created. ▪ Creating initiatives to transform the abandoned structures into community assets, such as recreational areas, community centers, or affordable housing projects.	Babati Town Council Land Act, 2019, Environmental Management (Solid Waste Management) Regulations, 2009 as amended in 2016, Environmental Management (Hazardous Waste Control and Management) Regulations, 2021 and Environmental Management (Control and Management of Electrical and Electronic Equipment Waste) Regulations, 2021	Will be established during preparation of decommissioning plan
	Safety Hazards	▪ Effective communication and coordination among project stakeholders, including contractors, workers, and relevant authorities, are vital for maintaining a safe working environment.	Babati Town Council	Will be established during preparation of

Phase	Potential Aspect/Impacts	Management/Mitigation Measures	Responsibility and guiding legal framework	Estimated Costs [TZS]
		▪ It is crucial for the contractor to prioritize safety measures and adhere to strict guidelines and regulations by implementing comprehensive safety protocols, providing appropriate personal protective equipment (PPE), conducting thorough risk assessments, and ensuring proper training for workers to significantly reduce the likelihood of accidents and injuries during the demolition activities.	Public Health Act, 2009 and Occupational Health and Safety Act, 2003	decommissioning plan
	Unemployment	▪ Ensuring that all staff are members of the National Social Security Fund and the employees should ensure that the developer's contributions are made.	School Administration Social Security Act, 2015	-
Total estimated Cost				**60,000,000**

CHAPTER TEN

10. ENVIRONMENTAL AND SOCIAL MONITORING PLAN

Environmental Management Plan (EMP) intends to set forth “environmental and social conditions” that are to be abided by the proponent. It aims at ensuring effective implementation of the proposed mitigation measures
The Project requires regular monitoring and auditing of key environmental, health and safety indicators to:

- assess the overall performance of the project;
- to comply with local environmental, health and safety legislation; and
- Benchmark its project with other similar projects for improved management.

Key environmental parameters of concern with the operation of such a project are:

- water consumption,
- energy consumption; and
- solid and liquid waste handling;

Additionally, the following social parameters need to be keenly monitored to ensure benefits to the community and its sustainability:

- Health status of workers;
- Employment opportunities to local community; and
- Corporate Social responsibility programs.

With these factors in mind, there are a need to put in place elaborate and sound environmental management system and mechanisms of monitoring on a continuous basis the environmental performance of the Project. Undertaking monitoring and auditing of key environmental parameters and putting in place of all approved recommendation of the environmental management plan and conditions of the EIA license achieved, this Monitoring undertaken are both active and reactive.

With increased urban development come the challenges of waste handling and disposal. The monitoring program developed must consider possible impacts of solid waste disposal. All waste emanating from the Project and its disposal must be monitored to ensure no environmental nuisance or degradation arises.

10.1 Parameters are Monitored

Monitoring involves measuring, observing, recording and evaluation of physical, socioeconomic and ecological variables within the project area and the neighborhood. This may include the following:

Table 6-8: Recommended Environmental and Social Monitoring Plan

Phase	Potential Impacts	Parameters to be Monitored	Target Level/Standard	Monitoring Area	Monitoring Frequency	Responsibility	Estimated Cost
Mobilization and Construction Phase	*Atmospheric Air Pollution* due to emissions of exhaust and fugitive gases	SO2, NOx, CO2, CO, Particulate matter (TSP, PM10, PM2.5	CO-4.5g/kWh NOx-1.1 g/kWh HC-8.0 g/kWh PM-0.612 g/kWh Smoke 0.15g/m	Established Monitoring Point	Before commissioning and once every three months	Babati Town Council along with the contractor	Part of the contractor's fee and project cost
	Communication interference, stress, fatigue impairment due to increased noise levels from construction vehicles and machinery	Noise and vibration level	As minimum emission as possible	Established Monitoring Point	Once Every three months	Babati Town Council along with the contractor	Part of the contractor's fee
	Loss of biodiversity (both Flora and Fauna)	Biodiversity	As minimum disturbance as possible	Project area	Before commissioning and once every three months	Babati Town Council	N/A
	Injuries and fatal accidents due to occupational health and safety issues	Incident and accident register	As minimum emission as possible	Project site	Once Every six months	Contractor along with Babati Town Council	Part of contractor's fee
	Waste generation	Waste disposal Inspection of amount of waste not contained in specified collection containers/skips	Zero waste	Transfer stations and disposal areas	Monthly	Babati Town Council along with the contractor	Part of the contractor's fee

Phase	Potential Impacts	Parameters to be Monitored	Target Level/Standard	Monitoring Area	Monitoring Frequency	Responsibility	Estimated Cost
Operation Phase	Disruption of air quality and effect on human health due to emissions of exhaust and fugitive gases	SO2, NOx, CO2, CO, Particulate matter (TSP, PM10, PM2.5	TZS 845:2005 Air Quality – Specification; TZS 983:2007 Air Quality - Vehicular Exhaust Emissions Limits	Established Monitoring Area	Once every six months	Babati Town Council and School Administration	1,000,000
	Increased Noise emissions	dBA	Noise and Vibration Levels Regulations (United Republic of Tanzania, 2011) 45 dBA (Leq) Day and 35 dBA (Leq) Night and baseline of 50dBA (Leq)	Established Monitoring Area	Once every six months	Babati Town Council and School Administration	1,000,000
	Waste Generation	Waste disposal Inspection of amount of waste not contained in specified collection containers/skips	Zero Waste	Transfer stations and disposal areas	Monthly	School administration	3,000,000
	Employment Opportunity	Employees	Local procurement and Local employment	Number of Employees	Quarterly	PO-RALG along with Babati Town Council	N/A
	General Health and Safety hazards	Accident and incident register	Zero incidents and accidents	School compound	Once every six months	School Administration along with	2,000,000

Phase	Potential Impacts	Parameters to be Monitored	Target Level/Standard	Monitoring Area	Monitoring Frequency	Responsibility	Estimated Cost
						Babati Town Council	
Decommissioning phase	Injuries and fatal accident	Accident and incident register	Zero accident	Project area	Monthly	Babati Town Council	2,000,000
	Unemployment	NSSF remittance	All employees	School Compound	Once every year	Babati Town Council	N/A

10.2 Environmental Health and Safety Auditing

Annual Environmental Health and Safety Audits should be carried out as provided for in the Environmental (Impact Assessment and Audit) Regulations of 2005.

The Audits serve to confirm the efficacy and adequacy of the Environmental Management Plan. The audits should include but not limited to the following:

- Air, soil, and water pollution
- Waste generation, management and disposal;
- Resources utilization
- Occupational Health and Safety
- Traffic Safety;
- Monitoring and

Views and comments from neighbors and progress in implementation of Environmental Health and Safety Management Plan.

10.3 Awareness and education

The project proponent with collaboration with contractor or local workers shall encourage environmental awareness among his supervisors before and during implementation of the project. The education will include:

- Provide copies of the EMP and discuss its contents with all construction foremen and workers
- Discuss techniques and answer questions about erosion and pollution control at regular site safety meetings
- Demonstrate proper housekeeping methods
- Inform the workers of actions to take in the event of spill of hazardous materials (oil, fuel, bitumen, concrete, etc.)
- Post sign at key locations reminding workers how to properly store construction materials, handle and dispose of toxic waste, wash water, and similar instructions
- Remind workers of fines, penalties that may be levied against the project by the local permitting agencies control environmental destruction is not adhered to

CHAPTER ELEVEN

11. RESOURCE EVALUATION/COST BENEFIT ANALYSIS

11.1 Introduction

Chapter 7 and 8 of this EIS report have documented the cost/impacts of the project to Manyara region and the degree to which they can be substantially mitigated. Cost-benefit analysis is normally done in the framework of feasibility study of an activity.

The aim of cost-benefit analysis is to inform the project developer to make a decision on: whether it makes economic sense to continue with the project; whether the chosen option is a cost-effective alternative; and the estimate of the size of a project. For this project, the costs will include capital expenditures; operating and maintenance costs; staff costs; materials; research and development; and environment, health and other social costs.

Benefits may include: build on the achievements of previous projects in the education sector which have supported quality improvements. It will support the expansion of the secondary school network in order to substantially reduce travel distances by bringing secondary schools closer to children's homes through an expansion of the secondary school network. Construction will be guided by a minimum infrastructure package based on the School Construction and Maintenance Strategy and minimum construction standards aligned with the Projects Environmental and Social Framework.

11.2 Environmental cost and benefit analysis

Environmental cost benefit analysis is assessed in terms of the negative and positive impacts. Furthermore, the analysis is considering whether the impacts are mitigatable and the costs of mitigating the impacts are reasonable. As it has been mentioned in Chapters 7 and 8, the potential benefits of the project, in terms of economic advancement and social benefit are substantial.

The environmental impacts are reasonably mitigatable. So to mitigate negative impacts, when compared to the required data are relatively small.

11.3 Effect on the Local Community

The benefits from project development can be judged in terms of employment, social welfare, education development, and the local economy (wages, goods and services). Thus, there will be a substantial spread of the benefit within the community through the provision of food, accommodation and other regular services to the employees and students.

11.4 Infrastructure Development

The upgrading, development and maintenance of local infrastructure are benefits that will extend far beyond the project's scope and lifetime. Also, during operation of the project there will camps that will be constructed with engineering standards at the site especially at Manyara TC or within project camps

11.5 Advantages for the Broader Community and Country

The earnings of the project will in the final analysis it will contribute the following,

- Creating a gender sensitive, learner-friendly school environment through investing in supportive structures in the school and community including trained school guidance counselors, stronger links with the community through Parent Teacher Associations and life skills training.
- Supporting female students to avoid getting pregnant and dropping out of secondary school through measures that include
    - Encouraging community awareness of risks for girls; and
    - Supporting safe passage and reducing the distance to schools to reduce the risks of gender-based violence on the way to school.

    - Supporting girls who become pregnant to access recognized, quality Alternative Education Pathways (AEPs)
- To obtain lower secondary certification and continue with upper secondary education or post-secondary education.
- Improving the quality of secondary school teaching and learning environments through the hiring of additional qualified teachers in core subjects and providing textbooks in core subjects.
- Increasing the number of secondary school spaces through the construction of new classrooms that meet minimum infrastructure standards and supporting the expansion of the school network to bring schools closer to communities.
- Using innovative digital technology to facilitate mathematics and science teaching and improve learning

CHAPTER TWELVE

12. DECOMMISSIONING PLAN

12.1 Introduction

Decommissioning is the last phase of project life. It involves terminating project activities and operations and rehabilitating site to or close to its original state. It is anticipated that the project shall continue as long as there is a demand for a project, however, individual components of the project shall be decommissioned as need be.

12.2 Components

This decommissioning plan presents a conceptual framework on how the Project can be demolished if need. The plan takes into consideration on how materials and equipment, support infrastructure and land on which the buildings are standing on can be handled.

12.3 Disposal/Demolition of Project Storage Buildings

Decommissioning of project shall only involve dismantling of the temporary office and store room that will be constructed during construction phase.

12.4 Considerations

- All employees involved in the decommissioning and demobilization exercises must have proper protective gear throughout;
- Decommissioning and demobilization activities should be done during day time only unless it's an emergency;
- Waste resulting must be disposed at designated waste disposal sites;
- All relevant lead agencies must be involved in the exercise; and
- Emergency services such as first aid and ambulance services must be on standby in case of any eventualities.

12.4.1 Decommissioning Plan for a Project's Construction

Table 6-9: Decommissioning Plan for the School's Construction Phase

Task	Description	Estimated Cost
Health and Safety	Detail safety protocols for decommissioning	Contractor's fee
Legal and Regulatory Compliance	Address permits and regulations	Contractor's fee and Project cost
Removal of Equipment	Remove construction machinery and equipment	Contractor's fee
Waste Disposal	Dispose of construction waste responsibly	Contractor's fee
Site Restoration	Restore the site to its original state	Contractor's fee
Final Inspections	Conduct final inspections and obtain approvals	Contractor's fee and Project cost

Project Closeout	Document project	Project Cost
Contingency	Allowance for unforeseen costs	Project Cost

12.4.2 Decommissioning Plan for the Project's Operation

Table 6-10: Decommissioning Plan for the School's Operation

Task	**Description**	**Estimated Cost**
Students Transition	Prepare students for transition to other schools	15,000,000
Staff Transition	Assist staff in finding new positions	25,000,000
Equipment Disposal	Sell or transfer school equipment and assets	Variable
Facility Closure	Conduct facility shutdown procedures	20,000,000
Administrative Closure	Complete legal, financial, and administrative tasks	12,000,000
Contingency	Allowance for unforeseen costs	35,000,000
Legal and Regulatory Compliance	Address legal requirements for closure	15,000,000
Total Estimated Annual Cost		122,000,000

CHAPTER THIRTEEN

13. CONCLUSION AND RECOMMENDATIONS

13.1 Conclusion

This ESIA report provide description of the proposed project, presents a concept project description and has acknowledged a number of issues pertaining to the operation of Project. The issues/ impacts have been assessed and described in some detail to gain an adequate understanding of possible environmental effects of the project in order to formulate mitigation measures in response to negative aspects, which have emerged.

The project shall have massive benefit to the scientific community and human race as a whole as it shall enable development of a deterministic model of climate change.

Given the nature and location of the development, the conclusion is that the potential impacts associated with the proposed development are of a nature and extent that can be reduced, limited and eliminated by the application of appropriate mitigation measures.

The key findings of the ESIA study conducted by Tansheq Limited are as follows:

- The Project Development Objectives (PDOs) are to increase access to secondary education, provide responsive learning environments for girls and improve completion of quality secondary education for girls and boys. SEQUIP will contribute to addressing key challenges to girls and boys accessing education and this school will definitely target girls for their studying excel. The project aims to reduce distance to government target: 3km (or 45 minutes)
- The project will contribute to increasing the total number of students in secondary education including Alternative Education Pathways (AEP) by 250,000. It will directly benefit about 1.8 million secondary school students, including 920,000 girls, 95% of whom are enrolled in lower secondary. SEQUIP will help more girls' transition from lower to upper secondary education, as girls are underrepresented at this level

13.2 Recommendations

The Project should systematically manage environmental as well as health and issues so as to ensure sustainability and attainment of overall goal of the project. This can only be achieve if the ESMP and the Monitoring Plan developed hereinwhithin is properly adhered to and improved upon whenever shortcommings are identified.

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APPENDIX I: LIST OF THE STAKEHOLDERS CONSULTED

SHEQ

SENSA 23 Agosti 2022 Jitandae Kuhesabiwa

TAMISEMI

SEQUIP – ENVIRONMENTAL AND SOCIAL IMPACT ASESSMENT

Location. MANYARA REGIONAL OFFICE Date 29/09/2022.

S/N	Name/ Jina	Title/ Cheo	Contacts/ Mawasiliano	Signature/ Sahihi
1	HALFANI O. MASUKIRA	REO	0767447973	
2.	MACHOTA KORA	RAO	0767573458	
3.	DOMINIC MBWETTE	A.G. RAS	0754288553	

Location BABATI TOWN COUNCIL Date 27/9/2022

S/N	Name/ Jina	Title/ Cheo	Contacts/ Mawasiliano	Signature/ Sahihi
1.	ANNA E FISOO	AG ID	0754 601166	
2	PASCALINA H LAWOKELO	TSEO	0682288596.	
3	TIMOTHY V. MAEMDAEMDA	SLO SEC	0784-410616 0620-410616	
4	Faista W. Akaro	TAEO	0765047572 0785094697	
5.	MATHIAS MKUMBO	TUPS	0682431531	
6	NUWAGI KARUGI	ECONOMIST	0715577059	
7	MODESTUS PONSIAN	Ag: IE	0682-795847	
8	CHRISTINA U. KANGELE	SWO	0766060984	
9.	Gerard Macho	Ofad	0787208974	

Location: BABATI - SEKONDARI MA [illegible] Date: KIONGOZI - 28/09/2022.

S/N	Name/ Jina	Title/ Cheo	Contacts/ Mawasiliano	Signature/ Sahihi
1:	THOMAS L. DUWE	M/KIT. S/KIJIJI	0717255274	
2	NICODEMUS J. SHALUA	M/KIONGOZI-MIGUNGANI	0673156777	

Location: BABATI - MAENEO YAMEKUSANYIKA HIWA TU Date: MIGUNGANI - 28/09/2022.

S/N	Name/ Jina	Title/ Cheo	Contacts/ Mawasiliano	Signature/ Sahihi
1:	QWENDO MUNA	MWENYE ENEO	0753045288	
2.	FANTE HORRAY	MWENYE ENEO	0718493503	
3.	ALOYCE BAWITE	" " "	0718791339	
4:	HEKE HORAY	" " "	0625871864	
5:	CHINI MUNA	" " "	0692609953	
6:	BARANI MUNA	" " "	0713687414	

Location: BABATI- ENEO LIMENEGWA -MIGUNDANI Date: 28/09/2021.

S/N	Name/ Jina	Title/ Cheo	Contacts/ Mawasiliano	Signature/ Sahihi
1.	MUNA QWENDO YAHAYA	MWENYE ENEO	0713687414 0672127470	
2	JUMANNE HORAY JLAQUE	MWENYE ENEO	0672127470	
3	MAIAMBO MUNA QWENDO	MWENYE ENEO	0672419518	
4	SALLAH MUNA QWENDO	MWENYE ENEO	0710926377	
5	SAMSONI HILONGA SULLE	MWENYE ENEO	0676001897	

APPENDIX II: EMERGENCY RESPONSE PLAN

1.0 Introduction

The purpose of this Emergency Response Plan is to establish procedures and guidelines that will ensure the safety and well-being of students, staff and visitors in the event of an emergency within the school premises. This plan outlines measures to be taken before, during and after various emergencies to minimize potential risks and provide effective responses.

1.1 Emergences Response Procedures

1.1.1 Fire Emergences

Students, staff, visitors, and members of the school community are kindly requested to remain vigilant and promptly report any signs or evidence of fire within the school premises. It is essential to observe and identify the following indicators:

I. **Smoke**:

- Report any sight or smell of smoke, regardless of its source or location within the school buildings or surrounding areas.
- Pay attention to areas where smoke may accumulate, such as stairwells, restrooms, or utility rooms.

II. Burning smell:

- Take note of any unusual or strong burning odors that may indicate a fire.
- Report any such smell, even if there is no visible smoke or flames.

III. Abnormal heating of any material or machines:

- Be observant of any objects, equipment, or machinery that exhibit abnormal or excessive heat.
- Report any instances where materials or devices feel unusually hot to the touch.

The swift detection and reporting of potential fire incidents are crucial for ensuring the safety and security of everyone within the school. All members of the school community are encouraged to remain alert and immediately inform the designated authorities or the emergency response team upon discovering any of these fire-related signs or evidence. Remember, early detection and timely reporting can help prevent the escalation of fire hazards and facilitate prompt response and evacuation procedures if necessary.

1.1.1.1 Fire response Plan (for Large Fires)

I. Use emergency communication systems to notify the Emergency Coordinator/Supervisor immediately of the fire's location.
II. Ensure that doors in large buildings open outwardly to facilitate easier movement of people outside the building.
III. Activate the nearest fire alarm within the premises to alert others of the emergency.

IV. If safe to do so, rescue any person in immediate danger and move them to a place of safety.
V. If someone's clothing is on fire, cover them with fire blankets. If fire blankets are not available, use water from showers or other sources to extinguish the flames.
VI. Proceed to the nearest exit and evacuate the building area using the nearest available exit.
VII. Close doors behind you to contain any smoke and prevent the fire from spreading further within the building.
VIII. Proceed to the designated assembly area and do not re-enter the building until it has been deemed safe to do so by emergency personnel.
IX. If you are unable to exit the room, try to prevent smoke from entering by using available materials to block gaps under doors or windows.
X. Make efforts to draw attention to your location if you are trapped. Use a phone, window, or call for help to alert others. Remember, smoke inhalation is a significant danger in fires.
XI. Only attempt to use a fire extinguisher if the fire is small and you have been properly trained to operate it safely.
XII. If you have any doubts about operating the fire extinguisher or if the fire extinguishing attempts are ineffective, evacuate immediately from the building.
XIII. Call the firefighting crew or emergency services (e.g., dial 911) immediately for professional assistance.

1.1.2 Chemical and Hazardous Material Spills

This section covers important information for emergence involving the release of chemical or hazardous substance that could harm people health and environmental.

- Train laboratory staff and science teachers in proper safety protocols.
- Establish clear guidelines for reporting accidents or injuries.
- Implement procedures for quickly and safely evacuating students from the laboratory area.
- Designate staff members responsible for administering first aid and contacting emergency medical services, if necessary.

1.1.3 Medical Emergencies

I. Remain calm and focus on ensuring the safety and well-being of all individuals involved, without compromising your own safety.
II. Immediately seek help by contacting the designated emergency phone number for the clinic and inform the Supervisor or appropriate personnel.
III. Provide the necessary First Aid services to the injured person(s) as trained and within your capabilities.
IV. Avoid moving an injured person unless they are in immediate danger of further harm. Stabilize the person and wait for medical professionals to assess the situation.
V. Alert personnel in adjacent areas of any potential hazards to their safety, such as fire explosions, chemical contamination, or civil disturbances.
VI. If a person's clothing is on fire, cover them with a fire blanket if available. If not, instruct them to roll on the floor to extinguish the flames. If showers are immediately available, use them to douse the person with water.
VII. If chemicals have entered the eye, promptly flush the affected eye with plenty of water for at least 15 minutes, ensuring to wash the eyeball and inner surface of the eyelid.
VIII. If necessary, transport the injured person(s) to the nearest dispensary or hospital. If an ambulance is not readily accessible, utilize the available means of transportation to ensure timely medical attention.

1.2 Resources and Equipment

1.2.1 First Aid Kits

In the school area, each designated area will be equipped with a First Aid Kit, which will be stored in a readily accessible location for emergency team members. These kits will contain essential first aid items that can be used before seeking further medical assistance at the clinic.

To maintain the effectiveness of the First Aid Kits, the clinic staff and/or Office Supervisor will conduct regular inspections to ensure that the items are in good condition and have not expired. This includes checking the integrity of the packaging, verifying the expiration dates of medications and perishable items, and replenishing any used or depleted supplies

1.2.3 Fire Extinguisher

To ensure the safety of the school compound, fire extinguishers will be strategically placed in all buildings, including classrooms, dormitories, laboratories, the dining hall, and offices. These fire extinguishers will be regularly inspected to ensure they are operational and ready for use.

A yearly inspection will be conducted to verify the functionality and condition of each fire extinguisher. Trained personnel or a designated fire safety team will perform these inspections, checking for any signs of damage, ensuring that pressure gauges are within the recommended range, and confirming that safety seals are intact. If any issues are identified during the inspection, immediate maintenance or replacement of the fire extinguisher will be arranged.

1.2.5 Alarms

The school's alarm system serves as a crucial tool for emergency notification. In the event of an emergency, all students, staff, visitors, and contractors are required to respond promptly and gather at the designated assembly point once the alarm is activated. The safety and well-being of everyone within the school compound are of utmost importance, and this response protocol ensures a swift and organized evacuation or response to any potential threat or emergency situation. By adhering to this procedure, we can maintain a secure environment and effectively practice our emergency preparedness measures

1.3 Accident / Incident Reporting Obligation

- All incidents/accidents must be reported
- Notify the department responsible, Safety Managers and Environmental personnel if the accident/ Incident have led into Environmental impacts
- Report all incidents and accidents using and incidents/ Accident form to ensure that corrective measures are in place to prevent re occurrence in future
- The filled incident and Accident form will be signed off when all corrective is already done.

1.4 Responsibilities

1.4.1 Workers and Students

- Workers and Students are responsible to ensure that all incidents or suspicious situations are reported immediately
- When fire alarm signal has sounded or shout for fire, workers and students are required to immediately evacuated the buildings and if possible, knocking on their neighbor doors and while saying **EMERGENCE GET OUT!**
- Familiarize with the Emergence Response Plan
- Familiarize with the signs **EXIT, EMERGENCY EXIT, ASSEMBLY POINT**
- Observe the fire warning sign such as **DO NOT SMOKE, FIRE**
- To know where the assembly point is it

1.4.2 Office Supervisor/ Emergence Coordinator

Emergence Coordinator or office Supervisor will be responsible to responsible the rescue team (Fire crew, first aiders and emergence response team) during emergencies cases

To identify OHS training needs depending upon the existing requirement

1.4.3 District Secondary Education Officer

- To provide recourses to implement Emergence Preparedness Plan

1.4.4 Emergence Respond Team

- To quickly respond and evacuate he facility within the designated timeframe and follow all other procedures as listed in the emergency plan.
- Know where emergency and first aid equipment are found in the building (s) and how to use such equipment.
- Know the Emergency number and understand how the chain of command works.
- Known Emergence numbers and understand how the chain of command works

1.5 Trainings Programs

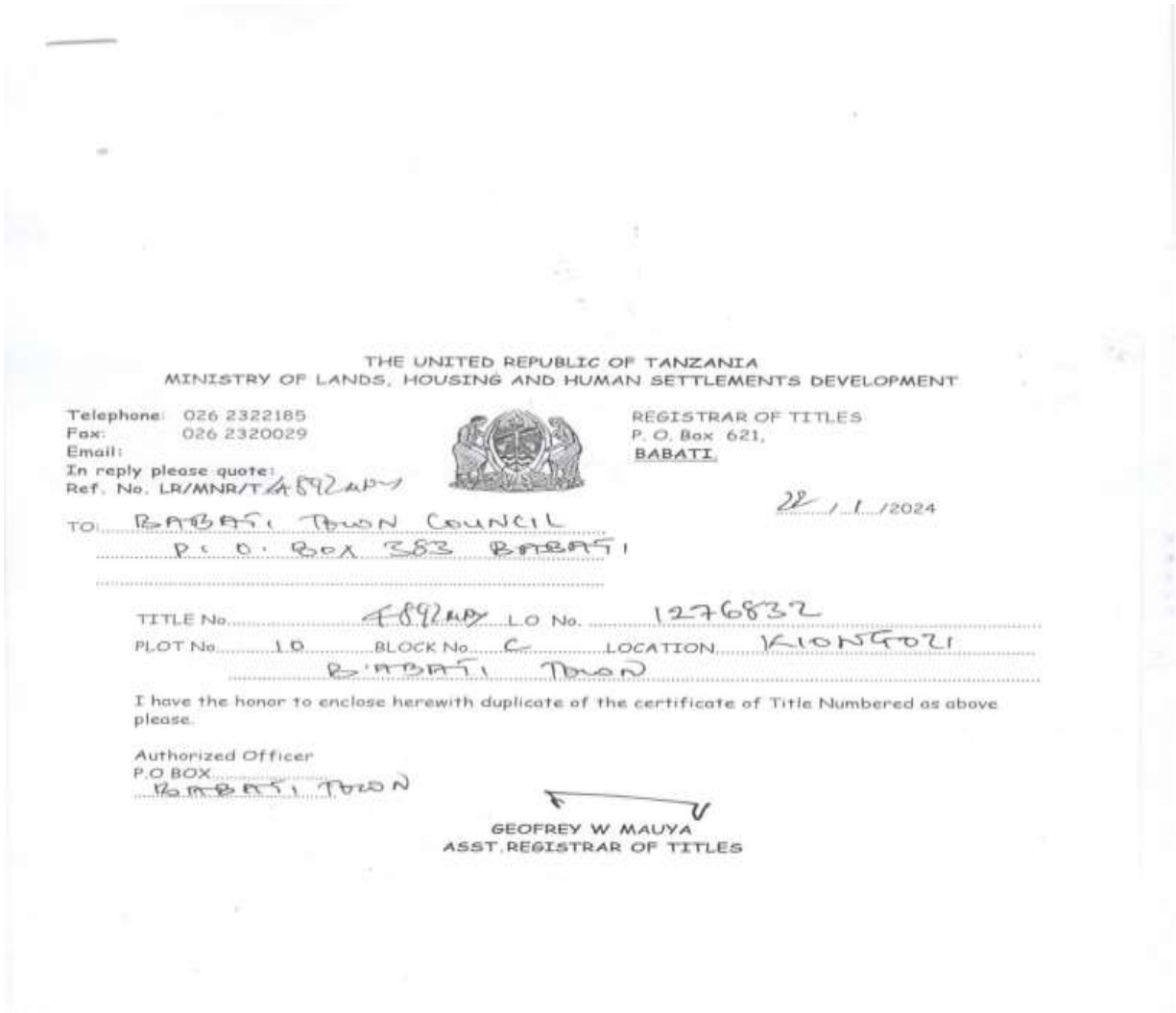
- Workers and Students will be trained depending upon the Training needs of each section
- Occupational Health, Safety and Environmental meeting will be held in month basis to ensure that issues from department are communicated and managed according
- Key personnel will be trained on evacuation procedures, use of fire Equipment's, first aid procedure etc.
- Notices indicting contact details for first aiders or appointed persons, the emergence contact number and where the first – aid box is must be posted at the site

1.6 Emergence Contact Detail

Table 1.1 List of Emergency Contacts

S/N	Organisation	CONTACT
1.	Kiongozi village Executive Director	
2.	Kiongozi Village Secondary Education Officer	
3	Fire and Rescue Office	
4	TANESCO	
5	Maisaka Ward Executive Officer	
7	Ward hospital	

APPENDIX III: CERTIFICATE OF OCCUPANCY



THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF LANDS, HOUSING AND HUMAN SETTLEMENTS DEVELOPMENT

Telephone: 026 2322185
Fax: 026 2320029
Email:
In reply please quote:
Ref. No. LR/MNR/T 4892 MP

REGISTRAR OF TITLES
P. O. Box 621,
BABATI

22 / 1 /2024

TO: BABATI TOWN COUNCIL
P. O. BOX 383 BABATI

TITLE No. 4892 MP L.O No. 12768832
PLOT No. 1D BLOCK No. C LOCATION. KIONGOZI
BABATI TOWN

I have the honor to enclose herewith duplicate of the certificate of Title Numbered as above please.

Authorized Officer
P.O BOX
BABATI TOWN

GEOFREY W MAUYA
ASST. REGISTRAR OF TITLES

Land Form 23 A.

TANZANIA

THE LAND ACT 1999
(NO. 4 OF 1999)

CERTIFICATE OF OCCUPANCY

(Under Section 29)

Date Issue: .....

Title Number: .....4892 MWZ.....

Land Office Number: .....127632.....

Land: PLOT NO.19BLOCK 'C' KIONGOZI BABATI TOWN

TITLE No. 4892 MWY
09/01/2023
REGISTERED ON
AT 02.30 P.M
Senior Asst. Registrar of Titles

Land Form no. 22

TANGANYIKA STAMP DUTY ACT
Stamp Duty Shs: 580/=
On Original Receipt No. 923318219442216
of: 14/11/2023
Stamp Duty Officer

TANGANYIKA STAMP DUTY ACT
Stamp Duty Shs: 100/= Paid
Receipt No. 923318219442216
of: 14/11/2023
Stamp Duty Officer

THE UNITED REPUBLIC OF TANZANIA

THE LAND ACT, 1999
(NO.4 OF 1999)

CERTIFICATE OF OCCUPANCY

(Under Section 29)

Title No. 4892 MWY
L. O. No. **1276832**
L.D.No. **BTC/LD/111228**

The 08th day of December Two Thousand and Twenty Three

THIS IS TO CERTIFY that **BABATI TOWN COUNCIL established under Local Government (Urban Authorities) ACT No. 8 of 1982** of P.O. Box 383, **BABATI,** (hereinafter called "the Occupier") are entitled to the Right of Occupancy (hereinafter called "the Right") in and over the land described in the Schedule hereto (hereinafter called "the Land") for a term of **Ninety Nine (99)** years from the **first** day of **October, Two Thousand and Twenty Three** according to the true intent and meaning of the Land Act and subject to the provisions thereof and to any regulations made thereunder and to any enactment in substitution there for or amendment thereof and to the following special conditions:-

1. The Occupiers having paid rent up to the thirtieth day of June, **2024,** shall thereafter pay rent of shillings **Five Thousand (5,000/=) only** a year in advance on the first day of July in every year of the term without deduction **PROVIDED** that the rent may be revised by the **Commissioner for Lands.**

2. The Occupiers shall:-

   (i) Be responsible for the protection of all beacons on the land throughout the term of the Right. Missing beacons will have to be re-established at any time at the Occupier's expenses as assessed by the Director responsible for **Surveys and Mapping.**

(ii) Do everything necessary to preserve the environment and protect the soil and prevent soil erosion of the land and do all things which may be required by the authorities responsible for environment and to achieve such objective.

(iii) Maintain on the land buildings (hereinafter called "the buildings") in permanent materials designed for use in accordance with the conditions of the Right and which conform to the building line(if any) decided by the Babati Town Council (hereinafter called "the Authority")

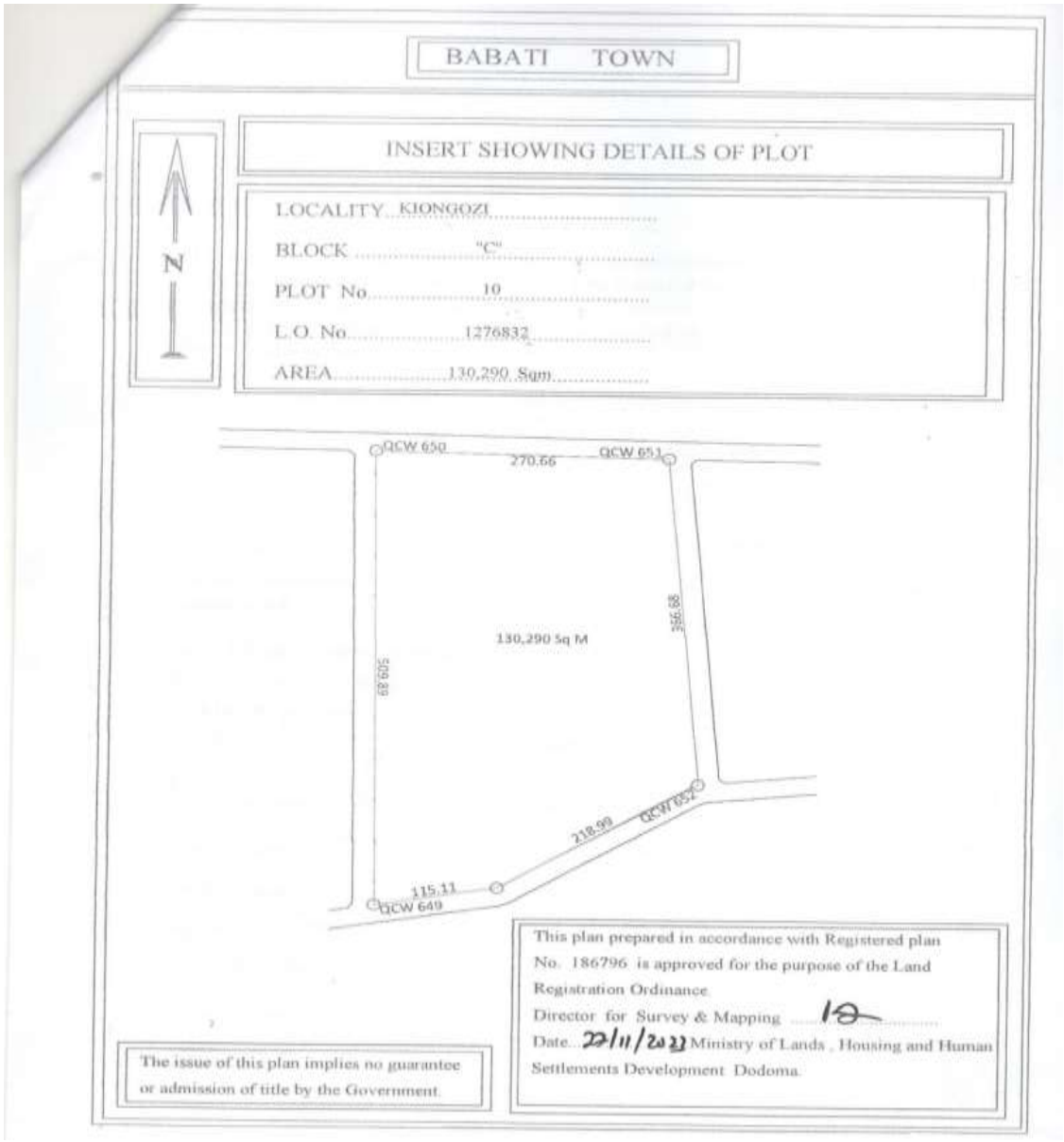
(iv) At all times during the term of the Right have on the land buildings as approved by the Authority and maintain them in good order and repair to the satisfaction of the Commissioner for Lands (hereinafter called "the Commissioner")

3. USER: The land shall be used for **Education Purposes, Use Group 'K' Use class (b)** as defined in The Urban Planning (Use Groups and Use Classes) **Regulations 2018.**

4. The Occupier shall not assign the Right within three years of the date hereof without the prior approval of the Commissioner.

5. The Occupier shall deliver to the Commissioner notification of disposition in prescribed form before or at the time the disposition of carried out together with the payment of all premia, taxes and dues prescribed in connection with that disposition.

6. The **President** may revoke the right for **good cause** and in **public interest.**


BABATI TOWN
INSERT SHOWING DETAILS OF PLOT
N
LOCALITY KIONGOZI
BLOCK "C"
PLOT No. 10
L.O. No. 1276832
AREA 130,290 Sqm
QCW 650
270.66
QCW 651
395.88
130,290 Sq M
509.89
218.99
QCW 652
115.11
QCW 649
This plan prepared in accordance with Registered plan No. 186796 is approved for the purpose of the Land Registration Ordinance.
Director for Survey & Mapping
Date 22/11/2023 Ministry of Lands, Housing and Human Settlements Development Dodoma.
The issue of this plan implies no guarantee or admission of title by the Government.

SCHEDULE

ALL that Land known as Plot No. **10** Block **'C'** situated at **Kiongozi Area** in **Babati Town** containing **One Hundred Thirty Thousand Two Hundred Ninety (130290) square meters** shown for identification only edged **red** on the plan attached to this Certificate and defined on the registered survey plan numbered **186796** deposited at the Office of the Director for Surveys and Mapping at Dodoma.

Given under **my hand** and **my official seal** the day and year first above written.

ASSISTANT COMMISSIONER FOR LANDS

We, the within named **BABATI TOWN COUNCIL, hereby** accept the terms and conditions contained in the foregoing Certificate of Occupancy.

SEALED and **COMMON SEAL** by the said
BABATI TOWN COUNCIL,
DELIVERED in presence of us this 15
day of November **2023.**

Signature.....
Name: UPENDO ERIC MANGALI
Postal Address 383 BABATI
Qualification: TOWN DIRECTOR

Signature.....
Name: ABDULRAHMANI H. KOLOLY
Postal Address 383 BABATI
Qualification: CHAIRMAN

APPENDIX IV: LEASE AGREEMENT OF LAND PROVISION

APPENDIX V: SITE LAYOUT PLAN

JAMHURI YA MUUNGANO WA TANZANIA
OFISI YA RAIS
TAWALA ZA MIKOA NA SERIKALI ZA MITAA

Simu Na: 027-2510066
027-2510075
027-2510060
Nukushi: 027-2510077
Baruapepe: ras@manyara.go.tz
Tovuti: www.manyara.go.tz
Unapojibu tafadhali taja:

Ofisi ya Mkuu wa Mkoa,
Mkoa wa Manyara,
S.L.P. 310,
BABATI.

Kumb.Na. CDA.88/277/01 'C'/7 **24 Desemba, 2020**

Katibu Mkuu,
Ofisi ya Rais – TAMISEMI,
Mji wa Serikali – Mtumba,
Mtaa wa TAMISEMI,
S.L.P 1923,
41185 – DODOMA.

Yah: ENEO LA KUJENGA SHULE YA SEKONDARI YA KITAIFA KWA WASICHANA KUPITIA MRADI WA SEQUIP

Tafadhali husika na mada tajwa hapo juu.

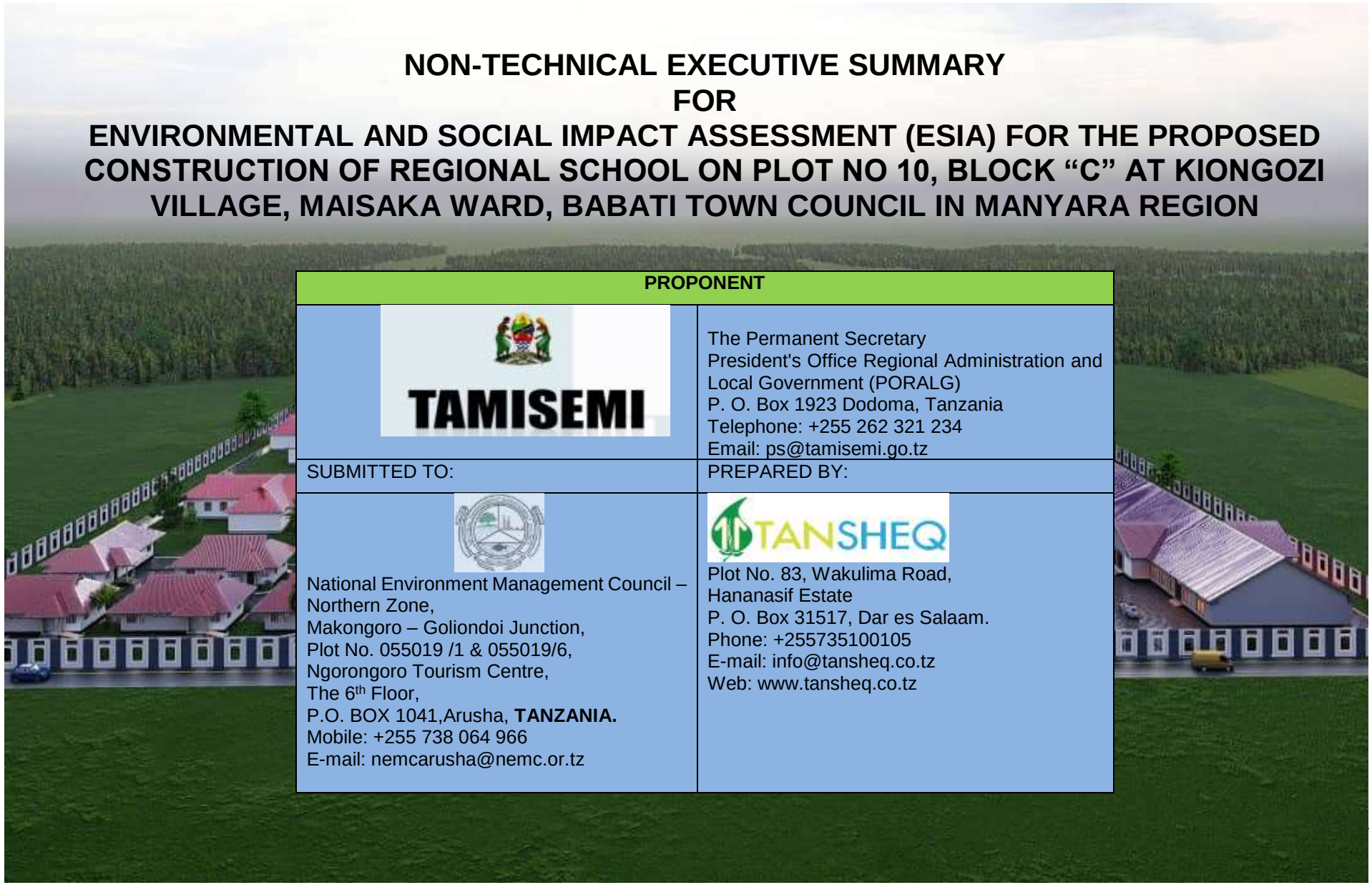
2. Rejea barua yako yenye Kumb.Na. Kumb.Na.DA.291/297/06/61 ya tarehe 16 Novemba, 2020 juu ya mada tajwa hapo juu.

3. Ninapenda kukuarifu kuwa Halmashauri ya Mji wa Babati imeteuliwa kwa ajili ya kujenga shule hiyo. Eneo lililotengwa ni HANADECO. Eneo hili linakidhi vigezo vyote vilivyoainishwa kwenye barua yako na mwongozo wa usajili wa shule uliotolewa na Wizara ya Elimu Sayansi na Teknolojia.

4. Ninawasilisha kwa hatua zako.

M.A.R Musa
KATIBU TAWALA (M)

NON-TECHNICAL EXECUTIVE SUMMARY
FOR
ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) FOR THE PROPOSED CONSTRUCTION OF REGIONAL SCHOOL ON PLOT NO 10, BLOCK "C" AT KIONGOZI VILLAGE, MAISAKA WARD, BABATI TOWN COUNCIL IN MANYARA REGION



PROPONENT	
TAMISEMI	The Permanent Secretary President's Office Regional Administration and Local Government (PORALG) P. O. Box 1923 Dodoma, Tanzania Telephone: +255 262 321 234 Email: ps@tamisemi.go.tz
SUBMITTED TO:	PREPARED BY:
National Environment Management Council – Northern Zone, Makongoro – Goliondoi Junction, Plot No. 055019 /1 & 055019/6, Ngorongoro Tourism Centre, The 6th Floor, P.O. BOX 1041,Arusha, **TANZANIA.** Mobile: +255 738 064 966 E-mail: nemcarusha@nemc.or.tz	TANSHEQ Plot No. 83, Wakulima Road, Hananasif Estate P. O. Box 31517, Dar es Salaam. Phone: +255735100105 E-mail: info@tansheq.co.tz Web: www.tansheq.co.tz

Introduction

The Government of United Republic of Tanzania (URT) in collaboration with the World Bank has prepared the Secondary Education Quality Improvement Project (SEQUIP). The objectives of SEQUIP are to increase access to secondary education, provide responsive learning environments for girls and improve completion of quality secondary education for girls and boys. In summary, activities under SEQUIP will be structured into four main components:

Component 1: Empowering Girls through Secondary Education and Life Skills
1.1 Creating Safe Schools: Implementation of the Safe Schools Program including:

vii. Trained school guidance and counselling teachers;
viii. Students' life skills training through girls' and boys' clubs by the guidance and counselling teachers; In-service training of secondary school teachers on the teacher code of conduct and gender sensitive pedagogical approaches;
ix. Training of school heads and School Boards on GBV, safe school issues etc.;
x. School and classroom monitoring system for early identification of and intervention on girls at risk of drop out; and
xi. Community-based mechanism for safe passage to school.

1.2 Promoting Girls' Completion of Secondary Education through Quality Alternative Education Pathways including:

vi. Setting up an ICT-enabled system for tracking girls dropping out at national and district level to provide key information for AEP planning and implementation.
vii. Alternative Education Centers and LGAs undertaking local outreach activities to out-of-school girls in the community which will include activities such as AEP center-organized community meetings, information via local radio, flyers and brochures.
viii. Enhancing access to Alternative Education Pathways through (i) expansion of the network of AEP centers; and (ii) tuition fee subsidies for vulnerable girls.
ix. A quality package for strengthening student learning in Alternative Education Pathways will also be implemented
x. Environmental and Social Management Framework –Tanzania - Secondary Education Quality Improvement Project (SEQUIP)

Component 2: Digitally Enabled Effective Teaching and Learning
2.1 Effective Teaching and Learning

v. Minimum package of critical teaching and learning resources for all schools: This package consists of an adequate number of textbooks and teacher guides in core subjects (English, Math and Sciences).
vi. Equitable, gender-balanced teacher deployment to schools
vii. In-service teacher training/continuous professional development (CPD) to improve classroom teaching practice for secondary English, Mathematics and Science teachers
viii. Evaluate student learning in lower secondary to provide opportunities for remedial use: to allow for targeted early intervention to prevent girl dropout due to learning difficulties

2.2 Digitally-enabled Teaching of Math Sciences and English:

iii. Development of an ICT in Education Strategy and plan for secondary education.
iv. Digital content and connectivity package to facilitate the teaching of English, Mathematics and Science in phases.

Component 3: Reducing Barriers to Girls' Education through Facilitating Access to Secondary Schools

Expansion of the secondary school network to substantially reduce the distance to secondary schools through an expansion of the secondary school network, especially in rural areas. SEQUIP will disburse project funding on the basis of the number of schools in each LGA meeting minimum infrastructure standards

Support upgrading existing secondary schools with the minimum infrastructure package (number of classrooms/students, adequate WASH facilities; multi-purpose science labs, electricity, etc.) with the objective is that at least 50 percent of all existing schools in all LGAs will meet the minimum standards set.

Component 4: Technical Assistance, Impact Evaluation and Project Coordination Environmental and Social Management Framework –Tanzania - Secondary Education Quality Improvement Project (SEQUIP). SEQUIP will be jointly implemented by the Ministry of Education, Science and Technology (MoEST) and the President's Office, Regional Administration and Local Government (PO-RALG).

Tansheq Limited, a NEMC registered environmental consulting firm with offices at House No. 83 Wakulima/Ngano Rd, Hananasif Estate and P.O. Box 31517 Dar es Salaam, has been contracted by Po-RALG as Implementing Supporting Team (IST).

Project Location and Accessibility

The proposed project site is administratively located at Kiongozi village, Maisaka ward in Babati Town Municipal- Manyara Region and is bordered by individual owned farm to the West, South and East, However in North the proposed site is bordered by Babati Arusha Road and there is seasonal river, crossing at the middle of the proposed land.

The proposed site is accessible through Babati Arusha Road 14km from Babati Town toward Arusha in Kiongozi Village with coordinate -4.201839, 35.75090.

Project Description

The school construction and design will consist of a required infrastructure package based on the school construction and maintenance strategy (e.g. number of classrooms/students, adequate WASH facilities, especially important for girls; multi-purpose science labs, electricity, etc.). The construction package will involve the following buildings;

Classrooms

The classrooms are designed following Education Bulletin number 1 of 2007 that directs capacity of each classroom level, 30 students for advance and 40 students for ordinary level. However, schedule of materials indicates each classroom will be having capacity of 40 students.

Construction will be undertaken in two phases. The first phase will involve construction of 12 classrooms within six blocks followed by the second phase that will involve the construction of 6 classrooms which will be of 3 different designs (2 classrooms with office, 2 classrooms with toilet and a 2 classrooms block).The proposed project development will adhere to the fire and rescue force directives for public premises.

The Education Global Practice Africa Region report prepared by World Bank provides the following directives; Student classroom ratios of 50:1 or less, student to functioning latrine ratio of 25:1 for girls and 30:1 for boys, at least one multipurpose science laboratory, student textbook ratios in mathematics and science subjects of 1:1, teacher: teacher guide availability of 2:1.

Laboratories

Education Bulletin number 1 of 2007 explain the capacity and set up of laboratory building for each level is 40 students, The scheduling of materials will adhere the bulletin as the following laboratory rooms will be constructed;

- Physics and geography lab
- Chemistry and biology lab,
- ICT room which is to be constructed in the second phase, and
- Domestic science

Administration block

The bulletin indicate for the school having capacity of 1000 student plus need to have not less than 40 teachers excluding other staffs such as school bursar, secretary etc. The administrative building will be constructed as an elevated building whereas only one (1) building will be constructed.

Toilets

The proposed toilet facility will comprise of one block with 16 holes to be constructed standalone as scheduling shows with estimates of one (1) hole for twenty (20) people, nevertheless, some of classrooms will be having sanitary rooms as designed, dormitory, and dining hall will also be having sanitary rooms.

The development of sanitary facilities is necessary to ensure the surrounding environment is well-managed and ensuring social well-being and practical operation of the school since human dignity is directly linked to access of safety and hygienic sanitation.

Dining hall

The Dining Hall is a pivotal gathering space on School's campus and is emblematic of The Family Boarding School ideal. The school will be having enough dinning space to all students since it is a boarding school thus meal will be served. According to the designs of the dining hall, it has the capacity of 2000 students.

Staff houses

The teachers' houses are designed to attract teachers out to the countryside, as well as to increase teachers morally to perform their duties unlike if they are

coming far from the school. The design considers the staff house to have one (1) master bedroom, two (2) bedrooms/ one (1) master bedroom, three (3) bedrooms with Public toilet, Sitting room/dining, Kitchen and Store. Four (4) of the staff houses will be constructed.

Dormitories

Dormitories are places where students stay. The student housing must also aim to provide healthy and acoustically pleasant environments for the protection, comfort, and productivity of the students. The dormitories are designed as per provided to meet the SEQUIP objectives having a capacity to accommodate 120 students. For phase one five (5) buildings will be constructed while for phase two four (4) buildings.

Library

The library is important because it affects cultures, it affects innovation, and it affects individuals. Because of all this, library architecture has the responsibility to enhance these effects by providing a knowledge center that is inspirational and conducive to good communication and teaching interactions.

According to designs, the library to be constructed will accommodate 52 students for readings and the computer learning room will accommodate 8 students.

Sick bay

A sick bay provides a dedicated space for students who may feel unwell or require immediate medical attention. It will serve as a primary point of care within the school premises, allowing for timely assessment and treatment of minor illness or injuries.

Incinerator

This will provide a safe and efficient men of disposing waste specifically biomedical waste such as used sanitary pads, medical supplies and other potentially hazardous materials.

Other components that will be constructed within school compounds area are Playgrounds, Water tunnel, Water tank (hippo) and its pillars), Manhole and gully trap, Walkway & Paving.

Project activities

7 Main activities of the project include preconstruction, Construction, Operations, and decommissioning.

Mobilization phase/Pre-Construction Activities

The mobilization phase of the project, which is estimated to take average of maximum three months, will entail the following activities:

- Establishment of construction of camps, material and equipment storage areas, materials processing yards, including sanitation facilities. The following activities will be involved during establishment of the camp.
    - Bush clearing.
    - Construction of Material and equipment storage areas
    - Construction of sanitation facilities
    - Installation of electrical infrastructure
    - Installation of water and wastewater infrastructure
- Identification of naturally-occurring material borrow sites (sand, fill, gravel borrow and quarry sites),
- Identification of sources of water for domestic and construction works

Construction Phase

The construction phase of the project, which is estimates to take 12 month for each of the phase one and will encompass following major activities:

- Earth works to facilitate widening and re-alignment of the road. Earth works will entail the following activities:
    e) Clearing and grubbing (clearing of vegetation, including trees).
- Extraction of naturally occurring construction materials. This will include:
    f) Excavation and transport of natural sand, gravel, and sub-base materials to construction sites
    g) Stone quarrying (including blasting), crushing and transport of crushed aggregates to construction sites
    h) Transport and handling of fuel, lubricants etc. from their sources to the project site
- Transport of construction materials from source to site such as roof, steel, woods, nails, rope

Operation phase

The maintenance activities of the Overall, SEQUIP will contribute to increasing total enrolment in secondary school by 1.8 million students and increase the number of girls graduating from both secondary schools and alternative secondary education pathways.

Decommissioning Phase

After completion of construction, all the utilities which were used shall be reverted to the Municipal Director who will decide on their future use. The main activities during demobilization phase, will engross the following:

- Collection and disposal of storage facilities such as pallets, packing, boxes
- Collection and disposal of construction materials and waste such as waste oil, sewage, solid waste (plastics, wood, metal, papers, etc.) at the workshop, site office etc. to authorized dumpsite
- Restoration of material borrows areas to safer condition

Project Cost

Total Project Cost is four billion Tanzanian shillings

Legal Framework

Relevant sectorial and cross–sectorial policies that provide directives on how projects should be operated In/on concerned natural resources and sensitive ecosystems are:

viii. The National Energy Policy,2015
ix. Education and training policy,2014
x. The National Environmental Policy, 2021
xi. The Occupational Health And Safety Policy 2009
xii. The National Employment Policy, 2008
xiii. The National Research And Development Policy, 2010
xiv. The National Biotechnology Policy,2010

Key legislation, which PO-RALG must adhere to during implementation of this project, includes:

XVIII. The Education Act, Cap.353.
XIX. The Law Of The Child Act, Cap. 13 R.E 2019
XX. The Engineers Registration Act, Cap 63
XXI. The Architects And Quantity Surveyors Act, Cap 267
XXII. The Workers Compensation Act, Cap 263
XXIII. The Persons With Disabilities Act, Cap 183
XXIV. The Occupier Liability Act, Cap 64
XXV. The standard Act, Cap. 130
XXVI. The Environmental Management Act, Cap 191
XXVII. The Water Resources Management Act, Cap 331
XXVIII. The Forest Act, Cap 323 R.E 2022
XXIX. The Electricity Act, Cap 131
XXX. The Local Government (District Authorities) Act, Cap,287
XXXI. The Local Government (Urban Authorities) Act, Cap,288
XXXII. The Fire And Rescue Force (Safety Inspection And Certificates) Regulations, 2008 As Amended In 2017
XXXIII. The Fire And Rescue Force (Fire Precautions In Buildings) Regulations, 2015
XXXIV. The Environmental Management (Control And Management Of Electrical And Electronic Equipment Waste) Regulations, 2021

Stakeholder Involvement and Participation

The Consultants identified organizations, groups, and individuals considered to be key stakeholders that Might be impacted by the project components or have influence on the project.

- Region Academic Officer, (RAO), Regional Community Development Officer (RCDO).
- District Executive Director (DED) in Karagwe District, District Environmental Management Officer (DEMO) and District Secondary Education Officer (DSEO)
- Ward Exevutive Officer (WEO)
- Rwambaizi village chairperson
- Local Fundi

Stakeholders Opinions and Concerns

The stakeholder consultations identified both positive opinions and negative concerns. Stakeholders had positive opinions of the project in terms of:

- Education opportunities to the specific project area and surrounding communities
- Rising of Chemchem Ward's economy as a result of population increase

Halfani O. Masukira, On behalf of the Manyara officials, the project team in Municipal is opt to ensure everything goes smoothly and the school starts on time.

A social worker should make sure there are no grievances during construction and the area and around the school. Contractor should increase speed of construction so as the school to start operation. Also Babati Town Council commented that the project is good and it will enhance education growth and development among the cattle breeding community, and will motivate young girls to attend school

ENVIRONMENTAL AND SOCIAL IMPACTS

The following impacts were identified in the various project development stages such as mobilization and construction, operational as well as decommissioning stage. These impacts were as follows:

Mobilization/Construction Stage:

- Loss/disturbance of biodiversity and threatened species
- Atmospheric emissions from engines of vehicles
- Dust and noise pollution from mobilization vehicles.
- Public health hazards and safety from construction of supportive infrastructure.
- Land disturbance.
- Roads accidents of the moving vehicles

Operation Stage:

- Disruption of air quality from emissions of exhaust and fugitive gases
- Disturbance to surrounding communities due to increased noise levels
- Aesthetic degradation, environmental pollution and outbreak of diseases and injuries due to improper management of surrounding hazardous and non-hazardous solid waste materials
- General health and safety impacts
- Increased population density

Socio – Economic Aspects:

- A more educated workforce in the country
- Decrease in unemployment rates
- Increase in income levels resulting to benefit to the government from taxes provided
- Women empowerment
- A more balanced and diverse demographic landscape with improved gender representation and opportunities for women in the respective regions and country

Decommissioning Stage:

- Abandoned infrastructure.
- Unemployment.
- Loss of revenue to the government

Enhancement of Positive Socio-Economic Impacts:

- Employment and training especially during construction
- Increased income/revenue/induced development.
- Increased income by utilization of local resources.
- Support to local social services and livelihood.

PROJECT ALTERNATIVES ANALYSIS

Different options were considered for the project. Analysis of alternatives compares reasonable alternatives to the proposed project site, technology, design, and operation in terms of their potential environmental and social impacts; the feasibility of mitigating these impacts; their capital and recurrent costs; their suitability under local conditions; and their institutional, training, and monitoring requirements.

It also states the basis for selecting the particular project designs proposed and justifies recommended emission levels and approaches to pollution prevention and abatement.

Alternatives considered for this project were the following

a) No-Go alternative,
b) Design and technological considerations
c) Location alternative
d) Energy alternative
e) Water alternative

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

The Environmental Impact Assessment for the proposed construction of Regional Girls Secondary School, has identified a number of impacts that are likely to arise during construction and operation stage of the proposed project.

The EIA has examined bio-physical, socio-economic and cultural effects of the proposed activity from site clearance, school construction and the school operation.

The real benefits of the proposed project can result only if the risks of the identified adverse impacts are minimized. This can be accomplished through implementation of adequate preventive and mitigation measures by formulating policies to cover them accordingly.

Environmental Management Policy

This will ensure that Project management and staffs are carrying out their activities with the highest regard to the natural environment and sustainable utilization of environmental resources therein. The policy should therefore cover the following, among other issues:

- Ensure that all Project activities operate within legal requirements of all relevant national legislation
- That there are continuous environmental improvement and performance through monitoring of Project activities;
- Ensure that utilization of natural resources is optimal with measures in place to ensure resource availability for future generation;
- Awareness creation to the surrounding community regarding sustainable utilization of natural resources, protection of sensitive ecosystems and bio-diversity maintenance for communal livelihood; and
- Balancing between natural resource use, environmental conservation and economic development.

Occupational Health and Safety Policy

It is developed for this project so as enable establishment of appropriate measures that ensure that the health, safety and welfare of all users is cared for as well as the health requirements of the local community in which the project is located. The policy should highlight on the following, among others:

- Medical examination of workers;
- Sanitation in the Project area;
- Proper liquid and solid waste management and disposal;
- Emergency preparedness;
- Fire safety;
- Necessity and availability of personal protective equipment
- Risk minimization of accidental damage to the community and environment

Community Relations Policy

The Local Community Policy are developed by management of the Project to ensure that the management of the project develops and maintains sound relations with all stakeholders on mutual respect and active partnership. The policy should highlight on ways the management should:

- Work with the local community and relevant government departments and agencies to achieve sustainability of the project;
- Come up with ways of enhancing information flow from management to the community and Project stakeholders, and vice versa;
- Community capacity building; and
- Active engagement of the local community in all Project activities that impact on the local community.

With regard to environmental management during the pre-construction, construction, operation and decommissioning phase of the project, the principal responsibilities of each party as described below. For certain aspects of the programme, assistance will be needed from the Local Government Authorities and the NEMC (mainly in the form of guidance and advice and in project monitoring).

ENVIRONMENTAL MONITORING PLAN

This report contains a detailed plan to monitor the implementation of mitigation measures and the impacts of the project during its execution. This plan includes a cost estimate for carrying out the proposed monitoring plan.

COST BENEFIT ANALYSIS AND RESOURCES EVALUATION

Environmental cost benefit analysis is assessed in terms of the negative and positive impacts. Furthermore, the analysis is considering whether the impacts are mitigatable and the costs of mitigating the impacts are reasonable. As it has been mentioned in Chapters 7 and 8, the potential benefits of the project, in terms of economic advancement and social benefit are substantial.

The environmental impacts are reasonably mitigatable. So to mitigate negative impacts, when compared to the required data are relatively small.

Social Cost Benefit Analysis

The benefits from project development can be judged in terms of employment, social welfare, education development, infrastructure development and the local economy (wages, goods and services). Thus, there will be a substantial spread of the benefit within the community through the provision of food, accommodation and other regular services to the employees and students.

Furthermore, the upgrading, development and maintenance of local infrastructure are benefits that will extend far beyond the project's scope and lifetime.

DECOMMISSIONING

Decommissioning is the last phase of project life. It involves terminating project activities and operations and rehabilitating site to or close to its original state. It is anticipated that the project shall continue as long as there is a demand for a project, however, individual components of the project shall be decommissioned as need be.

CONCLUSION

The project will have both positive and negative impact to the environment and the local communities along it. Measures have been proposed to enhance impacts which are positive to the environment and the local people.

For those impacts that are negative, mitigation measures have been proposed to avoid or abate them to the extent possible for the purpose of maximizing benefits of the school project and minimizing detriments of the project intervention to the communities.

Overall, the project shall act as a catalyst for positive change in the surrounding communities by improving education, infrastructure and social well-being, and by involving and engaging the local residents, the project can have a lasting impact and contribute to the overall development of the region.

MUHTASARI

UTANGULIZI

Serikali ya Jamhuri ya Muungano wa Tanzania (JMT) kwa kushirikiana na Benki ya Dunia wameandaa Mradi wa Kuboresha Ubora wa Elimu ya Sekondari. Lengo la mradi huu ni kuongeza upatikanaji wa elimu ya sekondari, kutoa mazingira bora ya kujifunzia kwa wasichana na kuboresha uhitimu wa elimu ya sekondari kwa wasichana na wavulana. Kwa ufupi, Mradi huu utajumuishwa katika sehemu kuu nne:

Sehemu ya 1: Kuwawezesha Wasichana kupitia Elimu ya Sekondari na Ujuzi wa Maisha

1.1 Kuunda Shule Salama: Kutekeleza Programu ya Shule Salama ikiwa ni pamoja na:

i. Walimu wa ushauri;

ii. Mafunzo ya stadi za maisha kwa wanafunzi kupitia klabu za wasichana na wavulana zinazoendeshwa na walimu wa ushauri; Mafunzo ya walimu wa shule za sekondari kuhusu kanuni za tabia na njia za ufundishaji zenye kuzingatia usawa wa kijinsia;

iii. Mafunzo ya viongozi wa shule na Bodi za Shule kuhusu Ukosefu wa usawa wa kijinsia, masuala ya shule salama nk.

iv. Mfumo wa ufuatiliaji wa shule na darasa kwa kutambua mapema na kuingilia kati kwa wasichana waliohatarini kuacha shule; na

v. Mfumo wa jamii kwa ajili ya njia salama ya kufika shuleni.

1.2 Kuchochea Uhitimu wa Wasichana wa Elimu ya Sekondari kupitia Njia za Elimu Mbadala Bora, ikiwa ni pamoja na:

i. Kuweka mfumo ulio na teknolojia ya habari na mawasiliano (ICT) wa kufuatilia wasichana wanaoacha shule kwa kiwango cha kitaifa na wilaya ili kutoa taarifa muhimu kwa ajili ya kupanga na utekelezaji wa Programu ya Elimu Mbadala.

ii. Vituo vya Elimu Mbadala na Halmashauri za Wilaya kufanya shughuli za kuwafikia wasichana ambao hawako shuleni katika jamii, ambazo zitajumuisha shughuli kama vile mikutano ya jamii iliyoandaliwa na vituo vya Programu ya Elimu Mbadala, taarifa kupitia redio za ndani, vipeperushi na brosha.

iii. Kuongeza upatikanaji wa Programu za Elimu Mbadala kupitia (i) upanuzi wa mtandao wa vituo vya Programu ya Elimu Mbadala; na (ii) ruzuku ya ada ya masomo kwa wasichana walio katika mazingira hatarishi.

iv. Pia kuwepo kwa mfuko wa ubora wa kuimarisha ufunzaji kwa wanafunzi katika Programu za Elimu Mbadala

v. Mfumo wa Usimamizi wa Mazingira na Jamii - Tanzania - Mradi wa Kuboresha Ubora wa Elimu ya Sekondari (SEQUIP)

Sehemu ya 2: Ufundishaji na Ujifunzaji Ulionaswa Kwa Kutumia Teknolojia

2.1 Ufundishaji na Ujifunzaji Uliofaa

i. Vifurushi vya chini vya rasilimali muhimu za kufundishia na kujifunzia kwa shule zote: Kifurushi hiki kinajumuisha vitabu vya kutosha na miongozo ya walimu katika masomo ya msingi (Kiingereza, Hisabati na Sayansi).

ii. Upangaji wa walimu wenye usawa na usawa wa kijinsia katika shule.

iii. Mafunzo ya walimu katika utumishi/ukufunzi wa kitaaluma (CPD)

iv. Kuimarisha mazoezi ya ufundishaji darasani kwa walimu wa Kiingereza, Hisabati na Sayansi katika shule za sekondari.

v. Kuchunguza ujifunzaji wa wanafunzi katika elimu ya sekondari ya chini ili kutoa fursa za matumizi ya marekebisho: ili kutoa fursa ya kuingilia kati kwa lengo la kuzuia wasichana kuacha shule kutokana na ugumu wa kujifunza.

2.2 Ufundishaji kwa Kutumia Teknolojia ya Mawasiliano na Habari katika Hisabati, Sayansi na Kiingereza:

i. Kuandaa Mkakati na mpango wa Teknolojia ya Habari na Mawasiliano katika Elimu ya Sekondari.

ii. Kifurushi cha maudhui ya kidijitali na huduma za mawasiliano kufanikisha ufundishaji wa Kiingereza, Hisabati na Sayansi kwa awamu.

Sehemu ya 3: Kupunguza Vizuizi vya Elimu ya Wasichana kwa Kurahisisha Upatikanaji wa Shule za Sekondari Upanuzi wa mtandao wa shule za sekondari ili kupunguza umbali kwa kiasi kikubwa kwa shule za sekondari kwa njia ya kupanua mtandao wa shule za sekondari, hasa katika maeneo ya vijijini.

Mradi huu utatoa ufadhili wa mradi kulingana na idadi ya shule katika kila Halmashauri inayokidhi viwango vya miundombinu ya chini kusaidia kuboresha shule za sekondari zilizopo na mpango wa miundombinu ya chini (idadi ya madarasa/wanafunzi, miundombinu ya kutosha; maabara za sayansi za shughuli mbalimbali, umeme, nk.) kwa lengo la kuhakikisha kuwa angalau asilimia 50 ya shule zote zilizopo katika Halmashauri zote zinakidhi viwango vya chini vilivyowekwa.

Sehemu ya 4: Msaada wa Kiteknolojia, Tathmini ya Athari, na Ushirikiano wa Mradi Mfumo wa Usimamizi wa Mazingira na Jamii – Tanzania - Mradi wa Kuboresha Ubora wa Elimu ya Sekondari. Mradi huu utatekelezwa kwa pamoja na Wizara ya Elimu, Sayansi na Teknolojia na Ofisi ya Rais, Tawala za Mikoa na Serikali za Mitaa (TAMISEMI).

Tansheq Limited, kampuni ya inayojishughulisha na ushauri elekezi wa mazingira iliyosajiliwa na Baraza la Taifa la Uhifadhi na Usimamizi wa Mazingira, yenye ofisi zake katika mkoa wa Dar es Salaam , S.L.P 31517, Dar es Salaam, imeingia mkataba na TAMISEMI kwa ajili ya utekelezaji wa kufanya tathmini ya Athari ya Mazingira.

Eneo la Mradi

Eneo lililopendekezwa la mradi lipo katika Kiongozi village, Maisaka ward ndani ya Babati Town Manisipaa- Mji wa Manyara imezungukwa na mashamba ya wananchi na kuna mto wa msimu unaokatisha katikati ya eneo husika.

Eneo lililopendekezwa linaweza kufikiwa kupitia barabara ya Babati Arusha. Eneo la mradi lipo umbali wa takriban kilomita 14 kutoka Babati Town kufika Kiongozi village. Anuani ya kijiographia -4.201839, 35.75090

Maelezo ya Mradi:

Ujenzi na ubunifu wa shule utajumuisha mfuko wa miundombinu uliohitajika kulingana na mkakati wa ujenzi na matengenezo ya shule (k.m. idadi ya madarasa/wanafunzi, miundombinu ya maji inayotosha, hasa muhimu kwa wasichana; maabara ya sayansi ya matumizi mbalimbali, umeme, nk.). Mfuko wa ujenzi utahusisha majengo yafuatayo.

Madarasa

Madarasa yameundwa kufuatana na Kanuni za Elimu namba 1 ya mwaka 2007 ambazo zinaelekeza uwezo wa kila darasa, wanafunzi 30 kwa darasa la juu na wanafunzi 40 kwa darasa la kawaida. Hata hivyo, ratiba ya vifaa inaonyesha kila darasa litakuwa na uwezo wa wanafunzi 40.

Ujenzi utafanyika kwa awamu mbili. Awamu ya kwanza itahusisha ujenzi wa madarasa 12 katika majengo sita, ikifuatiwa na awamu ya pili ambayo itahusisha ujenzi wa madarasa 6 ambayo yatakuwa na miundo tofauti (madarasa 2 yatakuwa na ofisi, madarasa 2 yatakuwa na choo, na majengo 2 ya madarasa). Maendeleo ya mradi yaliyopendekezwa yatazingatia maelekezo ya idara ya zimamoto na uokoaji kwa majengo ya umma.

Maabara

Kanuni za Elimu namba 1 ya mwaka 2007 inaelezea kuwa uwezo na muundo wa majengo ya maabara kwa kila ngazi ni wanafunzi 40. Ratiba ya vifaa itazingatia kanuni hiyo na maabara zifuatazo zitajengwa:

• Maabara ya Fizikia na Jiografia
• Maabara ya Kemia na Biolojia
• Chumba cha Teknolojia ya Habari na Mawasiliano ambayo itajengwa katika awamu ya pili.

Jengo la Utawala

Kanuni inaonyesha kuwa shule yenye uwezo wa wanafunzi 1000 au zaidi inapaswa kuwa na walimu wasiopungua 40 bila kuhesabu wafanyakazi wengine kama mhasibu wa shule, katibu, nk. Jengo la utawala litajengwa kama jengo lililoinuliwa ambapo jengo moja tu litajengwa.

Vyoo

Muundo wa choo uliopendekezwa utajumuisha jengo moja lenye mashimo 16 ambalo litajengwa kama jengo huru na kila shimo moja kwa watu ishirini (20). Vyoo vingine vitajengwa kwenye majengo ya madarasa, mabweni na sehemu ya chakula.

Maendeleo ya miundombinu ya vyoo ni muhimu kuhakikisha mazingira yanayozunguka yanadhibitiwa vizuri na kuhakikisha ustawi wa kijamii na uendeshaji wa shule kwa kuwa utu wa binadamu unahusiana moja kwa moja na upatikanaji wa vyoo salama na safi.

Chumba cha Chakula

Chumba cha chakula ni nafasi muhimu ya kukusanyika kwenye eneo la shule na ni ishara ya wazo la Shule ya Bweni kama familia. Shule itakuwa na nafasi ya kutosha ya chakula kwa wanafunzi wote kwa kuwa ni shule ya bweni hivyo chakula kitahudumiwa. Kulingana na muundo wa chumba cha chakula, kinaweza kuhudumia wanafunzi 2000.

Nyumba za wafanyakazi

Nyumba za walimu zimeundwa ili kuwavutia walimu kuishi vijijini, pamoja na kuongeza motisha kwa walimu kutekeleza majukumu yao kuliko wakija kutoka mbali na shule. Muundo unazingatia kuwa nyumba za wafanyakazi zitakuwa na vyumba vitatu vya kulala / vyumba vinne vya kulala vyenye choo cha umma, sebule/jiko, chumba cha kulia na ghala. Nyumba nne (4) za wafanyakazi zitajengwa.

Mabweni

Mabweni ni sehemu ambapo wanafunzi wanakaa. Makazi ya wanafunzi lazima pia yalenge kutoa mazingira yenye afya na sauti nzuri kwa ulinzi, faraja, na ufanisi wa wanafunzi. Mabweni yameundwa kulingana na malengo ya SEQUIP na kwa uwezo wa kuhifadhi wanafunzi 120. Katika awamu ya kwanza, majengo matano (5) yatajengwa, wakati katika awamu ya pili, majengo manne (4) yatajengwa.

Maktaba

Maktaba ni muhimu kwa sababu inaathiri utamaduni, inaathiri ubunifu, na inaathiri watu binafsi. Kwa sababu ya hayo yote, usanifu wa maktaba una wajibu wa kuimarisha athari hizi kwa kutoa kituo cha maarifa ambacho kinatoa hamasa na kinafaa kwa mawasiliano bora na mwingiliano wa kufundisha.

Kulingana na miundo, maktaba itakayojengwa itakuwa na uwezo wa kuhudumia wanafunzi 52 kwa ajili ya kusoma, na chumba cha kujifunzia kompyuta kitakachohudumia wanafunzi 8.

Chumba cha huduma za afya

Chumba cha Huduma za Afya kwa Wanafunzi Wagonjwa hutoa nafasi maalum kwa wanafunzi ambao wanaweza kujisikia vibaya au wanahitaji huduma ya matibabu ya haraka. Itatumika kama kituo kikuu cha huduma ndani ya eneo la shule, kuruhusu tathmini na matibabu ya wakati unaofaa kwa magonjwa madogo au majeraha.

Kichomea taka

Kichomea taka hiki kitatoa njia salama na yenye ufanisi ya kuharibu taka, hasa taka za kitabibu kama vile pedi zilizotumika, vifaa vya matibabu, na vifaa vingine hatari.

Vipengele vingine vitakavyojengwa ndani ya eneo la shule ni Maeneo ya Kuchezea, Mtaro wa Maji, Tangi la Maji (Tangi la maji 'hippo' na nguzo zake), Mfereji wa Maji, Njia za Kutembelea.

Shughuli za Mradi

Shughuli kuu za mradi zinajumuisha maandalizi kabla ya ujenzi, ujenzi, uendeshaji, na kufunga mradi..

Maandalizi kabla ya ujenzi

Maandalizi kabla ya ujenzi, ambayo yanakadiriwa kuchukua muda wa kati ya miezi mitatu, yatajumuisha shughuli zifuatazo:

- Kuanzishwa kwa kambi za ujenzi, maeneo ya kuhifadhi vifaa, maeneo ya usindikaji vifaa, pamoja na miundombinu ya vyoo. Shughuli zifuatazo zitahusika wakati wa kuanzisha kambi:

    - Kufyeka vichaka.
    - Ujenzi wa maeneo ya kuhifadhi vifaa.
    - Ujenzi wa miundombinu ya vyoo.

- Ufungaji wa miundombinu ya umeme.
- Ufungaji wa miundombinu ya maji na maji taka.

- Kutambua maeneo ya asili ambapo vifaa vinaweza kupatikana (kama vile mchanga, kifusi, na jiwe kutoka kwenye machimbo),
- Kutambua vyanzo vya maji kwa ajili ya matumizi ya kazi za ujenzi.

Hatua ya Ujenzi

Hatua ya ujenzi ya mradi, ambayo inakadiriwa kuchukua miezi 12 kwa kila awamu ya kwanza, itajumuisha shughuli kuu zifuatazo:

- Uundaji wa ardhi ili kurahisisha upanuzi na urekebishaji wa barabara. Kazi za uundaji wa ardhi zitajumuisha shughuli zifuatazo:

  a) Kufyeka na kutoa mizizi (kuondoa mimea, ikiwa ni pamoja na miti).

- Kupata vifaa vya ujenzi. Hii itajumuisha:

  i) Kuchimba na kusafirisha mchanga, kifusi, na vifaa vingine kwa ajili ya msingi wa ujenzi kwenye maeneo ya ujenzi.
  ii) Kuchimba mawe (ikiwa ni pamoja na kulipua), kuyavunja na kusafirisha vifusi vilivyovunjwa kwenye maeneo ya ujenzi.
  iii) Kusafirisha na kushughulikia mafuta, mafuta ya kupaka, n.k. kutoka vyanzo vyao hadi eneo la mradi.
- Kusafirisha vifaa vya ujenzi kutoka chanzo hadi eneo la ujenzi kama vile bati, chuma, mbao, misumari, kamba, nk.

Muhula wa Utekelezaji

Shughuli za matengenezo za SEQUIP zitachangia kuongeza idadi ya wanafunzi wanaojiandikisha katika shule za sekondari kwa wanafunzi milioni 1.8 na kuongeza idadi ya wasichana wanaohitimu kutoka shule za sekondari na njia mbadala za elimu ya sekondari.

Muhula wa Kufuta Kazi

Baada ya kukamilika kwa ujenzi, vifaa vyote vilivyotumiwa vitarejeshwa kwa Mkurugenzi wa Mji ambaye atafanya uamuzi juu ya matumizi yao ya baadaye. Shughuli kuu wakati wa awamu ya kufuta kazi zitajumuisha yafuatayo:

• Ukusanyaji na kuteketeza vifaa vya kuhifadhi kama vile pallets, pakiti, masanduku

• Ukusanyaji na kuteketeza vifaa na taka za ujenzi kama vile mafuta machafu, maji taka, taka ngumu (plastiki, kuni, metali, karatasi, nk) katika karakana, ofisi za eneo la kazi, n.k. kwenye dampo rasmi

• Kurudisha maeneo ya kukopa vifaa katika hali salama

Gharama za Mradi

Gharama Jumla ya Mradi ni shilingi bilioni nne za Kitanzania.

Mfumo wa Kisheria

Sera muhimu za kisekta na za kuvuka sekta ambazo zinatoa maelekezo juu ya jinsi miradi inavyopaswa kuendeshwa kuhusiana na rasilimali za asili na mifumo inayoteketezwa kwa urahisi ni:

i. Sera ya Taifa ya Nishati, 2015

ii. Sera ya Elimu na Mafunzo, 2014

iii. Sera ya Taifa ya Mazingira, 2021

iv. Sera ya Afya na Usalama Kazini, 2009

v. Sera ya Taifa ya Ajira, 2008

vi. Sera ya Taifa ya Utafiti na Maendeleo, 2010

vii. Sera ya Taifa ya Bioteknolojia, 2010

Sheria muhimu ambazo TAMISEMI lazima zichukue wakati wa utekelezaji wa mradi huu ni:

I. Sheria ya Elimu, Kifungu cha 353.

II. Sheria ya Mtoto, Kifungu cha 13 R.E 2019

III. Sheria ya Usajili wa Wahandisi, Kifungu cha 63

IV. Sheria ya Wasanifu Majengo na Wathamini, Kifungu cha 267

V. Sheria ya Fidia kwa Wafanyakazi, Kifungu cha 263

VI. Sheria ya Watu Wenye Ulemavu, Kifungu cha 183

VII. Sheria ya Uwajibikaji wa Mmiliki, Kifungu cha 64

VIII. Sheria ya Viwango, Kifungu cha 130

IX. Sheria ya Usimamizi wa Mazingira, Kifungu cha 191

X. Sheria ya Usimamizi wa Rasilimali za Maji, Kifungu cha 331

XI. Sheria ya Misitu, Kifungu cha 323 R.E 2022

XII. Sheria ya Umeme, Kifungu cha 131

XIII. Sheria ya Serikali za Mitaa (Mamlaka za Wilaya), Kifungu cha 287

XIV. Sheria ya Serikali za Mitaa (Mamlaka za Mijini), Kifungu cha 288

XV. Kanuni za Jeshi la Moto na Uokoaji (Uangalizi wa Usalama na Vyeti), 2008 Kama ilivyorekebishwa mwaka 2017

XVI. Kanuni za Jeshi la Moto na Uokoaji (Tahadhari ya Moto Katika Majengo), 2015

XVII. Kanuni za Usimamizi wa Mazingira (Kudhibiti na Kusimamia Taka za Umeme na Umeme), 2021

Ushiriki na Kushirikisha Wadau

Wakala wa Ushauri ulitambua taasisi, makundi, na watu binafsi walio na maslahi katika mradi ambao huenda wakaathiriwa na sehemu za mradi au wanao ushawishi juu ya mradi.

• Afisa Elimu wa Mkoa (RAO), Afisa wa Maendeleo ya Jamii wa Mkoa (RCDO).

• Mkurugenzi wa Halmashauri ya Wilaya (DED) wa Wilaya ya Rufiji na Afisa wa Afya wa Wilaya (DHO)

• Afisa Mtendaji wa Kata (WEO)

• Mwenyekiti wa kijiji cha Kindwitwi

• Fundi wa ndani

Maoni na Masuala ya Wadau

Mashauriano na wadau yalibainisha maoni mazuri na masuala hasi. Wadau walikuwa na maoni mazuri kuhusu mradi kwa upande wa:

• Fursa za elimu katika eneo maalum la mradi na jamii za jirani

• Kuongezeka kwa uchumi wa Kata ya Chemchem kama matokeo ya ongezeko la idadi ya watu

Wadau walikuwa na wasiwasi kuhusu:

• Wakati wa utekelezaji wa mradi, raia wa kata maalum na Watanzania kwa ujumla wanapaswa kupewa kipaumbele katika fursa za ajira kwa sababu wako jirani na Burundi

ATHARI ZA MAZINGIRA NA KIJAMII

Athari zifuatazo ziligunduliwa katika hatua mbalimbali za maendeleo ya mradi kama vile uhamasishaji na ujenzi, uendeshaji na hatua ya kufuta kazi. Athari hizi zilikuwa kama ifuatavyo:

Hatua ya Uhamasishaji/Ujenzi:

• Upotevu/uvurugaji wa bioanuai na spishi zilizo hatarini

• Uzalishaji wa hewa chafu kutoka kwenye injini za magari

• Uchafuzi wa vumbi na kelele kutokana na magari ya uhamasishaji.

• Hatari za afya ya umma na usalama kutokana na ujenzi wa miundombinu ya msaada.

• Uvurugaji wa ardhi.

• Ajali za barabarani za magari yanayosafirisha vifaa.

Hatua ya Uendeshaji:

• Uvurugaji wa ubora wa hewa kutokana na uzalishaji wa moshi na gesi zinazoondoka.

• Uvurugaji kwa jamii za jirani kutokana na ongezeko la kelele.

• Uharibifu wa taswira, uchafuzi wa mazingira na kuzuka kwa magonjwa na majeraha kutokana na usimamizi usio sahihi wa taka hatari na zisizo hatari karibu na eneo hilo.

• Athari za afya na usalama kwa jumla.

• Ongezeko la msongamano wa watu.

Masuala ya Kijamii na Kiuchumi:

• Nguvu kazi iliyoelimika zaidi nchini.

• Kupungua kwa viwango vya ukosefu wa ajira.

• Kuongezeka kwa kiwango cha mapato na faida kwa serikali kutokana na kodi zinazotolewa.

• Kuwawezesha wanawake kiuchumi.

• Mandhari ya kijamii na kiuchumi iliyo na usawa na tofauti iliyoboreshwa na uwakilishi bora wa kijinsia na fursa kwa wanawake katika mikoa na nchi husika.

Hatua ya Kufuta Kazi:

• Miundo mbinu iliyoachwa.

• Ukosefu wa ajira.

• Upotevu wa mapato kwa serikali.

Kuongeza Athari Chanya za Kijamii na Kiuchumi:

• Ajira na mafunzo hasa wakati wa ujenzi.

• Ongezeko la mapato/mafao/maendeleo yaliyochochewa.

• Ongezeko la mapato kwa kutumia rasilimali za ndani.

• Msaada kwa huduma za kijamii na uhai wa kijamii wa ndani.

Uchambuzi wa Chaguzi za Mradi.

Chaguzi tofauti zilizingatiwa kwa mradi huu. Uchambuzi wa chaguzi mbadala unachunguza chaguzi sahihi kwa eneo la mradi, teknolojia, muundo, na uendeshaji kwa kuzingatia athari zake za mazingira na kijamii; uwezekano wa kupunguza athari hizo; gharama za mtaji na za kawaida; ufaa wao chini ya hali za ndani; na mahitaji yao ya taasisi, mafunzo, na ufuatiliaji.

Pia inabainisha msingi wa kuchagua miundo maalum ya mradi iliyoainishwa na kuthibitisha viwango vilivyopendekezwa vya uzalishaji na njia za kuzuia uchafuzi.

Chaguzi zilizotiliwa maanani kwa mradi huu zilikuwa zifuatazo

a) Chaguo la Kutokwenda,

b) Mipangilio na uteuzi wa teknolojia

c) Chaguo la Mahali

d) Chaguo la Nishati

e) Chaguo la Maji

MPANGO WA USIMAMIZI WA MAZINGIRA NA JAMII

Tathmini ya Athari za Mazingira kwa ujenzi uliopendekezwa wa Shule ya Upili ya Wasichana wa Mkoa, imetambua idadi ya athari ambazo zinaweza kutokea wakati wa ujenzi na uendeshaji wa mradi uliopendekezwa.

EIA imeangalia athari za kibiolojia, kiuchumi na kitamaduni za shughuli iliyopendekezwa kuanzia kusafisha eneo, ujenzi wa shule na uendeshaji wa shule.

Faida halisi za mradi uliopendekezwa zinaweza kujitokeza tu ikiwa hatari za athari hasi zilizotambuliwa zinapunguzwa. Hii inaweza kufanikiwa kupitia utekelezaji wa hatua za kuzuia na kupunguza athari kwa kutunga sera za kuzishughulikia ipasavyo.

Sera ya Usimamizi wa Mazingira

Hii itahakikisha kuwa usimamizi wa Mradi na wafanyakazi unafanya shughuli zao kwa kuzingatia mazingira asilia na matumizi endelevu ya rasilimali za mazingira. Sera inapaswa kushughulikia mambo yafuatayo, pamoja na mengine:

• Hakikisha kuwa shughuli zote za Mradi zinaendeshwa kwa kuzingatia mahitaji ya kisheria ya sheria za kitaifa zinazohusiana na mazingira.

• Kuhakikisha kuwa kuna maboresho endelevu ya mazingira na utendaji kupitia ufuatiliaji wa shughuli za Mradi.

• Kuhakikisha matumizi bora ya rasilimali za asili na kuweka mikakati ili kuhakikisha upatikanaji wa rasilimali kwa kizazi kijacho.

• Kuongeza uelewa kwa jamii inayozunguka kuhusu matumizi endelevu ya rasilimali za asili, ulinzi wa mazingira nyeti na uhifadhi wa bioanuai kwa maisha ya pamoja.

• Kupata uwiano kati ya matumizi ya rasilimali za asili, uhifadhi wa mazingira na maendeleo ya kiuchumi.

Sera ya Afya na Usalama Kazini

Imeandaliwa kwa ajili ya mradi huu ili kuhakikisha kuwa hatua zinazofaa zinaanzishwa ili kuhakikisha kuwa afya, usalama na ustawi wa watumiaji wote unazingatiwa pamoja na mahitaji ya afya ya jamii ya eneo ambalo mradi unafanyika. Sera inapaswa kuzingatia mambo yafuatayo, pamoja na mengine:

• Uchunguzi wa matibabu ya wafanyakazi.

• Usafi katika eneo la Mradi.

• Usimamizi na utupaji sahihi wa taka za maji na taka za kiowevu na taka za kiowevu na taka za kiowevu.

• Maandalizi ya dharura.

• Usalama wa moto.

• Hitaji na upatikanaji wa vifaa binafsi vya kinga.

• Kupunguza hatari ya uharibifu wa bahati mbaya kwa jamii na mazingira.

Sera ya Mahusiano na Jamii

Sera za Jamii za Mitaa zimeandaliwa na uongozi wa Mradi ili kuhakikisha kuwa usimamizi wa mradi unajenga na kuendeleza mahusiano thabiti na wadau wote kwa kuheshimiana na kushirikiana kwa vitendo. Sera inapaswa kuzingatia njia za usimamizi kufanya yafuatayo, pamoja na mambo mengine:

• Kufanya kazi na jamii ya eneo na idara na mashirika husika ya serikali kufikia ustahimilivu wa mradi.

• Kujenga njia za kuongeza mawasiliano kutoka kwa usimamizi hadi kwa jamii na wadau wa Mradi, na kinyume chake.

• Kuendeleza uwezo wa jamii; na

• Kuhusisha kwa vitendo jamii ya eneo katika shughuli zote za Mradi zinazoathiri jamii ya eneo.

Kuhusiana na usimamizi wa mazingira wakati wa hatua za awali, ujenzi, uendeshaji na kuondoa mradi, majukumu makuu ya kila chama kama ilivyoelezwa hapa chini. Kwa baadhi ya vipengele vya programu, msaada utahitajika kutoka kwa Mamlaka za Serikali za Mitaa na NEMC (hasa kwa njia ya mwongozo na ushauri na ufuatiliaji wa mradi).

MPANGO WA UFUATILIAJI WA MAZINGIRA

Ripoti hii ina mpango wa kina wa kufuatilia utekelezaji wa hatua za kupunguza athari na athari za mradi wakati wa utekelezaji wake. Mpango huu una gharama za kufuatilia kutekelezwa na athari za mradi wakati wa utekelezaji wake.

Uchambuzi wa Faida na Gharama za Jamii

Faida za maendeleo ya mradi zinaweza kutathminiwa kwa kuzingatia ajira, ustawi wa kijamii, maendeleo ya elimu, maendeleo ya miundombinu na uchumi wa eneo husika (mishahara, bidhaa na huduma). Kwa hivyo, faida hizo zitasambazwa kwa kiasi kikubwa ndani ya jamii kupitia upatikanaji wa chakula, malazi na huduma nyingine za kawaida kwa wafanyakazi na wanafunzi.

Zaidi ya hayo, uboreshaji, maendeleo na utunzaji wa miundombinu ya eneo ni faida ambazo zitaendelea zaidi ya wigo na muda wa mradi.

UONDOAJI WA MRADI

Uondoaji ni hatua ya mwisho ya maisha ya mradi. Inahusisha kusitisha shughuli za mradi na operesheni na kurejesha eneo kwenye hali yake asili au karibu na hali yake ya awali. Inatarajiwa kuwa mradi utaendelea kwa muda mrefu kama kuna mahitaji ya mradi, hata hivyo, sehemu za kipekee za mradi zitafutwa kadiri inavyohitajika.

HITIMISHO

Mradi utaleta athari chanya na hasi kwa mazingira na jamii ya eneo lililo karibu nayo. Hatua zimependekezwa kuboresha athari chanya kwa mazingira na watu wa eneo hilo.

Kwa athari zile ambazo ni hasi, hatua za kuzuiwa zimependekezwa ili kuepuka au kupunguza athari hizo kwa kiasi kinachowezekana ili kuongeza faida za mradi wa shule na kupunguza madhara ya kuingilia kati kwa mradi kwa jamii.

Kwa ujumla, mradi utakuwa kama kichocheo cha mabadiliko chanya katika jamii zinazozunguka kwa kuboresha elimu, miundombinu na ustawi wa kijamii, na kwa kuhusisha na kushirikisha wakazi wa eneo hilo, mradi unaweza kuwa na athari endelevu na kuchangia katika maendeleo ya jumla ya kanda.

APPENDIX VII: SCHEDULE OF MATERIALS AND ARCHITECTURAL DRAWINGS