ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) FOR THE PROPOSED CONSTRUCTION OF REGIONAL GIRLS SECONDARY SCHOOL TO BE LOCATED ON PLOT NO.1, BLOCK "A" AT WACHAWASEME VILLAGE, IGAGALA WARD, KALIUA DISTRICT IN TABORA REGION

DEVELOPER	
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** **Contact Person: Richard Makota** **Email; Richard.makota@tamisemi.go.tz**
SUBMITTED TO:	**PREPARED BY:**
The National Environment Management Council (NEMC), **Central Zone** **P. O. BOX 2724** **Dodoma — Tanzania** **Email: nemcdodoma@nemc.or.tz** **Telephone: +255 262963859** **Direct Line:+255 262963860**	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**

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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; In-service training of secondary school teachers on the teacher code of conduct and gender sensitive pedagogical approaches;
iii. Training of school heads and School Boards on GBV, safe school issues etc.;
iv. School and classroom monitoring system for early identification of and intervention on girls at risk of drop out; and
v. 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).

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 Wachawaseme village, Igagala ward in Kaliua-Municipal- Tabora Region and is bordered by individual owned farm to the West, South and East, while in North there is Tabora - Kigoma Regional.

The proposed site can be easily accessed by using Tabora- Kigoma trunk road at 21km from Kaliua District Council on the right-hand side of the road within Igagala Ward.

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

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,201

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

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 in Kaliua District Council, District Environmental Management Officer (DEMO) and District Secondary Education Officer (DSEO)
- Ward Exevutive Officer (WEO)
- Wachawaseme 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:

- This project will have positive impact to our community, it will motivated both parents and children to love school than before,
- People from different places of the country will come here for studying and working, therefore we will economically and socially develop.

- They got the area from the villagers of Wachawaseme willingly and they have the signed MoM from the community.

Stakeholders were concerned about:

- They have been called most of the time since 2020 regarding this project but no implementation have been done, therefore they need only to see the construction have started.

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

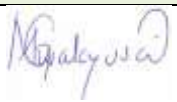
The project will have both positive and negative impact to the environment and the local communities along it. Measures have been proposed to enhance impacts which are positive to the environment and the local people.

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.

LIST OF REGISTERED EXPERTS INVOLDED IN CONDUCTING THE STUDY

Tansheq Registration No. NEMC/EIA/0034

S/N	Experts	Specialty	Signatures
1.	Eng. Gwakisa Mwakyusa	Principal Environmental Consultant	
2.	Mr. Lusako Raphael	Senior Environment expert	
3.	Eng. Anamary Philemon	Monitoring and Waste Management Expert	
4.	Mr. Erick Gagalla	Environmental expert	
Other Experts Involved in the Study			
1	Nyasaila Nyakia	Sociologist	
2	Veronica Msolla	Environmental Officer	
3	Asia Abibu	Environmental Officer	
4	Jerusalem Mwaipopo	Environmental Engineer	
5	Joachim Marawiti	Environmentalist and GIS Expert	

ACRONYMS AND ABBREVIATIONS

ADB	African Development Bank
AIDS	Acquired Immune Deficiency Syndrome
AEP	Alternative Education Program
ARAP	Abbreviated Resettlement Action Plan
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
ESCP	Environmental and Social Commitment Plan
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
NSGRP	National Strategy for Growth and Reduction of Poverty
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
RAP	Resettlement Action Plan
RAS	Region Administrative Secretary
RAO	Region Academic Officer
RC	Region Commissioner
REO	Region Education Officer
REME	Region Environmental Management Expert
SEA	Strategic Environmental Assessment
SEP	Stakeholder Engagement Plan
SEQUIP	Secondary Education Quality Improvement Project
SO_2	Sulfur dioxide
TABOTEX	Tabora Textile
TANESCO	Tanzania Electric Supply Company
TDV	Tanzania Development Vision
ToR	Terms of Reference
TUWASA	Tabora Urban Water Supply & Sewerage Authority
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 Tabora Region, Kaliua District Council, and the Ward Executive Officer for Igalagala Ward, the Village Chairperson for Wachawaseme Village, and all community members for their significant opinions and contributions 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.

TABLE OF CONTENTS

FIGURES

TABLES

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. 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 Regulatory Requirements and Nature of the project

In terms of the Environmental Management Act (EMA) of 2004 and the Environmental Impact Assessment and Audit Regulations, 2005 (United Republic of Tanzania, 2005) amended in 2018, the project falls within the project type B1 which is the boundary list which may require Environmental Impact Assessment (EIA) as per screening as it is listed in Category B1 Projects ***13. Building & Civil Engineering Industry (c) schools, dispensaries, health-centres (Schools with boarding facilities for >360 students).***

Thus this Environmental and Social Impact Assessment is prepared to fulfil the requirement as per National Environmental Management Council decision and The World Bank Environmental and Social Framework (ESF) as stated in the ESS1 on Assessment and Management of Environmental and Social Risks and Impacts.

1.4 Scope of the Study

The ESIA was conducted in accordance with the guidelines laid down by the Environment Management Act of 2004, and its regulations as well as the World Bank requirements as provided in the Environmental and Social

Framework which goes down to the ten environmental and social standards. In its undertaking, the key consideration among others included the following:

- 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.

1.5 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 Kaliua will need 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 land in Kaliua was previously owned by the community. As per construction directives from PO-RALG, the specific land size requirement is 5 acres in rural areas and 3 acres in urban areas. However, the proposed site has a total of 64 acres reserved for this project.

1.6 Study Approach and Methodology

The approach to this exercise was structured to cover the requirements under the Environment Management (Environmental Impact Assessment and Audit), (2005) read together with (Amendment) Regulations, 2018 largely involved 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 approach of cconducting Impact Assessment which is closely related to the flowchart in Figure 1-1.

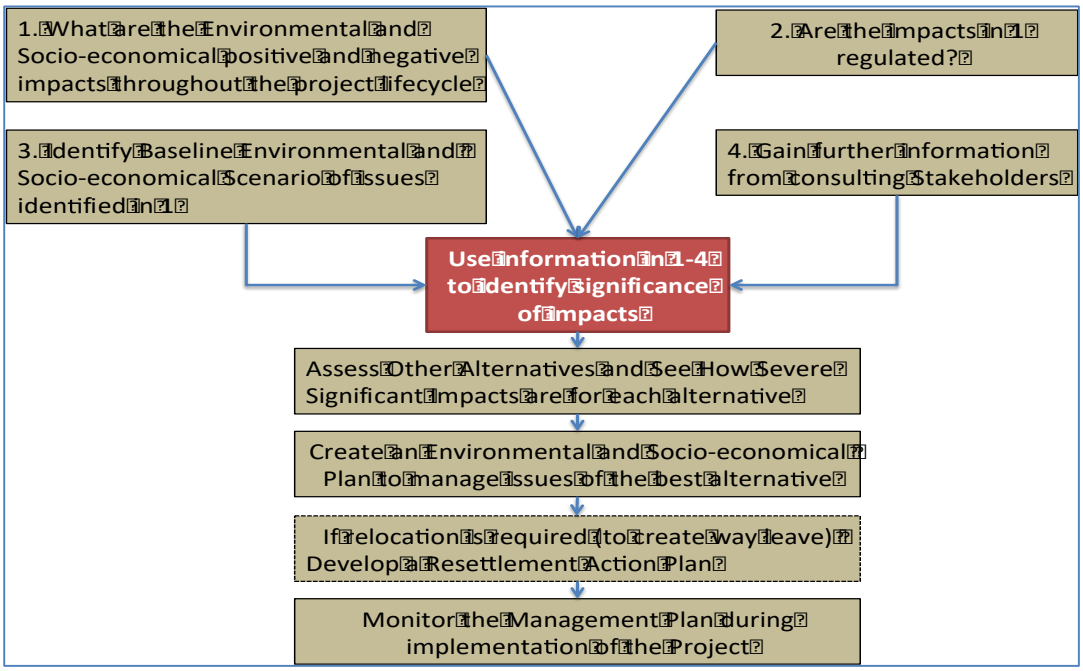


Figure 1-1: Impact Assessment Process

1.6.1 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.

1.6.2 Regulatory Framework with Associated Issues

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

1.6.3 How the Situation is Currently (Baseline Situation)

To gauge the extent of impact, it is crucial to establish the status quo (CHAPTER FOUR). 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. 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.

1.6.4 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.

1.6.5 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.

1.6.6 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 is also covering the decommissioning phase of the project.

1.6.7 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.

1.7 Content of the Report

This report is designed to meet the requirements of Regulation 18 of Environmental Impact Assessment and Audit Regulations of 2005 as amended in 2018 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	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

Chapter	Description
Identification of Alternatives	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 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	The 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 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 the 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

CHAPTER TWO

2 PROJECT BACKGROUND DESCRIPTION

2.1 Background

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. SEQUIP will contribute to addressing key challenges to girls and boys accessing education and this school will 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.

2.2 Project Location and Accessibility

The proposed project site is administratively located at Wachawaseme village, Igagala ward in Kaliua-Municipal- Tabora Region and is bordered by individual owned farm to the West, South and East, while in North there is Tabora - Kigoma Regional.

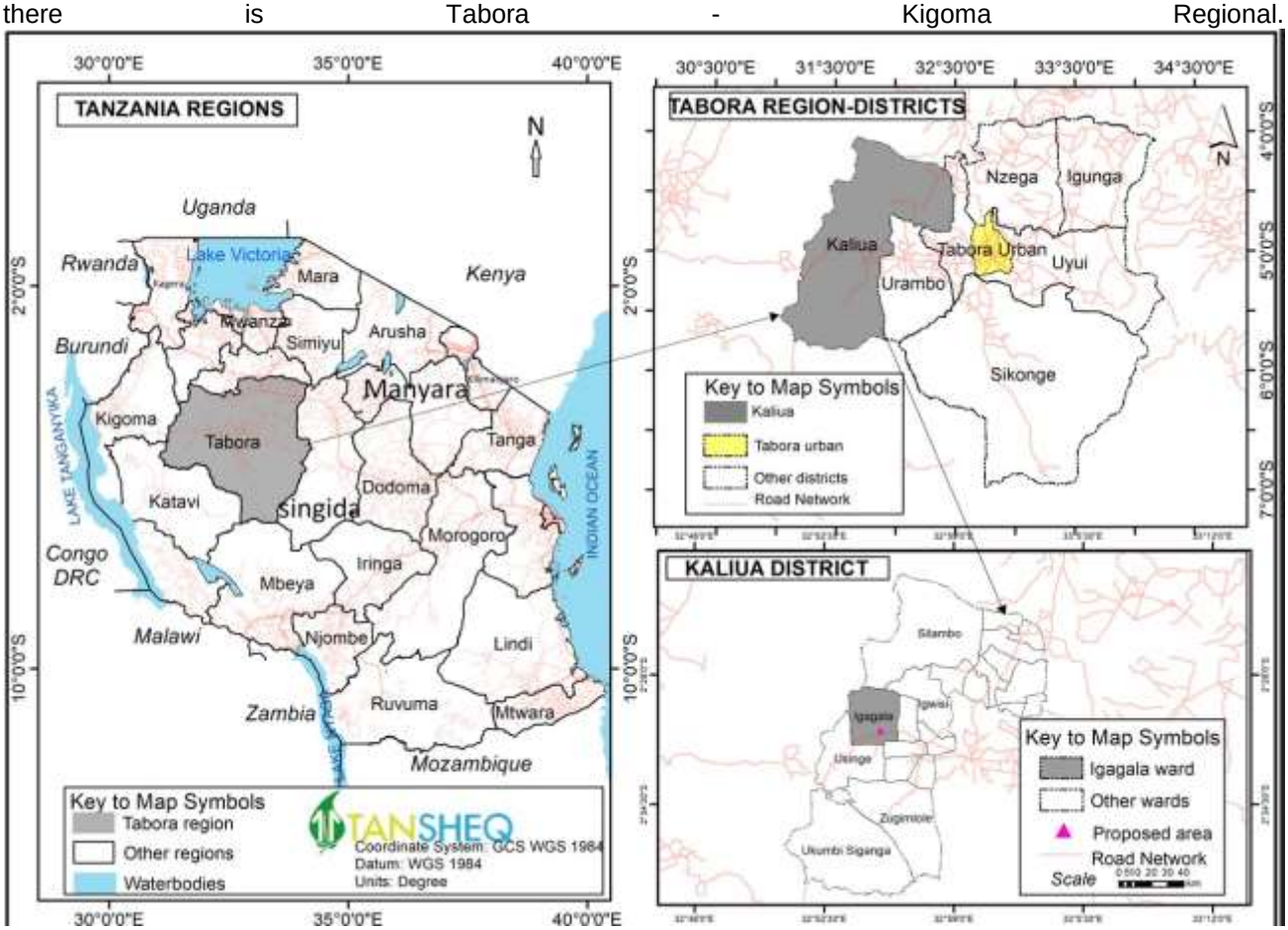


Figure 2-1 displays the location map of the proposed project area in Kaliua District, Tabora Region.

The proposed site can be easily accessed by using Tabora- Kigoma trunk road at 21km from Kaliua District Council on the right-hand side of the road within Igagala Ward.

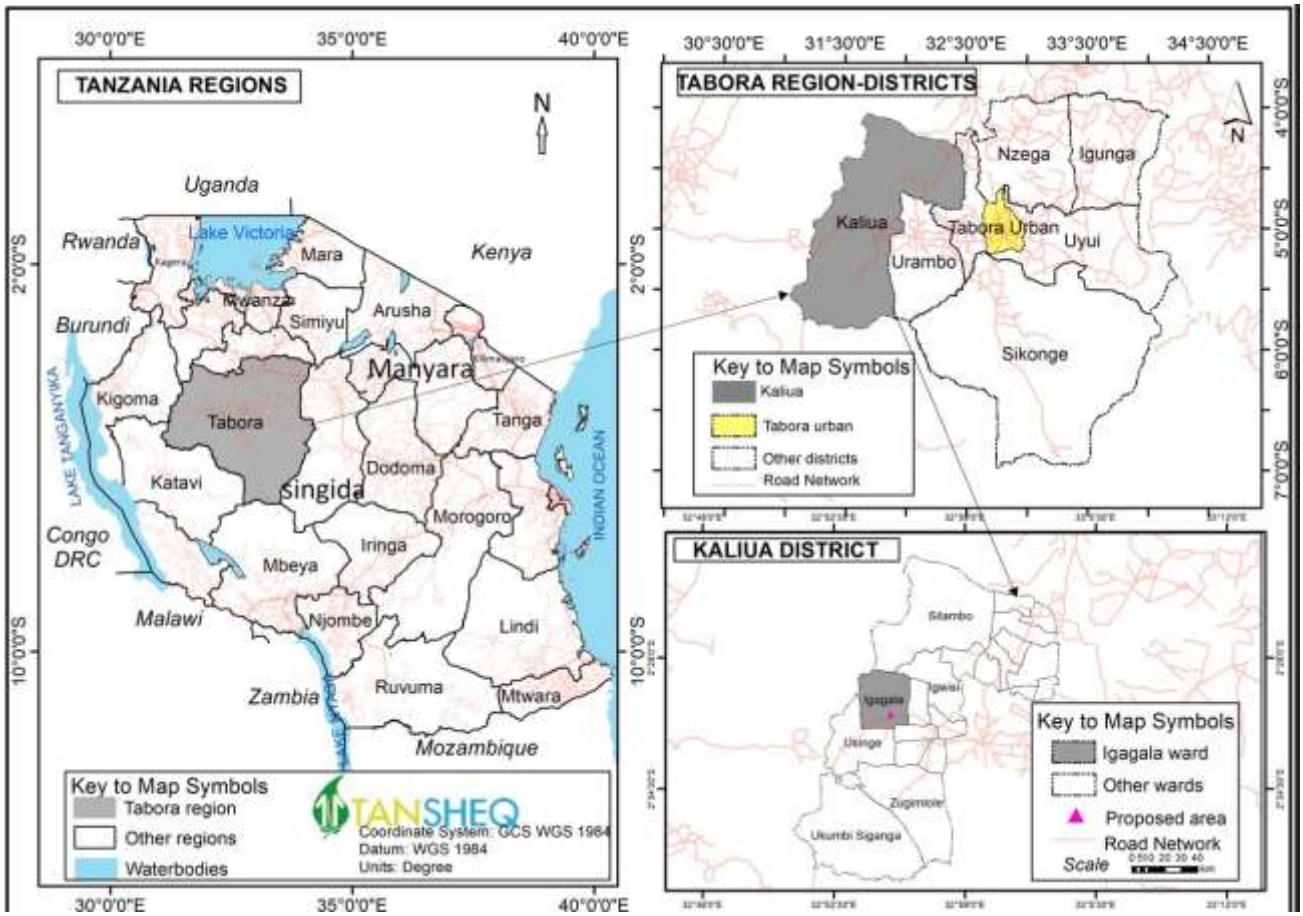


Figure 2-1: The proposed project location (Source, Tansheq, 2022)

2.2.1 **Current Situation in vicinity proposed site.**

2.2.1.1 Proposed site

The proposed site is within a mixed agricultural and sparsely populated settlement and it is the Greenfield site as it is not disturbed and no any development within the site as shown in Figure 2-2.

Figure 2-2: Scenery of the project site

2.2.1.2 Surroundings

The proposed area for construction of the school is surrounded by residential houses at the distance of 500m along the trunk road to Kigoma and Wachawaseme Primary school at the distance from 4km away as shown in Figure 2-3

Figure 2-3: Primary school and residential houses nearby the proposed site

2.3 Project Planning and Design

2.3.1 Overview

Project planning and all designs are prepared as per SEQUIP design and the overall objectives for the development was specified in the Environmental and Social Management Framework (ESMF). The design of the Girls' Regional School consists of required infrastructure package based on the school construction and maintenance strategy (e.g. number of classrooms/students, adequate WASH facilities, multi-purpose science labs, electricity, etc.).

The proposed construction of the school will be having both ordinary and advanced level with capacity of accommodating students between 1000 and 1100 students. The construction package will involve two phases which will both take 12 months. The construction package will involve various facilities as detailed in subsequent sections while the drawings and layout for the proposed facilities can be accessed in the Appendix.

2.3.1.1 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) (Appendix VII). 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.

2.3.1.2 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

Drawings of the following are shown in Appendix VII.

2.3.1.3 Administration blocks

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 and its drawings are obtained in Appendix VII.

2.3.1.4 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. Drawings are obtained in Appendix VII.

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.

2.3.1.5 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 drawings and materials to be used of the dining hall, it has the capacity of 2000 students and they are obtained in Appendix VII.

2.3.1.6 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 and materials to be used consider 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 as shown in Figure 2-4. Four (4) buildings of the staff houses will be constructed.

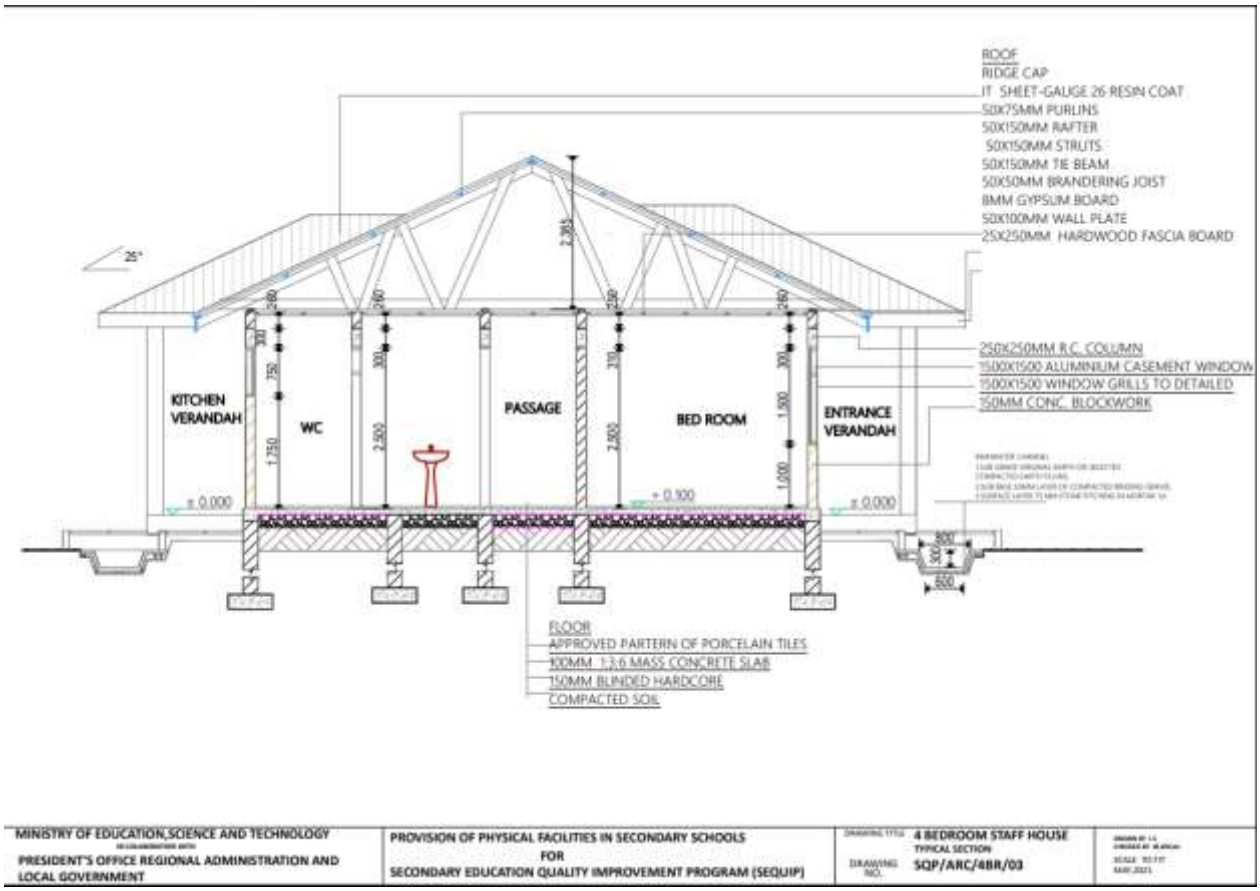


Figure 2-4: Staff-house structure

2.3.1.7 Dormitories

Dormitories are places where students stay. The student housings aim to provide healthy and acoustically pleasant environments for the protection, comfort, and productivity of the students. The dormitories will be designed as per provided to meet the SEQUIP objectives whereas they will consist of 4 buildings having the capacity to accommodate 120 students. The drawings are attained in Appendix VII.

2.3.1.8 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 drawings, the library to be constructed will accommodate 52 students for readings and the computer learning room will accommodate 8 students as illustrated in Appendix VII.

2.3.1.9 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. Drawings are attained in Appendix VII.

2.3.1.10 Incinerator

This will provide a safe and efficient mean of disposing waste specifically biomedical waste such as used sanitary pads, medical supplies and other potentially hazardous materials. Drawings attained in Appendix VII.

The proposed project will have two incinerators which will be located far from residential houses and all school facilities. However they will be nearby dormitories as well as toilets.

As per Tanzania Bureau Standards and WB EHS Guidelines, the incinerator shall have two chambers: Primary and secondary chambers. It will meet the following design criteria:

- It shall be capable of destructing waste into ashes by 95%.
- Fuel burners shall be used.
- Emission shall conform to national and international standards
- Design, selection and efficiency of incinerators shall conform to TZS1681, TZS 1682, and TZS 1683 respectively

The incinerator is built on site will use locally available materials (aggregate, sand, cement, Blocks, morram, Refractory fire cement, steel, Fuel pipe Stainless, fuel tape etc.). It has a secondary combustion chamber to reduce harmful emissions.

When residual combustible gases reach the secondary combustion chamber they meet a further supply of air and undergo secondary combustion, raising the temperature even higher, and reducing the gases to stable compounds such as carbon dioxide. The incinerator is loaded at start-up and may then be re-loaded from time to time while in operation.

The incinerator will operate with natural draught, requires fuel to start and takes time to reach operating temperature from cold. It is therefore best operated for long periods, not less than four hours at a time. It is not suitable for operation in a closed room. Smoke will be emitted whenever the loading door is opened. A roof may be fitted to protect the operator from rain, but only minimum walls.

The walls of the incinerator will never become dangerously hot to touch, even during operation, because of the double walls and sand infill between the walls.

Generally, waste incineration at schools focuses on the disposal of non-recyclable and non-compostable waste, such as certain types of plastics, papers, and other materials that cannot be effectively recycled or composted.

It is recommended to install a controlled air incinerator, also known as a controlled air combustion incinerator. This type of incinerator ensures efficient and controlled combustion of waste materials.

The incinerator should have an appropriate capacity to handle the waste generated by 1000 students. A recommended capacity for this school would be a small-scale incinerator with a capacity of approximately 50-100 kilograms per hour.

The quantity of waste to be incinerated will depend on the waste generation rate of the school. Based on an average waste generation rate per student, an estimate of 0.5 kilograms of waste per student per day can be used. Therefore, the incinerator should have the capacity to handle approximately 500 kilograms to 1000 kilograms of waste per day.

To ensure the safety of the school and nearby residential areas, it is recommended to place the waste incinerator at a sufficient distance from both the school and residential areas.

2.3.1.11 Playgrounds

These hold significant importance for the holistic development of students. They provide a dynamic and interactive space where students can engage in various, physical, cognitive and emotional activities. These will involve football ground, global goal, handball, netball, volleyball, basketball and a running track pitch.

2.3.1.12 Water tanks along with a water tunnel

Additionally, the proposed project intend to construct the two water storage tanks as the separate structures which will be ground tanks and elevated water tanks. For ground water tank, the project will use the reinforced concrete of grade 20 with fcu=20N/mm² at 28 days of age while reinforcements shall be high tensile steel with fy =460N/mm² and the nominal cover to the reinforcements.

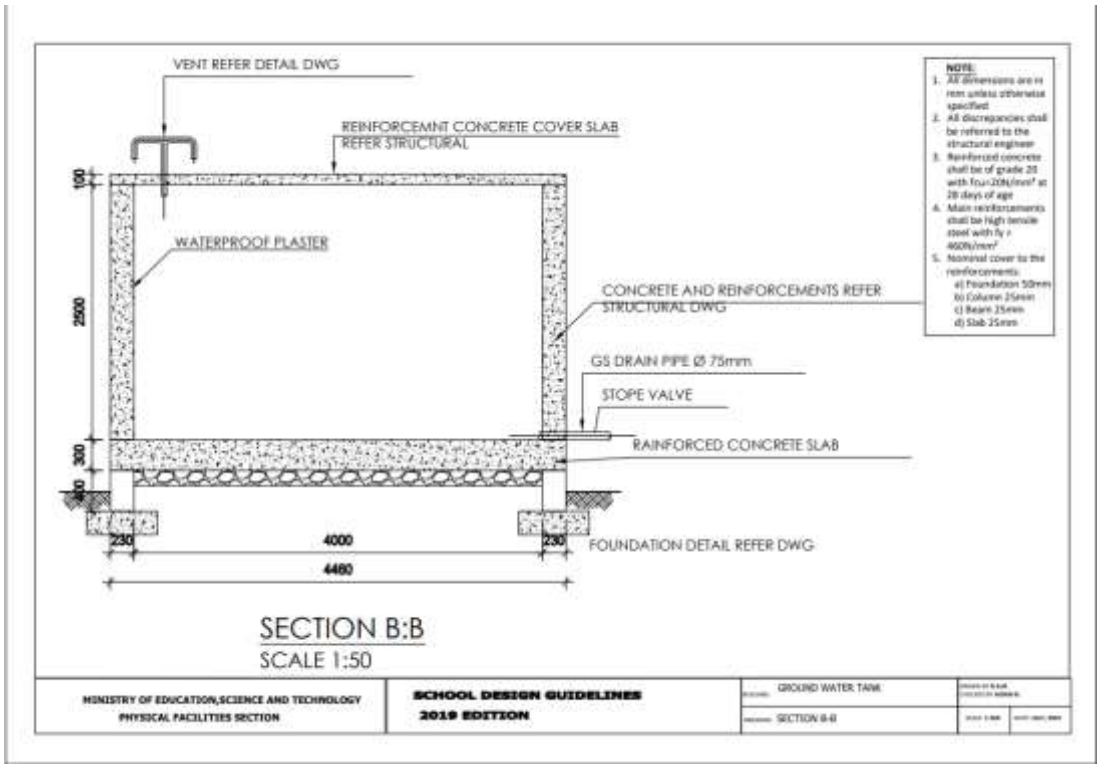
- Foundation 50mm
- Column 25mm
- Beam 25mm
- Slab 25mm

The proposed project opted for overhead (-elevated) tank to allow the natural flow of water by gravity within the entire area of the school. Not only flow but also will be used in fire protection. In designing this elevated tank, the following were observed:

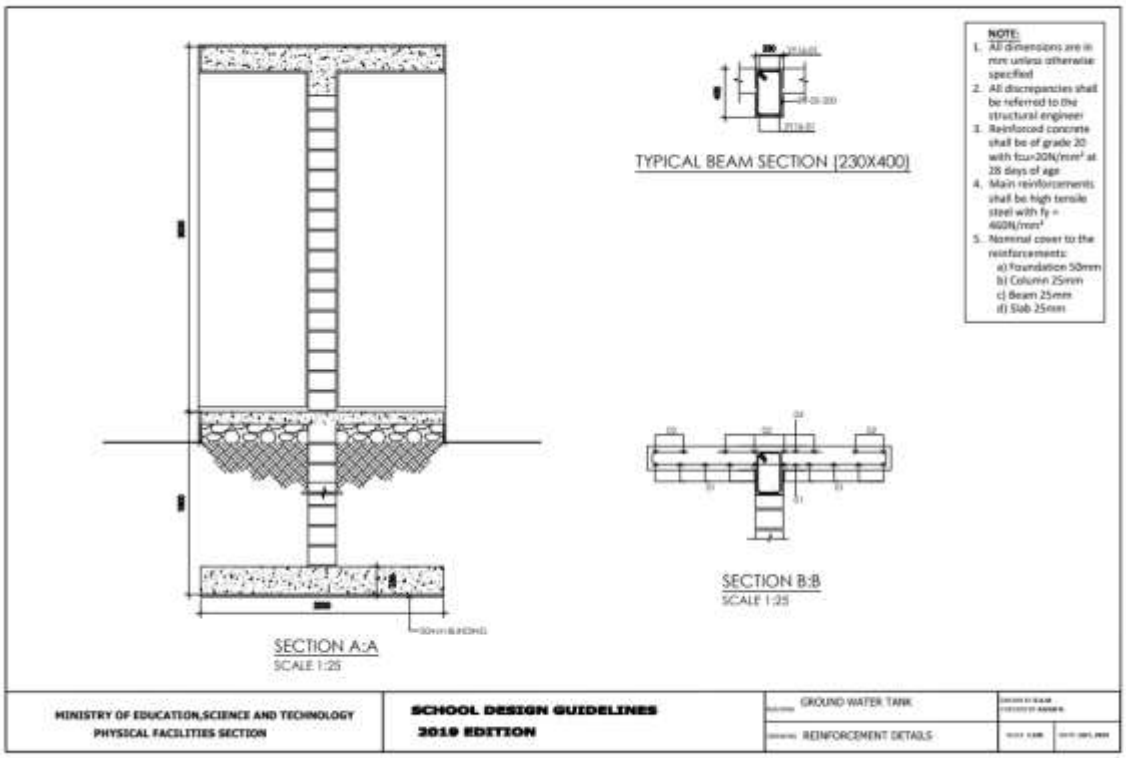
- Thickness of wall
- Free board 0.3m
- Lower slab thickness
- Bottom ring beam
- Size of braces
- Column size
- Number of column
- Staging height
- Height of tank
- Zone factor

Water tunnels of 1050m which are essential components of water supply systems used to connect either elevated water storage tanks or ground-level water storage tanks will be installed. These will serve a crucial function in ensuring a consistent and reliable flow of water to meet the needs of the school.

Figure 2-5, shows the structure for ground tank and elevated tank to be constructed for water supply within the proposed school accordingly, the elevated tank discourage the use of pump in distributing water within the school.



a) Ground water tank structure



b) Elevated water tank structure

Figure 2-5: Water storage tanks designed for the project

Other components that will be constructed within school compounds area are, Manhole and gully trap, Walkway & Paving. **Error! Reference source not found.**shows the summary of buildings 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	5
11	Teacher's house (2 in 1)	1	4
12	Dormitories @ 120	5	Cubicle 15
	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

	CONSTRUCTION		
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	Cubicle 15

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

2.4 Project Activities

The envisaged project activities can be broadly categorized in three phases as listed in Table 2-2.

- 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 • 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

2.4.1 Mobilization/pre-construction Activities

The mobilization phase of the project entails 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 sources of construction materials (borrow pits and quarry sites),
- Identification of sources of water for domestic and construction works
- Acquisition of building permit from Geita Town Council

2.4.1.1 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 Tabora, while sand, aggregates, and timber will be obtained locally.

2.4.1.2 Equipment Required During Mobilization Phase

The major equipment that will be required during mobilization phase of the project include:

- Bull dozers/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)

2.4.1.3 Waste Generated During Mobilization Phase

Mobilization phase of the project generated waste as shown in **Error! Reference source not found.** 2.3.

Table 2-3: Waste 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 waste, 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 waste	Sanitary waste	None
Servicing of construction equipment	Used batteries, used tyres, used metals parts, used oil and fuel filters, empty oil drums	Waste oil	None

2.4.1.4 Treatment and Disposal of Waste Generated During Mobilization Phase

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

- During site clearing, top soil and green cutting were disposed of in old borrow pits or other areas approved by the Engineer
- Concrete and cement blocks waste were disposed of in borrow pits during their reinstatement as approved by the Engineer.
- Metal waste such as GS pipes, nails, reinforcement bars, and used equipment parts were disposed of by recycling. They were collected and stored; until enough quantities were obtained before being disposed of by the Contractor. The Engineer approved the metal scraps disposing companies.
- Degradable materials such as paper cement bags and paper boxes were treated on site by controlled burning.

- Non degradable waste such as plastic, PVC pipes, and plastic bottles were collected and transported and given freely to plastic factories where they will be recycled.
- Used batteries, empty metals drums, used oil filters were disposed of through approved disposing companies.
- Temporary pit latrines were constructed at active mobilization sites (campsites) for the disposal of sanitary waste.

2.4.2 Construction phase

Several physical activities will be involved in this phase. These include site clearing, fencing, excavation, leveling, and construction of the staff houses, classroom, administration blocks, and laboratories, toilets, dining hall, dormitory and other related facilities. During the construction, there will be regular inspections to ensure that the implementation of the project abides by the set regulations as well as conforming to the approved schemes.

The Project Architect and Engineer, the District Council officials of Kaliua as well as PO-RALG will undertake the inspections. The development will thus undergo several certifications during the construction process. The construction activities of the proposed project will entail the following:

2.4.2.1 Site preparation

The site is to be secured by screening before starting construction activities; such hoardings will contain construction activities to minimize any spread of dust to the surrounding. Same for removal of vegetation, site clearance will not entail significant works as the exact site for construction does not feature any obstacles.

The site will then be laid out to identify the exact locations of the proposed units. The corner points and edges of the houses will be established accordingly. The marking out will use stakes and strings as well as chalk lines.

2.4.2.2 Excavation and earth works

The main method of excavation to be used is trenching in order to accommodate the buildings' foundations/footing. The excavated soil material will be disposed off-site at designated sites. No major rock obstruction is registered on site to warrant use of explosives.

Going by existing developments in the area, the load bearing capacity of the underlying soil is adequate and safe to support the building foundation without additional stabilization.

2.4.2.3 Construction of foundation

The proposed development has detached footing, reinforced concrete, designed to structural engineer's details. The depth of the foundation will be established to structural engineers specification based on the test pit results. The foundation walling is made of load bearing stone 200 mm wide. The footings will be molded using customer built timber formwork fabricated on site. The steel reinforcement for strip foundations will be cut and fabricated on site.

The concrete is also to be mixed on site. All the foundation works are to be constructed to structural engineers detail and approval. Minimal amount of ground water is expected to accumulate below the ground surface thus installation of sub-surface drainage system will not be required. However, damp proof canvass and dump proof membrane are recommended. The area enclosed by the foundation walls is to be backfilled with compacted hardcore. Termite treatment is also to be given to the foundation.

2.4.2.4 Construction of super structure

2.4.2.4.1 Ground Floor Slab

The ground floor reinforced concrete slab, 150mm thick, shall be cast overlying compacted hardcore and ground. The concrete is to be poured and finished as necessary through screening to level to top surface and remove excess concrete. A vibrator will also be used during the casting of the slab.

2.4.2.4.2 **Walls**

The buildings will utilize load bearing masonry walls. All external and other load bearing walls measure 200 mm thick. The masonry for the external walls is to be dressed to provide a pleasant view from the outside.

2.4.2.4.3 **Roofing**

A trussed conventional timber structure frame shall be used to erect the roof based on a combination of hip and gable roof structure. The roof cover shall be made of DECRA metal tiles, or its equivalent, laid on timber structure.

2.4.2.4.4 **Internal Finishes**

- Floors – The floor to the main spaces shall be finished in tiles and patches of granoin wet areas.
- Walls – All walls will be finished in plaster and paint.
- Ceilings –The ceiling will be finished in plaster and paint with timber molding in selected areas to design specifications.

2.4.2.4.5 **External Finishes**

External walls shall be of dressed masonry stone with any rendered surfaces painted or applied with brick facing. All exposed steel or timber shall be painted

2.4.2.5 Installation of internal / utility services

2.4.2.5.1 **Plumbing System**

- Water Supply

The proposed buildings will be supplied with water from RUUWASA and any other reliable source. Cold water supply system will be installed in the project.

- Waste Water Drainage

The wastewater drainage system consists of drain pipes. These pipes also incorporate gully traps, inspection chambers, and other assorted fittings. Except for cooling fans, the development does not provide for air conditioning installations. The drain pipes will be directed to the septic tank, soak away pit and manholes that will be constructed by the council.

2.4.2.5.2 **Electrical System**

The installation of electrical wiring and fittings will mainly cater for lighting and appliances. The installation will cater the computerized system is the computers room. All installations shall be to TANESCO-Tabora Regional Office approval. There is need for consideration for solar energy.

2.4.2.6 Development of external works

2.4.2.6.1 Driveway, Walkway and Parking

Paved driveways and walkways will be constructed to give motor vehicle and pedestrian traffic proper surface on which to move. Any paving will be made of 50 mm thick standard paving blocks.

2.4.2.6.2 Water Connection

The development will be connected to the water supply networks by RUWASA. At the same time, during the operation phase, it is recommended that roof catchments be installed to harvest rainwater to complement to the existent water supplies to deal with potential cases of water shortage, if they occur

2.4.2.6.3 Sewerage and Foul Water Drainage

The area has no sewer system. A properly reticulated sewer system (septic tank) will be laid down covering the entire development to the recommended capacity and standards as the designs can be accessed from the council's officials and the periodic and routine inspection and maintenance of the tank and its environs will be maintained.

2.4.2.6.4 Surface Water Drainage

Most of the rain water will be absorbed into the soil during the construction phase. Appropriate drainage systems will be put in place to handle the run-off/storm water from the site during the operation of the project. During operation phase, run-off/storm water will be directed to the main drainage system

2.4.3 Solid Waste Disposal

The construction waste will be collected for final disposal at open dumpsites surrounding the project area. A private company may be employed to deal with solid waste management.

2.4.4 Landscaping

This will mainly entail small works in paving, flower beds, and lawns. The top soil will be treated with manure if necessary to encourage faster and improved plant growth. The perimeter gardens will be planted with continuous bed of grass lawn and provide aesthetically appealing scene.

2.4.4.1 Perimeter Fence

A concrete block perimeter fence will be built to surround the school and will be complemented with electric fence. The final wall will be finished in key dressing.

2.4.4.2 Clearing of Site

The site will be given a general cleaning, and any left-over material and debris will be carted away to designated District disposal sites. Similarly, any tools and equipment still on site will be removed.

2.4.5 Completion Phase and Final Inspection

During this stage, finalization activities of the project will be undertaken. These include; internal finishes of the school buildings, completion of the statutory inspections and certifications, installation of utility meters and issuance of completion /occupation certificates by the District Council.

Final inspection will be undertaken to ensure that the project has been done properly and according to the terms of the contract. The inspection team will include PO-RALG, the architect, the engineer and the contractor or their representatives. The inspection team shall prepare a punch list indicating any items that will need to be corrected including final verification for environmental and social issues.

The list will be given to the contractor for necessary action within a specified period. If no defects are noted, the job will officially be completed and a certificate of occupancy will subsequently be issued. In issuing the certificate of occupancy, the inspection will take into account health and safety considerations of intended occupants.

It is important to note that the Council shall issue the occupation certificate on completion of the civil works. The certificates are issued after PO-RALG building and health inspectors inspect and certify the buildings to ensure compliance with approved plans. This is done to certify the building fit for school operation and occupancy.

2.4.6 Materials Required During Construction Phase

During the project construction, the following materials (Table 2-4) will be required, these are few of the materials that will be used but other materials and their quantities for each school facility that will be constructed are provided under the website of PO-RALG:

Table 2-4: Materials required During Construction Phase

SN	Material	Usage	Possible Source
1.	Ordinary Portland Cement (OPC) and Pozollana Portland Cement (PPC)	For construction purposes.	Twiga cement (Dar es salaam), Tanga cement (Tanga), and Mbeya cement (Mbeya)
2.	Sand	Production of mortar and general concrete works	At the respective project site and surrounding areas
3.	Crushed aggregate	Concrete works (Structural works) and construction	Igwisi/Urambo District Council
4.	Steel reinforcement bars	Reinforced concrete works construction of structures,	Tabora /imported
5.	Steel shutters and form works	Concrete works	Tabora
6.	Soft timber	Production of timber formworks and shutters	Locally
7.	Nails	Nails for fixing timber form works	Tabora
8	Water	Drinking, concrete works, dust suppression	Borehole within the project site and awaiting RUWASA project which is yet to be completed.
9.	Electrical (Single fluorescent fitting Complete, LED Philips, Main switch 4way, Double switch socket, Earth wires, conduit coupling and pipes, Elbow, Junction box etc.	Electrical wiring and installations.	Tabora, Mwanza, Dar es Salaam and Dodoma.

2.4.7 Waste Generated During Construction Phase

The waste generated during construction phase of the project resulted from operation of construction and equipment maintenance. The waste that will be generated during construction phase of the project are shown in Table 2-5.

The estimated amount of waste to be generated within a week is 856kg which includes all waste such as Paper, Litter, Paper litter, Plastic bottles/bags, Aluminum cans, Food wastes and Plastic and glass (containers), used tyre, metal (used parts), plastic and cable parts, used lead-acid batteries which will be disposed as per WB EHS Guideline and Tanzanian Regulations.

Table 2-5: Waste generated during cconstruction phase

Aspect	Solid Waste	Liquid Waste	Gaseous Waste	Hazardous Waste
Operations of On-site				
	Paper	Sanitary waste	-	Paint cans
	Litter	-	-	Solvent containers
	Packaging waste	-	-	E-waste
	Paper litter	Sanitary waste	-	-
	Plastic bottles/bags	-	-	-
	Aluminium cans	-	-	-
	Food waste	-		
	Construction debris			Biohazard waste (medical waste)
Machinery and equipment Maintenance				
		Waste oil and grease, battery acid (dilute] sulphur ic acid)	-	Gases that are compressed, liquefied, or dissolved under Pressure may b e hazardous. Flammable liquids including oil, grease and petroleum compounds are also hazardous. Used lead-acid batteries, plastic containers
	-	Lubricant, coolants (radiator fluid), hydraulic fluid, waste water)	-	Lubricants, hydraulic fluid

2.4.7.1 Treatment and Disposal of Waste Generated During Construction Phase

All waste generated at the project site which do not require special handling (bio-degradable waste) will be collected by waste trucks and disposed of at surrounding dumpsites within the project site. The other waste which require special handling (non-biodegradable waste) are to be handled by the contractor.

2.4.8 Operation phase

Administrative tasks including students' registration, staffing, infrastructure maintenance and coordination with other education authorities 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.

2.4.8.1 Material and equipment required during operation phase

During school operation, various materials and equipment are needed in supporting the educational, administration and residential aspects of the school including but not limited to;

- Classroom supplies such as textbooks, notebooks, writing materials (pens, pencils and erasers), rulers, calculators, blackboards, chalks, education posters and various teaching aids essential for classroom instruction and student learning.
- Laboratory equipment for science subjects such as microscopes, test tubes, beakers, Bunsen burners, lab coats and other essential materials are required to facilitate practical learning.
- Sports Equipment such as balls, nets, goal posts and sports uniform to support physical activities.
- Dormitory furnishings such as beds, mattresses, bed sheets wardrobes, and appropriate lighting fixtures to support students' accommodation.
- Dining hall supplies such as tables, chairs, serving utensils, plates, bowls, cutlery and kitchen appliances will be needed to facilitate meals for the students and staff.
- Library resources such as books, reference materials, educational magazines and comfortable seating is important for students' academic and personal development.
- IT infrastructure such as computers, printers, scanners, projectors, internet connectivity and software applications are necessary for administrative tasks, computer classes and accessing educational resources.
- Maintenance and cleaning supplies such as blooms, mops, cleaning agents, trash cans, gardening tools and maintenance equipment to ensure cleanliness of the school premises.
- Security system, emergency response equipment such as fire extinguishers and alarm systems may be necessary to ensure safety within the school premises.
- Sick bay supplies such as medical supplies, medications, first aid kits, diagnostic equipment, furniture and amenities for the aim of meeting the health and safety needs of the students and staff.

For chemistry and biology laboratories, various chemicals and reagents are used to perform experiments and scientific investigations including;

- Acids such as hydrochloric acid, sulfuric acid, nitric acid and acetic acid used for pH adjustments, titrations and chemical reactions.
- Bases such as sodium hydroxide, potassium hydroxide, and ammonium hydroxide used for pH adjustments, neutralizations and precipitation reactions.
- Solvents such as water, ethanol, acetone and methanol used for dissolving substances, cleaning equipment and preparing solutions.
- Indicators such as phenolphthalein, bromothymol blue, and litmus paper used in determining acidity or alkalinity of a solution.
- Enzymes such as amylase, lipase and catalase used in biology laboratories for studying enzymatic reactions and biochemical processes.
- Stains and dyes such as methylene blue, iodine and eosin used to visualize cells, tissues and specific structures in biological samples.
- Various salts such as sodium chloride, potassium nitrate and calcium carbonate used in experiments and preparation of solutions.
- Oxidizing and reducing agents such as hydrogen peroxide, potassium permanganate and sodium metabisulfite used in chemical reactions.
- Preservatives, chemicals such as formaldehyde and ethanol used for biological specimen to prevent decay and microbial growth.
- Culture Media Components like agar, peptone, and nutrient broth used for preparing culture media for micro-organisms growth.

2.4.8.2 Wastes generated during operation phase

The waste generated during the operation phase of the project is a result of different activities taking place during the operational phase of the project. The waste generated during the project's operation phase are;

- Solid waste from the dining hall, kitchen, laboratories, classroom, office, dormitories etc.

- liquid waste from sanitary facilities, laboratories, canteens, and kitchens
- Hazardous waste such as used sanitary pads, bio-medical waste, damaged computers, expired chemicals along with used chemical containers

The dormitories, office, classroom, dining hall, laboratories and resting areas will be supplied with dustbins, complete with waste separation option. The storage capacity will be one week and waste will then be collected for final disposal at a dumpsite located at the District's headquarters. A private company may be employed to deal with solid waste management.

2.4.8.3 Labour requirement during operation phase

Both skilled and unskilled labor are required in the operation phase of the project, which will include:

- Teachers
- Librarians
- Laboratory technician
- Security officer

2.4.8.4 Treatment and Disposal of Waste Generated During Operation Phase

Solid waste management;

For solid waste management, the school can adopt use of the incinerator for management of waste like papers, packaging materials from offices, classrooms, school compounds, and dormitories apart from using it only for biomedical waste from the sick bay and used sanitary pads. Food waste from kitchen and dining halls can be used as manure for variety of plantations that will be present during school operation. For waste from laboratories such as expired chemicals, chemical containers, damaged computer parts, the school heads will segregate the waste from other non-hazardous waste and contact authorized waste management authorities for collection and proper disposal.

Liquid waste management

Waste water drainage systems from all facilities within the school premises will be connected directly to the septic tanks though waste water drainage systems from laboratories specifically the chemistry and biology laboratories should be installed separately to allow treatment before being connected to the septic tanks. These septic tanks will be designed by the Kaliua District Council officials whereas the designs are and the construction costs will also be handled by the council itself.

2.4.9 Decommissioning Phase

After completion of construction, all the utilities that 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.

2.4.9.1 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.

2.4.9.2 Equipment Required During Demobilization Phase

The equipment required during demobilization phase will include vehicles and trucks for transport of waste.

2.4.9.3 Waste Generated During Demobilization Phase

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

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

2.4.9.4 Treatment and Disposal of Waste Generated During Demobilization Phase

The treatment methods for the waste generated during construction phase will depend on whether they are degradable, non-degradable, hazardous, or non-hazardous. Depending on the nature of the waste, the waste will either be re-used, re-cycled, buried, or burnt.

2.4.9.5 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 for both the first and second phase. Nevertheless, with reference to construction schedule and material life span such as steel bricks the project life time will be 50 years followed by maintenance.

2.4.9.6 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.

2.5 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.

The building standards acceptable to the World Bank typically include internationally recognized codes and standards such as:

- International Building Code (IBC): A comprehensive set of building regulations that covers various aspects of construction, including structural safety, fire protection, accessibility, and energy efficiency.
- International Fire Code (IFC): Provides requirements for fire prevention, fire protection systems, and emergency planning to ensure the safety of occupants in buildings.
- International Plumbing Code (IPC): Sets standards for plumbing systems, including water supply, drainage, and sanitation, to ensure safe and efficient water management.
- International Energy Conservation Code (IECC): Establishes energy efficiency requirements for buildings, promoting sustainable construction practices and reducing energy consumption.
- Universal Design Standards: Guidelines that promote accessibility and inclusivity in buildings, ensuring that people of all abilities can access and use the facilities comfortably.

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.

2.5.1 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

2.5.1.1 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 inside the building, store reasonable weight of equipment and instruments at the top floor of the building such as water storage tanks should be designed according to the construction standards and considering building materials such as fire detector alarms should be placed in all buildings.

2.5.1.2 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 which through their government regulatory bodies, need to ensure effective monitoring to control quackery and ensure violators are punished, building and construction permit should also be adhered and lastly ensuring the use of professional people during construction etc.

2.6 Project Associated Facilities

ESIA studies vary in scope and type of analysis, depending on the characteristics of the proposed project. In doing so, each element of a project should be analyzed for its potential to affect the environment and/or society during each phase of the project (including construction, operation, and decommissioning).

ESIAs address a project's environmental and social costs and benefits, including an appraisal of the economic implications of the proposed project. The ESIA should consider the project as designed, in addition to potential alternative options (including that of no action).

In addition to the direct effects outlined above, the possible interactions between different environmental components (indirect effects) should also be considered, together with the impacts that could occur in conjunction with other activities taking place in the near vicinity at the same time (cumulative effects). The construction of school in Tabora region-Kaliua District Council has identified the following activities in the category of associated facilities.

- Utilities (water and electricity)
- Access roads
- Water channels for storm water
- Fire Protection Systems
- Operation procedures

- Emergency procedures
- Fire control
- Car parking

2.6.1 Access Roads

The development of access roads is necessary providing access to staff and students within the school during operation. Access route design must consider several factors, including existing ground strength, expected weather condition.

2.6.2 Utilities Systems (Water and Energy)

2.6.2.1 Power Supply

The proposed project will use electricity from the National Grid (TANESCO), whereas the town council is responsible for pulling the electrical wires to the respective project site and installation within the school premises. The power consumption will vary depending on the school operational hours, type of lighting and equipment uses, and energy efficient practices implemented thus its challenging to provide an estimate of power to be used during the construction and operation phase of the project.

2.6.2.2 Water Supply

Water 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. Water for construction works will be obtained from the available borehole near the project site while during operation water will be obtained from the available borehole along with the awaited RUWASA water supply project that is yet to be completed.

The amount of water required during construction of the project is estimated to be 5500litres per day and during operation is yet to be established though according to the World Health Organization (WHO), water requirement for a person for domestic purposes including drinking, cooking, personal hygiene and cleaning is about 50-100 liters per day. Thus, the actual water usage quantity will vary based on school specific needs and practices.

2.6.3 Water channels for storm water

The development of water channels for storm water is necessary preventing water accumulation within the school compounds and easier movement and prevent water accumulation within the school premises.

2.6.4 Fire protection systems

Fire protection systems are integral components of school safety measures, designed to detect, suppress, and contain fires to safeguard students, staff, and property. These systems encompass a range of equipment and protocols, including fire alarms, smoke detectors, fire extinguishers, fire sprinklers, and emergency lighting. Throughout school buildings, strategically placed fire alarms and smoke detectors provide early warning of fire emergencies, allowing for swift evacuation. Fire extinguishers are readily accessible in key locations, empowering individuals to respond to small fires effectively. In larger buildings, fire sprinkler systems automatically release water or extinguishing agents to control fire spread. Additionally, emergency lighting illuminates exit routes, facilitating safe evacuation during emergencies.

2.6.5 Operation procedures

Operation procedures are established to maintain a safe and orderly environment within schools during regular operations. These procedures encompass daily routines, classroom management practices, safety protocols, and emergency preparedness measures. Examples of operation procedures include attendance tracking, classroom cleanliness guidelines, cafeteria procedures, and visitor management policies. By adhering to these procedures, schools ensure the smooth functioning of day-to-day activities while prioritizing the safety and well-being of students and staff.

2.6.6 Emergency Procedures

Emergency procedures (Appendix II) outline the steps to be followed in the event of various emergencies, such as fires, natural disasters, medical incidents, and security threats. These procedures provide clear guidance on evacuation routes, shelter-in-place protocols, communication methods, and emergency contacts. Regular emergency drills and training sessions familiarize students and staff with these procedures, ensuring a swift and coordinated response in real emergencies. By rehearsing emergency procedures regularly, schools prepare their community to respond effectively to unforeseen events and minimize potential risks.

2.6.7 Fire Control

Fire control measures are implemented to prevent fires from occurring and spreading within school premises. These measures include regular maintenance of electrical systems, heating equipment, and cooking appliances to reduce fire hazards. Periodic fire safety inspections and audits identify potential hazards and ensure compliance with fire safety regulations, reinforcing the school's commitment to protecting the safety and well-being of its occupants.

2.6.8 Parking area

The development of parking areas is necessary for the project implementation to avoid congestion problems for inhabitants of neighboring properties and ensure safety issues for visitors and staff.

2.7 Project Cost

Total Project Cost is four billion Tanzanian shillings

2.8 Manpower

Both skilled and unskilled labor are required in the mobilization and construction phase of the project, which will include: Civil Engineers for construction activities and Manual workers are needed for caring sand, gravels, cement, bricks and other related activities at the project site.

During operation phase of the proposed school the following will be recruited for daily activities in order to run the school smoothly; teachers, librarians, laboratory technicians, Cooks, Matrons, Security officers and; other staff for various activities required for operation of a boarding school.

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, take into 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 Development Vision 2025 and National Five-Year Development Plan 2021/22–2025/26

The Tanzania National Development Vision of 2025 outlines the long-term development goals and aspirations of the country. While the specific details of the Vision may vary, as the Vision evolves over time, we can explore how a project of girl's school construction in whole of Tanzania aligns with the broader principles and objectives outlined in the Vision. Here are some key points to consider:

1. Quality Education: The National Development Vision of 2025 emphasizes the importance of quality education for all Tanzanians. Constructing a girls' school aligns with this objective by providing access to quality education specifically for girls. The project contributes to the overall goal of ensuring inclusive and equitable education, fostering human capital development, and equipping girls with the knowledge and skills necessary to contribute to Tanzania's development.
2. Gender Equality and Empowerment: The National Development Vision recognizes the importance of gender equality and women's empowerment as crucial components of development. A project of constructing a girls' school directly aligns with this objective by promoting gender equality in education and providing opportunities for girls to access quality education. The project helps to bridge gender

gaps, empowers girls with knowledge and skills, and contributes to their social and economic empowerment.

3. Human Capital Development: The National Development Vision emphasizes the development of human capital as a key driver of sustainable development. Constructing a girls' school contributes to this objective by investing in the education and development of girls. By providing them with quality education, the project enhances their knowledge, skills, and capabilities, thereby contributing to the development of a skilled and productive workforce that can drive Tanzania's socio-economic growth.
4. Inclusive Development: The National Development Vision emphasizes the importance of inclusive development that leaves no one behind. A project of constructing a girls' school aligns with this objective by ensuring that girls, who may face social and economic barriers to education, are included and provided with equal opportunities. By promoting access to education for all, the project contributes to reducing inequalities and fostering inclusive development in Tanzania.
5. Sustainable Development: The National Development Vision underscores the need for sustainable development practices to ensure long-term socio-economic and environmental sustainability. A project of constructing a girls' school can incorporate sustainable design principles, such as energy-efficient infrastructure, renewable energy sources, and environmentally friendly construction materials. Additionally, the project can integrate sustainability concepts into the school curriculum, promoting environmental awareness and stewardship among students.

3.4 Relevant Policies

3.4.1 National Environmental Policy (2021)

The overarching governing Tanzania’s environmental management are the National Environmental Policy (NEP) of 2021 and the Environmental Management Act (EMA) of 2004.

This Policy is a supreme national framework for environmental management in the country. It recognizes the role of sectoral policies in pursuit of effective environmental conservation and sustainable socio-economic development. In view of that, the envisioned achievements of this Policy depend on mainstreaming and implementation of relevant environmental measures in the respective sectoral policies.

The Overall Objective of this policy is to provide a national framework for guiding harmonized and coordinated environmental management for the improvement of the welfare of present and future generations. The project will adhere to this policy as the policy will provide insights through all project phases regarding environmental considerations.

3.4.2 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 Tanzanian with knowledge, skills, competencies, abilities and positive attitudes to be able to contribute in bringing about the development of the Nation. The policy focuses on various aspects of education, including access, equity, quality, and relevance whereas implementation of this project will assist in supporting the policy’s goals. Here are some points to consider;

1. Access and Equity: The policy emphasizes the need to ensure access to education for all, regardless of gender or socio-economic background. By constructing a girls' school, the project aims to address the gender disparity in education and provide increased access to quality education specifically for girls. This aligns with the policy's goal of promoting equity and inclusivity.

2. Gender Equality: The policy highlights the importance of promoting gender equality in education. The project's focus on constructing a girls' school directly addresses this aspect by providing girls with an environment that encourages their participation and supports their educational needs. It contributes to creating equal opportunities for girls in accessing education.

3. Quality Education: The policy emphasizes the provision of quality education that meets national and international standards. The project should ensure that the girls' school meets the required infrastructure standards, including classrooms, libraries, laboratories, and other facilities, to deliver quality education. Adequate teaching and learning resources, trained teachers, and an appropriate curriculum should be considered to conform to the policy's objective of quality education.

4. Inclusive Education: While the project focuses on girls' education, it should also consider the broader objective of inclusive education. This means ensuring that girls with disabilities, girls from marginalized communities, and other vulnerable groups have equal opportunities to access education in the school. Creating an inclusive environment that accommodates diverse needs conforms to the policy's commitment to inclusivity.

5. Community Engagement: The policy emphasizes the importance of involving the community in education. The project will engage relevant stakeholders, such as parents, local leaders, and community members, to ensure their participation and support. Collaboration with the community can help address cultural, social, and economic factors that may affect girls' education and contribute to the sustainability of the project.

3.4.3 The National Research and Development Policy, 2010

The Tanzania National Research and Development Policy of 2010 primarily focuses on promoting research and development activities to drive socio-economic development in the country. We can analyze how such a project aligns with the broader objectives and principles outlined in the policy. Here are some key points to consider:

1. Human Capital Development: The policy emphasizes the importance of human capital development through research and education. By constructing a girls' school, the project contributes to enhancing human capital by providing girls with access to quality education and empowering them with knowledge and skills. This aligns with the policy's objective of investing in education and human resource development.

2. Gender Equality and Empowerment: The policy highlights the need for gender equality and women's empowerment. The construction of a girls' school directly supports these objectives by providing a conducive learning environment that addresses gender disparities in education. It empowers girls by giving those equal opportunities to access education, develop their potential, and contribute to the country's development.

3. Research and Innovation: The policy encourages research and innovation to drive development in various sectors. While the construction of a girls' school may not directly involve research activities, the project can support research indirectly. For example, it can serve as a platform for educational research and pilot innovative approaches to improve girls' education, which can contribute to the overall research and development agenda of the country.

4. Socio-economic Development: The policy aims to foster socio-economic development through research, innovation, and technology transfer. By constructing a girls' school, the project contributes to long-term socio-economic development by investing in human capital and promoting gender equality. Educated girls are more likely to become active participants in the workforce, which can lead to economic growth and poverty reduction.

3.4.4 ICT Policy for Basic Education 2007

The achievement of the objectives of Tanzania's education policies and education development programs. As stated in the education policy of 1995, 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.

3.4.5 National Biotechnology Policy, 2020

The Tanzania National Biotechnology Policy of 2010 primarily focuses on regulating and promoting the safe and responsible use of biotechnology for the country's socio-economic development. We can explore how such a project aligns with the broader principles and objectives outlined in the policy. Here are some key points to consider:

- Capacity Building: The biotechnology policy emphasizes the importance of building capacity in biotechnology research and development. The project will contribute to capacity building indirectly by providing a conducive educational environment by investing in the education of girls, including subjects related to science, technology, and biology, thus fostering interest and potential in biotechnology and related fields.
- Sustainable Development: The biotechnology policy underscores the need for sustainable development through the responsible use of biotechnology. The project will adopt environmentally conscious practices during the construction phase by including use of sustainable building materials, implementing energy-efficient infrastructure, and considering waste management practices. By incorporating sustainable practices, the project will align with the broader principles of sustainable development advocated in the policy.

3.4.6 National Gender Policy, 2000

The Tanzania National Gender Policy of 2000 aims to promote gender equality and women's empowerment in all aspects of society, including education. A project of constructing a girls' school in Tanzania aligns with the key principles and objectives of this policy in the following ways:

1. Access to Education: The Gender Policy emphasizes the importance of providing equal access to education for girls. By constructing a girls' school, the project directly addresses the need for inclusive education by creating a safe and supportive learning environment specifically tailored to the needs of girls. This promotes equal access to quality education and supports the policy's objective of gender equality in education.

2. Empowering Girls: The Gender Policy highlights the importance of empowering girls through education. By constructing a girls' school, the project provides an environment that promotes the empowerment of girls by fostering their self-esteem, confidence, leadership skills, and educational attainment. This aligns with the policy's goal of empowering girls to become active participants in society and decision-making processes.

3. Elimination of Gender-Based Violence: The Gender Policy emphasizes the need to eliminate gender-based violence, including violence against girls in educational institutions. By constructing a girls' school, the project can prioritize creating a safe and secure environment that protects girls from any form of violence, harassment, or discrimination. This aligns with the policy's objective of ensuring the safety and well-being of girls.

4. Community Engagement and Awareness: The Gender Policy encourages community engagement and awareness on gender issues. The project will involve engaging community stakeholders, parents, and local leaders to promote the importance of girls' education and gender equality. By fostering community support and raising awareness about gender-related challenges and opportunities, the project aligns with the policy's goal of promoting gender equity in society.

3.4.7 Cultural Policy, 1997

The Tanzania National Cultural Policy of 1997 aims to preserve, promote, and develop Tanzanian culture while ensuring that cultural diversity is respected and protected. We can analyze how such a project aligns with the broader principles and objectives outlined in the cultural policy by considering the following:

- Community Engagement: The cultural policy encourages community participation and engagement in cultural activities. The project will involve the local community, cultural experts, and traditional leaders in the planning and implementation process. This collaboration will ensure that the school's activities and programs respect and incorporate local cultural practices and knowledge fostering community ownership and promoting the transmission of cultural values and traditions.

3.4.8 The Wildlife Policy of Tanzania, 2007

The Tanzania National Wildlife Policy of 2007 primarily focuses on the conservation, management, and sustainable use of wildlife and their habitats. The policy puts emphasis on environmental conservation, including protection of habitats and biodiversity. When constructing a girls' school, it will be essential to consider the environmental impact and adopt sustainable practices such as including site selection that minimizes disruption to wildlife habitats, implementing erosion control measures, and incorporating green building techniques to reduce the ecological footprint of the project.

3.4.9 Antiquities Policy of 2008

The Tanzania National Antiquities Policy of 2008 focuses on the preservation, protection, and management of the country's archaeological and historical heritage. The policy points out cultural heritage protection where during project implementation, it is important to ensure that the project does not encroach upon or disturb any known or potential archaeological sites or cultural heritage locations. Prior site surveys and assessments will be conducted to identify and avoid any potential impacts on cultural heritage resources.

3.4.10 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. We can explore how such a project aligns with the broader principles and objectives outlined in the forest policy. Here are some key points to consider:

- The forest policy emphasizes the importance of environmental conservation, including the protection and sustainable use of forest resources. When constructing a girls' school, it will be crucial to consider the environmental impact of the project by adopting sustainable construction practices, such as using certified sustainable building materials, minimizing deforestation or habitat destruction, and incorporating energy-efficient and environmentally friendly.
- The forest policy highlights the need for reforestation and afforestation efforts to increase forest cover and restore degraded areas. The project can align with this objective by incorporating tree planting programs within the school compound or surrounding areas. This will contribute to restoring the local ecosystem, enhancing biodiversity, and promoting a culture of environmental stewardship among the students.
- The forest policy aims to ensure that forest resources contribute to sustainable development. The project of constructing a girls' school can indirectly contribute to this goal by empowering girls through education. Educated girls are more likely to become environmentally conscious citizens who can contribute to sustainable practices, promote environmental conservation in their communities, and make informed decisions related to the sustainable use of forest resources.

3.4.11 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. Here are some key points showing how the project aligns with the broader principles and objectives outlined in the water policy;

- The water policy emphasizes the importance of providing safe and reliable water supply to all individuals. When implementing the project, it is essential to ensure access to clean water for drinking, sanitation, and hygiene facilities. The project should incorporate adequate water infrastructure, such as boreholes, wells, or connections to water supply systems, to provide a sustainable and sufficient water source for the school.
- The water policy emphasizes the importance of maintaining water quality and improving sanitation. The project should include appropriate sanitation facilities, such as gender-segregated toilets, handwashing stations, and proper wastewater management systems. It should also ensure that water sources and storage facilities are clean and free from contamination, aligning with the policy's objective of providing safe water for all.

3.4.12 Sustainable Industrial Development Policy, 1996 (SIDP)

The Tanzania National Sustainable Industry Development Policy of 1996 focuses on promoting sustainable industrial development, including economic growth, environmental protection, and social development. Here are some key points showing how the project aligns with the broader principles and objectives outlined in the sustainable industry development policy;

- The project of constructing a girls' school can indirectly contribute to economic development by providing employment opportunities during the construction phase and generating long-term benefits through improved education and empowerment of girls. Educated girls can positively impact economic growth and development through their participation in the workforce and contribution to the country's human capital.
- The sustainable industry development policy recognizes the importance of social development and inclusive growth. The project of constructing a girls' school aligns with this objective by providing access to education for girls, promoting gender equality, and empowering young women. Education is a crucial component of social development, as it helps break the cycle of poverty, improves health outcomes, and enables individuals to participate fully in society.
- The sustainable industry development policy emphasizes the importance of building human capacity and skills development. The project can contribute to capacity building by providing educational opportunities for girls, enhancing their knowledge, skills, and capabilities. By investing in education, the project promotes human capital development, which is crucial for sustainable industrial growth and social progress.

3.4.13 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. . Here are some key points showing how the project aligns with the broader principles and objectives outlined in the energy policy;

- The energy policy emphasizes the importance of providing access to modern and affordable energy services for all. When constructing a girls' school, it is crucial to ensure access to reliable and sustainable energy sources. The project can incorporate energy-efficient design principles, utilize renewable energy technologies such as solar panels or biogas systems, and prioritize energy access for lighting, cooking, and other energy needs within the school premises.
- The energy policy promotes energy efficiency measures to minimize energy waste and improve energy productivity. The project can adopt energy-efficient building practices and technologies, such as

insulation, efficient lighting systems, and energy-efficient appliances. By incorporating energy-efficient features, the project can reduce energy consumption, lower operating costs, and contribute to the policy's objective of promoting energy efficiency.
- The energy policy encourages the utilization of renewable energy sources to diversify the energy mix and reduce dependence on fossil fuels. The project can incorporate renewable energy technologies, such as solar panels or wind turbines, to generate clean and sustainable energy for the school. This aligns with the policy's objective of promoting renewable energy development and reducing greenhouse gas emissions.

3.4.14 National Transport Policy, 2003

The Tanzania National Transport Policy of 2003 aims to develop a safe, efficient, and sustainable transport system that supports economic growth and social development. We can explore how such a project aligns with the broader principles and objectives outlined in the transport policy. Here are some key points to consider:

- The transport policy emphasizes improving accessibility to education and social services. When constructing a girls' school, it is important to consider the location and accessibility of the school site. The project should be situated in an area with good transportation links, such as roads or public transportation, to ensure that students can easily access the school and that it is accessible to the surrounding communities.
- The transport policy prioritizes safety in all modes of transport. When planning the project, safety considerations should be taken into account, such as road design and traffic management around the school. Adequate measures should be put in place to ensure the safety of students, including safe pedestrian pathways, and road crossings.
- The transport policy encourages the integration and intermodal connectivity of different transport modes. Although not directly related to the construction phase, the project can consider the connectivity of the school with other modes of transportation, such as public transportation terminals or cycling infrastructure. This can facilitate easy access to the school for students and staff using various transport modes.

3.4.15 Construction Industry Policy, 2003

The Tanzania Construction Industry Policy of 2003 aims to promote sustainable and efficient construction practices, enhance industry standards, and stimulate economic growth within the construction sector. We can see how such a project aligns with the broader principles and objectives outlined in the construction industry policy. Here are some key points to consider:

- The construction industry policy emphasizes the importance of quality construction standards and practices. When implementing the project during construction phase, it is essential to adhere to recognized building codes and regulations, ensuring that the school meets safety, durability, and functionality requirements. The project should employ qualified professionals and contractors with relevant expertise and experience in constructing educational facilities.
- The construction industry policy encourages the use of local resources, materials, and labor to promote local economic development and employment opportunities. The project can prioritize the engagement of local suppliers, contractors, and labor, where feasible, to contribute to local job creation and skills development. This can also foster a sense of ownership and community involvement in the project.
- The construction industry policy emphasizes compliance with relevant laws, regulations, and standards. The project should ensure that all construction activities adhere to applicable building codes, health and safety regulations, and environmental guidelines. Regular inspections and quality control measures should be implemented to ensure compliance throughout the construction process.

3.4.16 National Health Policy, 2007

The health policy emphasizes the need for adequate infrastructure and facilities to support quality healthcare services. When constructing a girls' school, attention should be given to creating a healthy and conducive environment. This includes ensuring proper ventilation, clean water supply, sanitation facilities, and hygiene

practices within the school premises. Creating a safe and healthy physical environment contributes to the overall well-being of students and staff.

3.4.17 Occupational Health and Safety Policy 2008

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.

During the construction phase of the project, it is crucial to prioritize the safety of workers, contractors, and visitors. The project should comply with safety regulations and best practices, such as providing appropriate personal protective equipment (PPE), implementing safety protocols, conducting regular safety inspections, and promoting awareness and training programs for all construction personnel.

3.4.18 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. The land policy also emphasizes the conservation and sustainable management of natural resources. When constructing a girls' school, the project can consider environmental conservation measures, such as preserving existing vegetation, minimizing deforestation, and implementing erosion control measures.

3.4.19 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 waste do not endanger the health of residents. The policy advocates for a set of environmental quality standards of gaseous emissions from industries and vehicles. This has to be ensured during the construction phase so as to ensure no environmental pollution to the surrounding community.

The policy also focuses on the development of necessary infrastructure in human settlements. When constructing a girls' school, the project can contribute to infrastructure development by providing the necessary facilities such as classrooms, libraries, laboratories, and sanitary facilities. The project can also consider the availability of basic amenities such as water supply, electricity, and sanitation services in the school premises.

3.4.20 National HIV/AIDS Policy (2001)

The overall goal of this policy is to provide for a framework for leadership and coordination of the national multi-sectoral response to the HIV/AIDS pandemic. This includes the formulation by all sectors of appropriate interventions which will be effective in preventing transmission of HIV/AIDS and other sexually transmitted infections, protecting and supporting vulnerable groups, and mitigating the social and economic impacts of HIV/AIDS.

The policy also recognizes gender inequality as a key driver of the epidemic and emphasizes the importance of gender equality and empowerment in HIV/AIDS prevention and care. A project of constructing a girls' school aligns with this objective by providing a supportive and empowering environment for girls to thrive. This includes promoting gender equality in education, addressing gender-based violence, and empowering girls with

knowledge and skills to protect themselves from HIV infection. For project sustainability PO-RALG will have to closely observe the above policy.

3.4.21 National Economic Empowerment Policy (2004)

The Tanzania National Economic Empowerment Policy of 2004 aims to promote economic growth, reduce poverty, and enhance the economic participation of all citizens, particularly marginalized groups. We can assess how such a project meets the broader principles and objectives outlined in the economic empowerment policy. Here are some key points to consider:

- The economic empowerment policy recognizes the importance of education and skills development in empowering individuals to participate in the economy. Constructing a girls' school aligns with this objective by providing access to quality education for girls, which can enhance their knowledge, skills, and capabilities. By investing in girls' education, the project contributes to their economic empowerment, as education is a key factor in reducing poverty and improving economic opportunities.
- The economic empowerment policy emphasizes the need to generate employment opportunities for all citizens, including women and youth. When constructing a girls' school, the project can contribute to employment generation by engaging local labor and contractors. This creates job opportunities for the local community, stimulates economic activity, and promotes income generation.
- The economic empowerment policy highlights the importance of gender equality and social inclusion in economic development. A project of constructing a girls' school aligns with this objective by promoting gender equality in education and empowering girls to participate actively in the economy. The project can ensure equal access to resources, opportunities, and support for girls, creating an environment that is inclusive and supportive of their economic empowerment.
- The economic empowerment policy emphasizes community development as a means of reducing poverty and improving livelihoods. The project can contribute to community development by engaging with local communities, fostering partnerships, and considering community needs in the planning and implementation of the school construction. This can include involving local stakeholders in decision-making processes, utilizing local resources, and supporting community initiatives for economic development.

3.5 Legal Framework

3.5.1 Environmental Management Act (2004), Cap. 191

The Environmental Management Act No. 20 of 2004 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 or developer 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.

3.5.2 The Education Act, Cap. 353 of 1978

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.

3.5.3 Person with Disability Act, Cap.183 of 2010

The act aims to protect the rights and interests of persons with disabilities and ensure their full participation in all aspects of life, including education.

The project complies with the act as it has ensured that the school’s infrastructures and facilities are designed and constructed in a manner that easier accessibility and mobility.

3.5.4 Water Resource Management Act, Cap. 331 of 2009

The Water Resource Management Act emphasizes the sustainable use and allocation of water resources. When constructing a girls' school, it is important to consider the water needs of the project and ensure efficient water use practices. The project should obtain the necessary permits or water rights for water abstraction and comply with regulations related to water allocation and management. It should also prioritize water conservation measures, such as using water-efficient fixtures and promoting water-saving practices within the school premises.

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

The Land Act emphasizes land use planning as a means to ensure sustainable and orderly development. When constructing a girls' school, it is important to consider land use planning regulations and obtain the necessary approvals or permits for the project. The project should align with the designated land use plans and conform to zoning regulations to ensure appropriate land use within the designated area.

Also, the Act addresses land tenure and ownership, recognizing various forms of land rights, including customary, statutory, and public land. When undertaking a construction project, it is essential to clarify land ownership and obtain the necessary legal documentation and consent from the relevant landowners or authorities. The project should comply with regulations related to land acquisition, ownership, and transfer to ensure that the land for the girls' school construction is acquired lawfully and in accordance with the Act.

Furthermore, the Land Act emphasizes the need to consider environmental factors in land management. When constructing a girls' school, it is crucial to assess and minimize potential environmental impacts. The project should avoid environmentally sensitive areas, such as wetlands or protected areas, and implement measures to mitigate soil erosion, deforestation, or other adverse environmental effects.

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

The Act highlights the need for community involvement and consent in matters related to village land. When undertaking a construction project, it is crucial to engage with the relevant village authorities and consult with the local community. This engagement ensures that the project aligns with the aspirations and needs of the community, and any necessary permissions or consents are obtained in accordance with the Act.

Furthermore, the Village Land Act promotes infrastructure development for the benefit of the community. Constructing a girls' school contributes to infrastructure development in the village, providing educational facilities for girls and promoting equal access to education. The project should align with the broader development objectives of the village and contribute to the overall socio-economic well-being of the community.

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

The Land Acquisition Act allows for land acquisition for public purposes, which can include the construction of educational facilities such as girls' schools. PO-RALG conforms to the Act since the project clearly demonstrate its public purpose and contribution to the public welfare by providing education opportunities to girls within respective region.

3.5.8 Forest Act, (Cap. 323 R.E) of 2022

The Forest Act emphasizes the conservation and restoration of forest resources. When undertaking a construction project, it is important to minimize the impact on forested areas. Implement measures to prevent soil erosion, protect existing trees, and promote reforestation and afforestation efforts within the project site or in nearby areas. The project should also consider using sustainable construction practices that minimize the use of forest resources and promote environmental conservation.

3.5.9 The Local Government (district Authorities) Act, [Cap 287 R. E. 2002] and 'The Local Government (Urban Authorities) Act, [Cap 288 R. E 2002].

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 Developers 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.

3.5.10 Occupational Health and Safety Act, 2003

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 labor 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.

3.5.11 Public Health Act No. 1 of 2009

The Act addresses environmental health concerns, including the control of pollution and environmental hazards. When undertaking a construction project, it is important to assess and mitigate potential environmental health risks. This includes managing construction waste properly, preventing contamination of water sources, and

controlling air and noise pollution. Compliance with environmental regulations and standards is crucial to align with the Act's provisions.

3.5.12 Wildlife Conservation Act No 5 of 2009

The Act focuses on the conservation of biodiversity and the sustainable use of wildlife resources. When undertaking a construction project, it is important to assess and mitigate potential impacts on biodiversity. This includes avoiding the destruction of natural habitats, minimizing disturbance to wildlife, and adopting sustainable construction practices that minimize environmental impacts.

3.5.13 The HIV and AIDS (Prevention and Control) Act, Cap 431 of 2008

The Act prohibits discrimination against individuals living with HIV/AIDS and promotes efforts to reduce stigma. When constructing a girls' school, it is essential to create an inclusive and non-discriminatory environment. This includes developing policies that protect the rights of students and staff living with HIV/AIDS and fostering an atmosphere of acceptance, understanding, and support.

3.5.14 Industrial and Consumer Chemicals (Management and Control) Act, Cap. 182, 2003

The Act provides guidelines for the management and disposal of hazardous substances and waste. During the construction process, it is important to identify and manage any hazardous substances used, ensuring compliance with the Act's requirements for safe handling, storage, and disposal. This includes implementing proper waste management practices to minimize environmental pollution and health risks.

3.5.15 The Employment and Labor Relation Act, Cap. 366 of 2019

The Act promotes occupational safety and health in the workplace. When implementing the project, it is important to prioritize the safety and well-being of the workers involved in the construction process. This includes providing a safe working environment, adhering to occupational health and safety standards, and implementing appropriate safety measures to prevent workplace accidents and injuries.

Nevertheless, the Act prohibits discrimination in employment based on various grounds, including gender. When undertaking a project in all phases, it is crucial to ensure equal employment opportunities for all workers, regardless of their gender. This includes promoting gender equality in hiring practices, providing equal pay for equal work, and fostering a work environment that is free from gender-based discrimination.

3.5.16 The Fire and Rescue Force Act, Cap 427 of 2007

The Act requires compliance with building codes and regulations related to fire safety. When undertaking a construction project, it is crucial to follow the approved building plans and ensure that the design and construction of the girls' school comply with fire safety standards. This includes proper compartmentalization, sufficient evacuation routes, and adequate fire-resistant materials.

Also, the Act promotes the development of emergency response plans. When constructing a girls' school, it is important to develop an emergency response plan that outlines procedures for handling fire incidents, evacuation plans, and communication protocols. This plan should be shared with staff, students, and relevant authorities to ensure a coordinated and efficient response in case of a fire emergency.

Furthermore, the Act establishes the Fire and Rescue Force as the responsible authority for fire prevention and control. When undertaking a construction project, it is essential to collaborate with the Fire and Rescue Force and seek their guidance and support. Engaging with fire authorities during the planning and construction phases can help ensure compliance with fire safety standards and regulations.

3.5.17 The Contractors Registration Act, Cap. 235, 1999

The Act requires contractors registered with the Contractors Registration Board (CRB) to engage in construction activities. When undertaking a project of girl's school construction, it is important to ensure that the contractor involved in the project is registered with the CRB so as to meet the necessary qualifications, standards, and requirements set by the Act.

The Act also emphasizes the importance of quality assurance and adherence to construction standards. When constructing a girls' school, it is important to ensure that the contractor follows the relevant building codes, regulations, and standards. This includes using appropriate construction materials, employing skilled workers, and implementing quality control measures throughout the construction process.

Nevertheless, the Act also encourages compliance with labor laws and regulations related to employment, wages, and working conditions. When engaging contractors and subcontractors, it is important to ensure that they comply with labor laws, provide fair wages, adhere to safety regulations, and follow proper employment practices.

3.5.18 Standard Act Cap. 130 of 2009

The Tanzania National Standards Act of 2009 establishes the legal framework for standardization activities in Tanzania. We can explore how such a project aligns with the broader principles and objectives outlined in the Act. Here are some key points to consider:

1. Adherence to Construction Standards: The Act emphasizes the importance of adherence to standards in various sectors, including construction. When undertaking a project of girl's school construction, it is important to ensure that the construction process follows relevant construction standards and codes. This includes using appropriate building materials, following structural design guidelines, and implementing quality control measures to ensure compliance with established standards.

2. Relevant National Standards: The Act establishes the Tanzania Bureau of Standards (TBS) as the national standards body responsible for setting and enforcing standards in various sectors. When constructing a girls' school, it is important to consult relevant national standards that apply to the construction industry. This includes standards for building materials, structural design, fire safety, electrical systems, plumbing, and other relevant aspects of the construction project.

3. Certification and Conformity Assessment: The Act promotes certification and conformity assessment of products and processes to ensure quality and safety. When undertaking the construction project, it may be necessary to obtain certification for certain materials or components used in the construction process. This includes verifying that the materials meet established standards and have undergone appropriate testing and evaluation.

4. Stakeholder Engagement: The Act encourages stakeholder engagement in the standardization process. When undertaking the project, it is important to engage with relevant stakeholders, such as the Tanzania Bureau of Standards, architects, engineers, and other professionals involved in the construction industry. This promotes collaboration, knowledge sharing, and adherence to established standards throughout the project.

5. Compliance with Occupational Health and Safety Standards: The Act also emphasizes the importance of occupational health and safety standards. When constructing a girls' school, it is important to comply with relevant occupational health and safety standards to ensure a safe working environment for the construction workers and future occupants of the school.

6. Quality of Education: The Act promotes the use of standards to ensure the quality of products and services. In the context of a girls' school, the Act can be interpreted as encouraging adherence to educational standards to ensure a high-quality education for students. This includes complying with curriculum standards, teacher qualifications, teaching methodologies, and assessment practices as prescribed by the relevant educational authorities.

7. Health and Safety Standards: The Act emphasizes the importance of health and safety standards in various sectors. When operating a girls' school, it is crucial to comply with relevant health and safety standards to provide a safe and secure learning environment for students and staff. This includes ensuring proper sanitation facilities, fire safety measures, first aid provisions, and appropriate security arrangements.
8. Compliance with Education Regulations: The Act indirectly aligns with education regulations set by the Ministry of Education or relevant authorities. When operating a girls' school, it is important to comply with the applicable regulations related to school operations, student welfare, teacher-student ratios, class sizes, and other aspects of educational administration.

3.5.19 Urban Planning Act No.8 of 2007

In adhering to the Tanzania Urban Planning Act No. 8 of 2007, the construction of a girls' school in Tanzania must align with the stipulated regulations and guidelines outlined within the Act. This legislation mandates comprehensive planning and development processes to ensure the efficient and sustainable use of urban spaces. The project must undergo rigorous urban planning procedures, including land zoning, infrastructure provision, and environmental impact assessments, to obtain the necessary permits and approvals.

Additionally, the project must conform to land use regulations and building codes specified by local urban planning authorities. By adhering to the provisions of the Tanzania Urban Planning Act, the construction of the girls' school contributes to the orderly development of urban areas, promoting the well-being and quality of life for residents while fostering sustainable urban growth and development.

3.5.20 Social Security Authority Act, (Cap 34 R.E 2015)

The construction of a girls' school in Tanzania aligns with the Tanzania Social Security Authority Act, (Cap 34 R.E 2015) by prioritizing the welfare and social security of its stakeholders, particularly the employees involved in the project. The Act mandates that employers, including entities engaged in construction projects, adhere to social security provisions to ensure the well-being and financial stability of workers. In compliance with this legislation, the project must register with the Tanzania Social Security Authority (TSSA) and fulfill its obligations related to employee contributions to social security schemes such as the National Social Security Fund (NSSF). By adhering to the provisions of the Act, the construction project provides a secure and supportive environment for its workforce, promoting social welfare and contributing to the broader goals of social security in Tanzania.

3.5.21 Tanzania Investment Act No. 26 of 1997 revised 2002;

The construction of a girls' school in Tanzania, aligns with the provisions of the Tanzania Investment Act No. 26 of 1997, revised in 2002. This Act aims to promote and regulate investments in Tanzania, whether they are initiated by local or foreign entities. As the government is undertaking the project, it must adhere to the Act's requirements, which include obtaining necessary approvals and permits from the Tanzania Investment Center (TIC) or other relevant authorities.

Additionally, the Act ensures protection of investments, guarantees against expropriation, and facilitates repatriation of profits. By conforming to the Tanzania Investment Act, the construction of the girls' school contributes to the development of the education sector in Tanzania while also fostering an investment-friendly environment that supports economic growth and development.

3.5.22 National Health Insurance Act, Cap 395.

The construction of a girls' school in Tanzania aligns with the Tanzania Health Insurance Act, Cap 395, by promoting the well-being of the school community. While the Act primarily focuses on health insurance coverage for individuals and families, the project indirectly supports its objectives by providing access to education, which is essential for promoting health and well-being.

By constructing the school, the government of Tanzania is investing in the education sector, which plays a crucial role in empowering individuals with knowledge and skills necessary for making informed decisions about their health. Additionally, the school can implement health promotion programs and provide access to healthcare services, contributing to the overall health and welfare of students, staff, and their families. While the project may not directly involve health insurance provisions, its contribution to education and community well-being aligns with the broader objectives of the Tanzania Health Insurance Act.

3.5.23 The Weight and Measure Act 2019 Cap 340;

The construction of a girls' school in Tanzania aligns with The Weights and Measures Act 2019, Cap 340, by ensuring compliance with standards and regulations related to infrastructure and facilities. While the Act primarily focuses on regulating weights and measures in commercial transactions, its broader objective is to promote accuracy, transparency, and fairness in various sectors. In the context of school construction, adherence to this Act may involve ensuring accurate measurement of building materials, dimensions of structures, and compliance with safety standards.

By adhering to these regulations, the project ensures that construction activities are conducted with precision and integrity, safeguarding the quality and safety of the school infrastructure. Additionally, compliance with The Weights and Measures Act contributes to the overall trust and credibility of the construction process, fostering confidence among stakeholders and ensuring accountability in the implementation of the project.

3.6 National Regulations

3.6.1 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 (EMA) 2004, and the first schedule of The Environmental Management (Environmental Impact Assessment and Audit) (Amendment) Regulations (United Republic of Tanzania, 2018) which detail 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

3.6.2 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

3.6.3 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

3.6.4 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

3.6.5 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.

3.6.6 Other Environmental Regulations

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

3.6.6.1 Environmental Management (Air Quality Standards) Regulation, 2007

This give permissible emission limits of sulphur oxides, carbon monoxide, hydrocarbons (as total organic carbon), dust, nitrogen oxides and lead. The standard is used as criteria in evaluation of impact significance

3.6.6.2 Environmental Management (Quality Standards for Controlling Noise and Vibrations Pollution) Regulation, 2015;

These regulations establish standards for controlling and managing noise and vibrations to protect human health and well-being. To comply with these regulations, the project would need to implement measures to

minimize noise and vibrations during the construction phase, such as using appropriate construction techniques, employing noise barriers, and scheduling noisy activities during non-school hours.

Once operational, the project would need to ensure that noise levels within the school premises comply with the established standards, including the use of soundproofing materials, maintaining equipment and machinery in good condition, and implementing noise control strategies where necessary. By adhering to these regulations, the project can create a peaceful and suitable environment for learning, promoting the well-being and academic performance of the students attending the girls' school.

3.6.6.3 Environmental Management (Biosafety) (Amendment) Regulations, 2015 (G.N. No. 41 of 2015);

These Regulations, made under sections 69 and 230(2)(o)) of the Environmental Management, concern the import, export, deliberate release, confined use, contained use, transit and placing on the market of Genetically Modified Organisms (GMOs) and their products. The Regulations implement in Tanzania provisions of the Cartagena Protocol of Biosafety. They designate the Ministry responsible for environment as the National Biosafety Focal Point for purposes of the Protocol and define its functions.

3.6.6.4 Environmental Management (Hazardous Waste Management) Regulation, 2009;

The main focuses of this regulation is to ensure proper management of hazardous waste from the generation to the disposal area to ensure that there is sustainable environment.

3.6.6.5 Environmental Management (Solid Waste Management) Regulation, 2009;

Made under sections 114 of Environmental management for Solid waste management for the purpose of ensuring minimization of solid waste in their respective geographical areas of jurisdiction local government authorities shall prescribe as for different types or kind of waste or refuse or garbage to be separated at the source and fail for that made under section 45(1) of Solid waste management amended 2016 that person commit an offense and to fine not less than fifty thousand shilling but not exceed two hundred thousand shilling or imprison in term of not less than three month.

3.6.6.6 Environmental Management (Control and Management of Electrical and Electronic Equipment Waste) Regulations, 2021.

The main objective of these Regulations is to provide for and promote proper management of e-waste to protect human health, and environment while ensuring sustainable development.

3.6.6.7 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.

3.7 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.

3.7.1 National Development Vision 2025 and 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 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.

3.7.2 National Strategy for Growth and Reduction of Poverty (2005)

The National Strategy for Growth and Reduction of Poverty (NSGRP) is viewed as an instrument and channelling national efforts towards broadly agreed objectives and specific inputs and outputs. Achieving the target of accelerating growth with require significant efforts by different stakeholders to enhance productivity and increase investment in both human and physical capital.

Section 2.4.1 of the strategy considers education and illiteracy especially the pace of transition to secondary schools to be low despite the growth of private secondary schools. Vulnerability of girls to cultural beliefs and customs, early pregnancies and sexual abuse remain a challenge to enrolment and completion of schooling. As such, this project contributes in the alleviation of some of these challenges in the energy education and illiteracy.

3.7.3 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.*

3.7.4 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.

3.7.5 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.

3.8 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.

3.8.1.1 The main objectives of the ESF are:

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 mechanisms for participation of stakeholders in decision making process for the project.

Table 3-1: The World Bank Environmental and Social Safeguards

S/N	The Environmental and Social Standards (ESS)	Purpose/Objectives	Reason for its Application in the Project
1.	**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).
	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. Developer 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.
	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.
	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 developer to avoid or minimize such risks and impacts, with particular attention to people who, because of their circumstances, may be vulnerable
	ESS5: Land Acquisition, Restriction on Land Use	To avoid or minimize involuntary resettlement and to avoid forced eviction	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) was carefully planned and implemented.

S/N	The Environmental and Social Standards (ESS)	Purpose/Objectives	Reason for its Application in the Project
	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.
	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.
	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.
	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,

S/N	The Environmental and Social Standards (ESS)	Purpose/Objectives	Reason for its Application in the Project
			including the capacity of the FI and the nature and scope of the funding to be provided by the FI.
	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 developer 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.

3.9 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. Among the applicable guidance notes for SEQUIP are:

3.10 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.

3.10.1 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.

3.10.2 3.4.8 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.

3.10.3 1996 Convention on Biological Diversity,

Developer 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.

3.10.4 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.

3.10.5 Labor 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 labor.
- To promote safe and healthy working conditions, and to protect and promote the health of workers.

3.10.6 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

3.10.7 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

3.10.8 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

3.10.9 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

3.10.10 Indigenous Peoples

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

3.10.11 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

3.11 International Convention

3.11.1 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.

3.11.2 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”.

3.11.3 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”.

3.11.4 Convention on the Rights of the Child, 1989

The Convention recognize 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.

3.11.5 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”.

3.12 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	Target
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 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

Goal	Target
	desertification, drought and floods, and strive to achieve a land degradation-neutral world

3.13 Institutional Framework

The Tanzania EIA Procedure confers different roles and responsibilities to all parties involved in the EIA process of any proposed development undertaking to which EIA is obligatory. Important institutions to the proposed project are as summarized in Table 3-3.

Table 3-3: Relevant Key Institutions for proposed expansion activities

Level	Institution	Role and Responsibility
National	Vice President's Office (Division of Environment)	• Co-ordinate Environmental Management Policy, Environment Management Act and EIA guidelines • Approves, signs and issues Environmental Certificate • Advise Government on all environmental matters • Enforces and ensures compliance with the national environmental quality standards • Provides policy direction and leadership in all matters, particularly those pertaining to hazardous waste management under the Environmental Management Act
	National Environment Management Council (NEMC)	• Project registration, approval of ToR, and review of EIA and EA • Environmental Monitoring and Compliance Auditing • Advises Government on all environmental matters
Ministry	Ministry of Education, Science and Technology	• To put in place and strengthen structures and procedures which will enable a country to get educated and continuous learning Tanzanians that add value in National development.
	Ministry of Lands, Housing and Human Settlements Development	• Land use planning • Issuing of Right of Occupancy; • Valuation and compensation.
Institution	Occupational Safety and Health Authority (OSHA)	• General understanding and views about the project • Requirements of the project in terms of safety at the workplace • Land use in the area of vicinity in terms of safety
	Fire and Rescue force Office	• Rescue operations • Emergency response • Fire suppression • Fire prevention • Hazardous materials response
Region and District	Tabora Regional Office (Regional Administrative Secretary)	• Oversee and advice on implementation of national policies at city level • Oversee enforcement of laws and regulations • Advice on implementation of development projects and activities at city level
	Kaliua District Council office	• Oversee and advice on implementation of national policies at District level • Oversee enforcement of laws and regulations • Advice on implementation of development projects and activities at District level

Level	Institution	Role and Responsibility
	Kaliua District Executive Director's Office	• Chief Executive Officer for all development activities in the Municipal level
	Kaliua District – Environment/ Planning/ Community Development Departments etc.	• Baseline data on social and economic conditions • Extension services • Plan and coordinate activities on community-based natural resource and environment management • Enforcement of laws and regulations • Responsible for waste management within District
Ward	Igalagala Ward	• Oversee general development plans for the Ward. • Provide information on local situation and extension services • Technical support & advice • Project Monitoring
	Chairman, Communities groups (Members of Wachawaseme Village Council)	• Information on local social, economic, environmental situation • View on socio-economic and cultural value of the sites • Rendering assistance and advice on the implementation of the project • Project Monitoring (watchdog for the environment, ensure well-being of residents and participate in project activities

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.
- 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 Tabora region, Kaliua District Council in Igagala ward, Wachawaseme village. Tabora is the largest administrative region in Tanzania, accounts for 8.6 percent of Tanzania mainland land area of 881,289 square kilometers.

The Region is in the mid-western part of Tanzania mainland on the Central African Plateau between latitudes 4o and 7o south of the Equator and longitude 31o to 34o east of Greenwich Meridian. Tabora region is located at an elevation of 1,209 meters above sea level.

Kaliua District is one of the seven districts of the Tabora Region of Tanzania. This district shares borders with Urambo and Uyui Districts to the east, Mpanda and Mlele Districts (Katavi Region) to the south, Uvinza and Kibondo Districts (Kigoma Region) to the west. In the north, the district borders Ushetu District (Shinyanga Region) and Bukombe District (Geita Region) to the northwest.

Kaliua District has a total land area of 14,050 square kilometers, which is approximately 18.82% of the total area of Tabora. The agricultural area is 1,965.5 square kilometers, of which 1,500 square kilometers are cultivated annually. The remaining 12,084.5 square kilometers (86%) consist of forest reserves, grassland, and water bodies. The vegetation of the district is divided into natural miombo forests found in Igombenkulu, Milambo, and Kanindo.

Kaliua can be accessed by tarmac Trunk Road T18 from Tabora to Kigoma passes through the district which is 20km from Kaliua District town. The Tanzanian Central Line train - from Dar es Salaam to Kigoma - passes through the district. The train track to Mpanda branches off from the main line in Kaliua town.

4.3 General Conditions

4.3.1 Current Land Uses and Activities at the Proposed Project Site

The proposed land site which is located in Wachawaseme village was once used for agricultural activities by the community which has size of 61.45 acres currently there is no economic activities proceeding in such area, hence it is a bush area as figure showing bellow

4.3.2 Built in Environment

The proposed site is surrounded by farms in south, west and east but only North there is T18 trunk road from Tabora to Kigoma as well as residential houses as shown in Figure 4-1

Figure 4-1: Surroundings to the proposed area

4.4 Socio-economic Baseline

4.4.1 Background

A development envelope (Area of Interest - AOI) is situated at wachawaseme Village, Igagala Ward, Kaliua District, Tabora Region. Details of the study area for the Social Impact Assessment (SIA) is in Table 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, adjacent to nation trunk road, which will be used as the access roads,

Study Area	Definition	Areas included for this project
Local study area	Areas likely to experience impacts related to population influx, etc.	The neighboring settlements in Igagala and wachawaseme Villages
Regional study area	Area likely to experience economic impacts of the project	Kaliua (since most of the development envelope falls within this district). This is set against the backdrop of Tabora Region and Tanzania as a whole

4.4.2 Administrative Set up

The proposed project fall under Wachawaseme village headed by Village Executive Officer (VEO) and village chairperson, in, Igagala ward headed by ward executive officer (WEO) and ward council, in Kaliua Districts headed by District commissioner (DC) and District Executive director (DED) in Tabora region under Region Administrative Secretary (RAS)

4.4.3 Demographic Condition

Tabora Region is one of 31 administrative regions of the United Republic of Tanzania located in the mid-western part of Tanzania Mainland. The region has 7 districts with 8 councils covering an area of 75,685 square kilometers, representing eight per cent (8%) of the total land area of Mainland Tanzania. The region has a total population of 3,391,679 (2022 Census).

Considering the project will be implemented in Tabora region and Kaliua District Council among all the councils, thus population development in Kaliua District Council as well as related information and services will be provided.

Kaliua District Council

3,391,679 (Male: 1,661,171 ; Female: 1,730,508) Population Census, 2022

714,050 **km²** Area

Kaliua District Cuncil in Tabora Region, Tanzania

The council consists of 28 Wards with 116,224 households as shown in Table.

Table 4-2: Population of Kaliua District Council by Wards

Council/Ward		Population			Sex Ratio	Number of Households	Average Household Size
		Both Sexes	Male	Female			
Kaliua District Council		**678,447**	**331,965**	**346,482**	**96**	**116,224**	**5.8**
1.	Ukumbi Siganga	20,522	10,203	10,319	99	4,046	5.1
2.	Zugimlole	42,943	21,025	21,918	96	6,761	6.4
3.	Ugunga	22,507	10,948	11,559	95	3,510	6.4

4.	Kaliua	16,270	7,663	8,607	89	3,733	4.4
5.	Kamsekwa	24,954	12,262	12,692	97	4,102	6.1
6.	Ufukutwa	18,131	8,731	9,400	93	3,616	5.0
7.	Ushokola	27,005	13,012	13,993	93	4,952	5.5
8.	Kazaroho	13,041	6,564	6,477	101	2,183	6.0
9.	Igwisi	72,409	35,797	36,612	98	11,741	6.2
10.	Usimba	6,436	3,235	3,201	101	1,156	5.6
11.	Usinge	69,774	33,980	35,794	95	12,804	5.4
12.	Igagala	46,097	22,734	23,363	97	8,902	5.2
13.	Usenye	14,721	7,473	7,248	103	2,417	6.1
14.	Uyowa	41,656	20,349	21,307	96	6,949	6.0
15.	Silambo	18,969	9,470	9,499	100	3,283	5.8
16.	Ichemba	5,177	2,607	2,570	101	951	5.4
17.	Mwongozo	11,963	5,824	6,139	95	2,139	5.6
18.	Kanoge	5,332	2,610	2,722	96	844	6.3
19.	Mkindo	29,582	14,392	15,190	95	4,807	6.2
20.	Milambo	36,306	17,613	18,693	94	6,534	5.6
21.	Nhwande	16,713	8,238	8,475	97	2,622	6.4
22.	Makingi	7,717	3,743	3,974	94	1,093	7.1
23.	Kashishi	22,487	10,916	11,571	94	3,473	6.5
24.	Sasu	10,645	5,108	5,537	92	1,716	6.2
25.	Seleli	21,643	10,566	11,077	95	3,259	6.6
26.	Igombemkulu	30,376	14,808	15,568	95	4,605	6.6
27.	Kona Nne	14,863	7,136	7,727	92	2,589	5.7
28.	Ilege	10,208	4,958	5,250	94	1,437	7.1

Source: NBS, 2022

4.4.4 Ethnic Composition

The Tabora region is the traditional centre of the Nyamwezi Tribe, and for this reason was originally referred to as ‘Unyamwezi’, and in its hey-day during the early 1800s, the town of Tabora was called Unyanyembe. The largest ethnic group (tribe) in the region is *Wanyamwezi*, followed by *Wasukuma*, *Waha*, *Wanyiramba* and a few refugees from the neighbouring country of Burundi.

4.4.5 Economic Activities

The primary source of income in Kaliua District is the trade in annual crops such as maize, beans, sorghum, and sweet potatoes, as well as cash crops including tobacco, groundnuts, cotton, and sunflower. Forest products, honey, and livestock also contribute significantly to the district's revenue. The agriculture sector employs 80% of Kaliua's population. Social and economic services are provided by the government in collaboration with the private sector. Income from livestock, fishing, honey, and small-scale mining industries also contributes to household incomes.

4.4.5.1 Agriculture.

Tabora Region's largest employer is agriculture at 64% of the economic activities in the region, mainly in commercial and food crops, together with livestock. Major crops grown in Tabora are maize, mainly for domestic consumption. Major cash crops are ground nuts, cassava, beans, tobacco, rice, sunflower oil and cotton.

4.4.5.2 Livestock.

Livestock keeping is the second predominant economic activity in Tabora Region. The climate and environmental conditions are favorable for livestock keeping. The most important type of livestock are cattle, sheep and goats. The cattle population is made up of indigenous breed, the majority being Tanzania short horn Zebu but substantial number of long horned Ankole cattle exist.

4.4.5.3 Forestry and honey production.

Tabora is home to some of the largest miombo forests in Africa and the largest forest reserve in Tanzania. The region is one of the largest supplier of natural timber and the largest honey producer in Tanzania, producing 13, 5000 tons in 2008. Tabora has a very productive bee keeping industry in the region, thus earning the nick name the honey region. Tabora produces half of all honey products in Tanzania.

Tanzania is the second largest honey producer in Africa producing 27,000 tons in 2008, after Ethiopia which produces 44,000 Tons. Tabora produces unprocessed honey which is exported to Arusha City and Dar es Salaam City to be processed for export and domestic use.

4.4.5.4 Wildlife.

Tremendous wildlife resources are found in Tabora region. Except for Nzega district, all districts are rich in wild animals. The main species include elephants, buffaloes, waterbuck, eland, giraffe, impala, roan and sable antelopes, warthog, hippo, and many birds such as Francolin love birds. The region has one game reserve which is the Ugalla Game Reserve located in the southern part of Urambo.

4.4.5.5 Tourism

Tourist hunting which started in 1992 is being conducted in the following blocks: Ugalla Game Reserve, Luganzo GCA, Rungwa GCA, Ugunda GCS, Wembere South and Ugalla - Niensi area

4.4.5.6 Fisheries

Situated in the inland of Tanzania, Tabora region has limited fishing resources. Fishing activities are mainly confined to Lake Sagara, Ugalla River and the man-made dams of Igombe, Kilimi, Mwamapuli, Mihama and Bulenya. Fishing is done by individuals using seine nets.

4.4.5.7 Mining

Although mining industry has been contributing to the region economy of Tabora region since colonial times, very little is known about the actual potential of minerals. For a long time, mining activities have been carried out by small scale prospectors. Recently some large companies have shown interest in prospecting and mining in the region.

Currently there are companies prospecting for Tabora which has a great potential particularly for gold, diamonds, and dimension stones. Gold (Green stone) found in Igunga, Nzega, and Sikonge, Diamond found in Nzega, Uyui and Sikonge and building materials such as Dimension stones are found in Tabora Urban and Uyui

4.4.5.8 Industry and Trade

Industry and Trade are important activities which directly contribute to the region's economy while employing a good number of active labour force. The big industrial establishments in Tabora are the TABOTEX (Tabora Textile) which deals with cotton spinning and employs over 1000 people and the Manonga Ginnery which gins cotton and employs over 500 people.

Other industrial establishments are the more than 260 small scale industries which include timber sawing, furniture making, vehicle garages, metal sheet working, oil processing and many others employing many people. Trade business in the region is advancing and showing much progressive because of demand for commodities.

4.4.6 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. The proposed site has trunk road connecting Tabora and Kigoma

4.4.7 Cultural Heritage

There are cultural inheritance, archeological and historical site in Tabora Region, also social values as mentioned, Dr. Livingstone Museum, Slave Trade Caravan Route from Kigoma to Bagamoyo via Tabora, The German Administrative Headquarters in East Africa, The First Hospital in Tanzania, The First Secondary School in Tanzania Built By The Germans Tabora School, a boys' secondary school in Tabora, was built in 1922 to serve the sons of whites' and Tanzanian chiefs, Mixed Architectural Buildings, Memorial Monuments.

4.4.8 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.

The expectation is to provide essential health services at low cost and with acceptable quality and balance, gender-based, sustainable and aimed at improving the health status of the people of Kaliua District. Kaliua District Council has about 2 hospitals, 4 Health Centers and a total of 47 Dispensaries as shown in the Table 4-3.

Table 4-3: Health Facilities

Health facilities	Number
Hospitals	2
Health centers	4
Dispensaries	47

Sources: site verification

Service provided

- Number of stations
- Outpatient services
- Inpatient services
- Maternal and Child Health Services
- CTC services
- PMTCT services
- Immunization Services
- Surgical services
- Safe blood services

4.4.9 Sources of Energy

Kaliua utilizes major sources of energy in its daily operations, TANESCO's national grid. The project may cause the increase in energy demand due to number of people will be accommodated.

4.4.10 Sanitation and water supply

The Rural Water Supply & Sewerage Authority (RUWASA) is responsible for water distribution in Kaliua District, mainly utilizing existing boreholes. However, this method often results in acute water shortages within the district. To alleviate this issue, consultants from both TUWASA and RUWASA have conducted assessments. They determined that tapping water from the Lake Victoria system could be a viable solution to supply water to the Tabora Region.

The assessment reveals that the Lake Victoria system has adequate capacity to meet water demands until 2025, with a current capacity of 80,000m3/day. Even after increasing its capacity to 120,000m3/day by 2025, the system is projected to fulfill demand until 2035.

Presently, there are 558 water collection points, but only 365 are operational due to factors like pump failures and dry wells. Efforts are underway to rehabilitate these non-functional points through procedures such as well rehabilitation and the construction of water projects in various villages. This initiative aims to provide clean water access to communities facing challenges.

Concurrently, RUWASA is implementing an ongoing project at the site to install water supply infrastructure, specifically targeting improved water access during school operations.

4.4.10.1 Waste Management

Refuse disposal encompasses the management of various types of waste materials, including garbage, sewage, and other waste matter, with the aim of either safely destroying them or transforming them into a harmless or useful form. In Kaliua District, the predominant method of excreta disposal is through pit latrines, accounting for approximately 99.3% of disposal facilities, although flush toilets are also present to some extent.

However, for projects such as the operation of a school, a septic tank may be employed as a more sanitary and efficient alternative to traditional refuse pits. The capacity of the septic tank would depend on factors such as the projected student population and the estimated volume of waste generated. Additionally, the time interval for emptying the septic tank would be determined based on its capacity and the frequency of waste accumulation, ensuring regular maintenance to prevent overflow and maintain hygienic conditions within the school premises.

The existing sewerage services cover only about 2% of disposal facilities, mainly serving educational institutions and several commercial establishments. Sewer waste is collected by private entities, and the community bears the cost of approximately 100,000 to 150,000 Tanzanian shillings for a capacity truck of 12,000 to 15,000 liters, respectively. The district has designated a dumping area in Ugunga village for sewer waste disposal.

4.5 Baseline Condition of Education

4.5.1 Primary education

Kaliua district has a total of 134 primary schools. This number makes the ratio of rooms to students 1:104 compared to the national ratio of 1:45. The total number of rooms required is 1,730, thus making a shortfall of 1,105 rooms.

There are 12,543 student desks, making the ratio of desks to students 1:5 compared to the national ratio of 1:3. The number of teachers present is 1,826. Among them, 661 are women and 1,165 are men. This number makes the ratio of teachers to students 1:39. Also, the ratio of books to students is currently 1:4

In terms of teachers' houses, there are 320 houses while the demand is 1,820 houses. In addition, there are 835 toilets for students compared to the need for 3,231 toilets.
On average, the admission of students in the district is at the level of 67.2% while the success rate for class VII students is 41% and class IV is 87%

In terms of adult education, there are 412 students enrolled in MEMKWA classes. In addition, the District has 1 vocational college (VETA) which is located in Ulyankulu.
The rate of people who know how to read and write at the age of 5 and above is 77%. More efforts are needed to improve education services in Kaliua District.

4.5.2 Secondary education

The district of Kaliua has a total of 21 secondary schools and 2 advanced school. This number of classrooms makes the ratio of classrooms for students to be 1:57 compared to the national ratio which is 1:40, thus making the district have a shortage of classrooms. 50.

Out of the 28 existing educational wards, only 13 wards have secondary schools while the education policy is for every ward to have a secondary school. The construction of secondary schools in 7 wards is ongoing. The wards where construction is ongoing include Kamsekwa, Silambo , zugimulole, Igwisi, Kanoge, Seleli and Sasu In terms of teachers' houses, there are a total of 63 houses while the actual demand is 413. There are currently 42 laboratories where the existing schools meet the demand.

The number of secondary teachers present is 413 and among them 278 teachers are men and 135 are women. This number of teachers makes the teacher to student ratio 1:16. The ratio of books for students is 1:2 for science books and 1:3 for art books. The number of student seats available is 6,287 and the available toilets are 153. In terms of dormitories, the district has a total of 17 dormitories out of 99 dormitories.

In addition, the rate of female students who get pregnant is 0.04%. is 96% while the success rate for the second form is 79%. More efforts are needed to improve the quality of secondary education in Kaliua District

4.6 Physical- Geographical Environment

4.6.1 Climate and meteorological conditions

The climate of Kaliua District can be classified as a tropical savanna climate, characterized by distinct wet and dry seasons and warm to hot temperatures. With temperature ranging from 16 to 33 degrees Celsius, the region experiences relatively high temperatures throughout the year. The dry season, occurring between August and October, brings reduced rainfall, while the wet season typically sees precipitation levels ranging from 900 to 1300mm annually. These conditions are conducive to the growth of various crops and support the predominantly agricultural economy of the district.

4.6.2 Geological Conditions

4.6.2.1 Landscape

Tabora Region is located on the central plateau of at the latitude between 4 and 7 degrees south of the equator. Majority of the region's land area is between 1000m to 1500 m above sea-level.

Tabora Region is in the central-western part of the country. The highest point in Tabora Region is Wumbo peak at 1395m located in eastern Sikonge District. The most prominent mountain is Mount Kizuge located in northern Tabora in Nzega District.

The longest river in Tabora Region is the Ugalla River which feeds into the Lake Tanganyika drainage basin. Other major rivers in Tabora territory are the Malagarasi River which forms the western border with Kigoma Region, in the north is the Wembere River and in the north is the Gombe River. Another prominent river is the Manonga River which drains east into Lake Eyasi in Arusha Region.

However, most of rivers in Tabora dry up during the dry season. The Malagarasi swamp is the largest Swamp in Tabora Region and one of the largest in Tanzania. Tabora borders a small eastern part of Lake Sagara

4.7 Biological Environment

4.7.1 Flora and Fauna

Forest reserves cover 34,698 square kilometres (13,397 sq mi) (46% of the region), and game reserves cover 17,122 square kilometres (6,611 sq mi) (22% of the region). As of 2019, Two national Parks are now located in parts of Tabora Region.

Ugalla River National Park is in Southwestern Tabora shared with northeast Katavi Region. Kigosi Game Reserve, which is officially a national park is in northwestern Tabora, shared with southern Geita Region.

The vegetation in Tabora is mostly Miombo woodland. However, there is a thick impenetrable shrub-land area in the northeast called the Itigi thicket. Tabora is home to birds like the White-browed coucal, which is also the regional bird. Figure 4-2 shows the Miombo woodland within the proposed site.

Figure 4-2: Miombo woodland in vicinity of the proposed site

4.8 Air Quality within the Project Area

4.8.1 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 Figure 4-3 respectively.

Figure 4-3: Ambient Air Quality Monitoring equipment used at the project

4.8.2 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, ground excavation, cut and fill operations (i.e., earth moving), and construction of a particular facility itself. Table below shows the emission generating activities. The data analysis results is tabulated in Table 4-4

Table 4-4: 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	0.038	0.00	0.00	0	0.001	0.001
Monitoring Point 1	0.00	0.017	0	0.00	0	0.013	0.010
Monitoring Point 2	0.00	0.011	0	0.00	0	0.001	0.002
Monitoring Point 3	0.00	0.011	0	0.00	0	0.000	0.001
Monitoring Point 4	0.00	0.08	0	0.06	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. The air quality data analysis results trend is shown in Figure 4-4

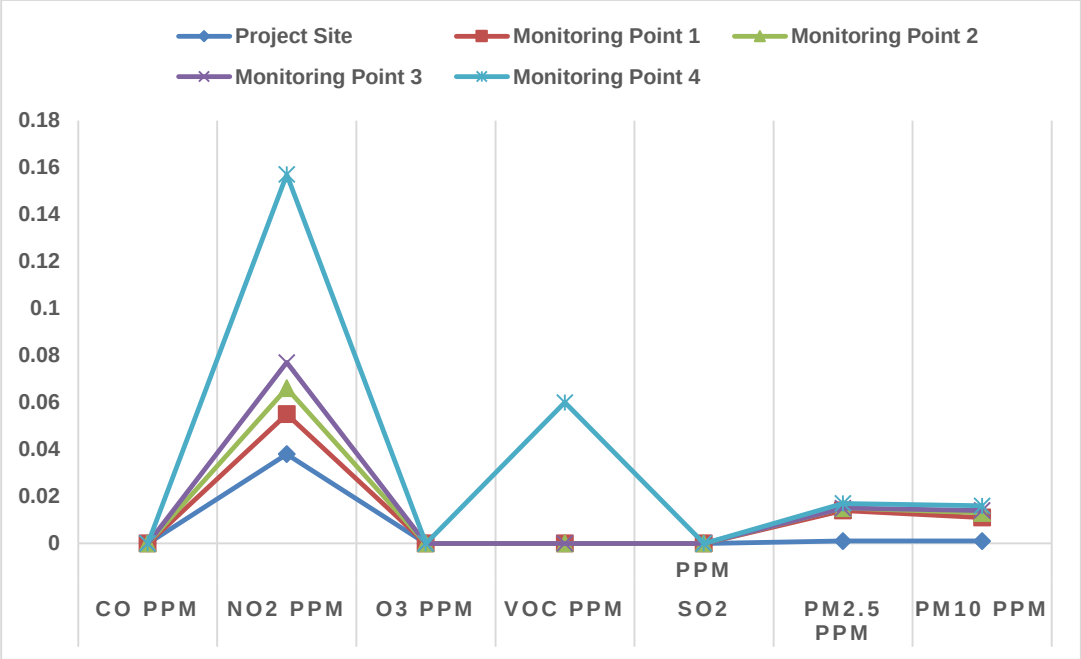


Figure 4-4: Ambient air quality data results trend (Source: Tansheq, 2022)

4.8.3 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 Figure 4-5

Figure 4-5: Noise and vibration level meters used to collect data on the project site

Table 4-5: Results on Noise and Vibration levels within the project site

Location	Noise Level [dBA]	Vibration [mm/s]
Project Site	43	1.9
Monitoring Point 1	45	1.1
Monitoring Point 2	37	1.5
Monitoring Point 3	33	0.7
Monitoring Point 4	36	0.9
Tanzanian Standards (TZS: [1471: 2015])	**50-60**	**5**

The noise and vibration level survey was executed during the day on the 13th September 2022 at 1300hrs. 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 as the result is presented in Table 4-5.

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. The process of stakeholder engagement was conducted in the tenements of ESS10: Stakeholder Engagement and Information Disclosure pinpoint the involvement of stakeholder in the project sustainability as speculated in the ESF. The details of the engagement process were extracted from the project stakeholder engagement plan which was disclosed as an official document governing all stakeholder engagement issues with regards to the SEQUIP project.

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 (EMA, 2004) 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.
Stakeholder engagement is the process of communicating and working with stakeholders to meet their needs and expectations, and to address issues as they occur. The engagement systematically fosters appropriate stakeholder engagement in project activities throughout the life of the project. The key benefit of this process is that it allows the Project Management to increase broad support and minimize resistance from stakeholders hence increasing the chances to achieve project success
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 Kaliua DEO, DEMO
- Initial meeting with village government, Ward officials including WEO at wachawaseme village, Igagala 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

The Tanzania EIA Procedure confers different roles and responsibilities to all parties involved in the EIA process of any proposed development undertaking to which EIA is obligatory. Important institutions to the proposed project are as summarized in Table 5-2.

Table 5-2: Relevant Key Institutions for proposed expansion activities

Level	Institution	Role and Responsibility
National	Vice President's Office (Division of Environment)	• Co-ordinate Environmental Management Policy, Environment Management Act and EIA guidelines • Approves, signs and issues Environmental Certificate • Advise Government on all environmental matters • Enforces and ensures compliance with the national environmental quality standards • Provides policy direction and leadership in all matters, particularly those pertaining to hazardous waste management under the Environmental Management Act
	National Environment Management Council (NEMC)	• Project registration, approval of ToR, and review of EIA and EA • Environmental Monitoring and Compliance Auditing • Advises Government on all environmental matters
Ministry	Ministry of Education, Science and Technology	• To put in place and strengthen structures and procedures which will enable a country to get educated and continuous learning Tanzanians that add value in National development.
	Ministry of Lands, Housing and Human Settlements Development	• Land use planning • Issuing of Right of Occupancy; • Valuation and compensation.
Institution	Occupational Safety and Health Authority (OSHA)	• General understanding and views about the project • Requirements of the project in terms of safety at the workplace • Land use in the area of vicinity in terms of safety
	Fire and Rescue force Office	• Rescue operations • Emergency response • Fire suppression • Fire prevention • Hazardous materials response
Region and District	Tabora Regional Office (Regional Administrative Secretary)	• Oversee and advice on implementation of national policies at city level • Oversee enforcement of laws and regulations • Advice on implementation of development projects and activities at city level
	Kaliua District Council office	• Oversee and advice on implementation of national policies at District level • Oversee enforcement of laws and regulations • Advice on implementation of development projects and activities at District level
	Kaliua District Executive Director's Office	• Chief Executive Officer for all development activities in the Municipal level
	Kaliua District – Environment/ Planning/ Community Development Departments etc.	• Baseline data on social and economic conditions • Extension services • Plan and coordinate activities on community-based natural resource and environment management • Enforcement of laws and regulations • Responsible for waste management within District
Ward	Igalagala Ward	• Oversee general development plans for the Ward.

Level	Institution	Role and Responsibility
		• Provide information on local situation and extension services • Technical support & advice • Project Monitoring
	Chairman, Communities groups (Members of Wachawaseme Village Council)	• Information on local social, economic, environmental situation • View on socio-economic and cultural value of the sites • Rendering assistance and advice on the implementation of the project • Project Monitoring (watchdog for the environment, ensure well-being of residents and participate in project activities

5.4.2 Other Stakeholders

Individual stakeholders refer to those occupying, owning, living, or working within the AOI and surroundings that may be impacted upon resulting from project implementation.
They include:

- Landowners
- Farm owners
- Residents/house owners affected village.

5.4.3 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 needs care or attention. Vulnerable groups associated to SEQUIP area:

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

5.5 Main Concerns and Comments of Stakeholders

The comprehensive list of all stakeholders consulted is in **Error! Reference source not found.**. Main c oncerns and comments from the consultation process raised by stakeholder to date are in Table 5-3.

Table 5-3: Stakeholder Consultation Views

Name of Stakeholders	Place	Dates	Comments, views and concerns from the stakeholders
Ambassador. Batrida S Burian (RC)	Tabora	13/09/2022	• All Region officials need collective comprehensive on all project components and stages, • The Region has the plan to provide food to students and teachers to motivate children toward school excel.

Name of Stakeholders	Place	Dates	Comments, views and concerns from the stakeholders
			• The project is very good, and she is calling the project coordinators to allocate fund for implementation because it has been long time,
Dr. John R. Mboya (RAS)	Tabora	13/09/2022	• The training program has not include procurement unit in for both Municipal and Region level, understanding that they are very important figure for the project because they involve procuring of materials • It very important to follow all the procedures for project implementation including preliminary study. • The project has been delayed in Tabora so they have to allocate fund for implementation
Mr. Robert Toyi (Ag. DED)	Kaliua	13/09/2022	• They know about the project and they are already for implementation, • They got the area from the villagers of Wachawaseme willingly and they have the signed MoM from the community.
Mr. Ndimi Mayala (District Surveyor)	Kaliua	13/09/2022	• He is aware about the project; they have been waiting for it from 2020
Mr. Bryieson .A. Kalatwa, (Ag. DEMO)	Kaliua	13/09/2022	• They are aware about the project, and they are ready for implementation
Mr. Abraham H. Mndemi (REMO)	Kaliua/ Tabora	13/09/2022	• On behalf of the Tabora officials they only wait the project to start. • The proposed area will involve the cutting of many trees at a time, therefore replantation should be done soon after project completion.
Salum Mwendapole **OHI**	OSHA-DODOMA	25/04/2023	• Proponent must ensure safety and health of workers during the project implementation • The project will ensure the provision of better education for the children. • To comply with safety and health Act No.5 of 2003.
INS. Mabosa Kilavo	Fire	4/05/2023	• For the case of fire precaution, the dormitories/hostels are always a challenge when in comes to fire accidents in schools so much attention should be put there such as fire alarms and smoke detectors • Doors and windows should open outside and shouldn't be constructed by steel. • Fire hydrants should be in excessive amount apart from fire extinguishers • Every building within the school compound should have fire extinguishers and fire blankets.
Mr. Joseph Kazite, (village Chairman)	wachawaseme	13/09/2022	• He sat with community to discuss on how they will get enough area for the proposed project, therefore some villager's voluntary gave their farms with signed copies.

Name of Stakeholders	Place	Dates	Comments, views and concerns from the stakeholders
			• They are curious waiting for the project because it will boost village development, growth of small business and large business such as hotelians and renting house.
Mr. Sadiki S. Kitebo (ward councilor)	Igagala ward	13/09/2022	• This project will have positive impact to our community, it will motivated both parents and children to love school than before, • People from different places of the country will come here for studying and working, therefore we will economically and socially develop.
Madam Rahel Isaya Masali. (VEO)	wachawaseme	13/09/2022	• The project is good and everyone is waiting for it.
Wachawaseme community	wachawaseme	13/09/2022	• They have been called most of the time since 2020 regarding this project but no implementation have been done, therefore they need only to see the construction have started. • Their children will be motivated with this school and they love studying.
Land owners	wachawaseme	13/09/2022	• They willing gave their farms for the love of development, and therefore the government is taking so long to implement.

Table 5-4: Consultation and site visit in wachawaseme village

5.6 Way Forward

Issues raised by stakeholders shall be assessed on their veracity 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.

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

The criteria applied for environmental and social impact assessment is given below. They are developed only for those receptors, which may experience significant changes.

6.3 Impact Assessment Methodology

The purpose of conducting an environmental impact assessment is to identify and assess the significant effects that are expected to happen compared to the current baseline conditions (as shown in Figure 6.1). This evaluation concentrates on the most important issues that are likely to have an impact, while disregarding concerns that are considered insignificant. The effects can be either beneficial or detrimental to the environment.

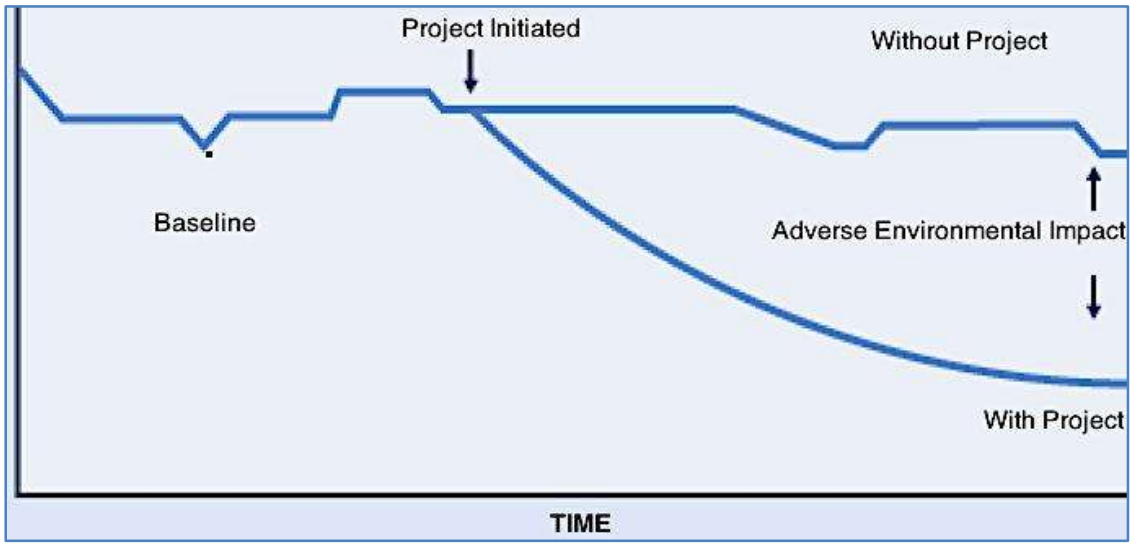


Figure 6-1: An Environmental Impact

The general method for assessing environmental impacts shall be developed based on the criteria in of the **Annex III of EU-EIA Directive (2014/52/EU).** The primary goal of using this method is to ensure that assessments are conducted using precise and well-defined terms, and to enhance transparency in the process. The aim is to suggest potential measures to mitigate the impacts and determine any remaining effects to assist in decision-making. **Error! Reference source not found.** describes when mitigation m easures are expected with a view to reducing a given environmental impact.

Table 6-2: Degree of Remedial Measures (Annex III of EU-EIA Directive, 2014/52/EU)

Magnitude of impact	Mitigation Measure
Major impact	Impact considered of sufficient importance to consider whether the project should be changed or whether mitigation measures should be made to reduce this impact
Moderate impact	Impact of a magnitude where mitigation measures are considered
Minor impact	Impact of a magnitude where it is not likely that mitigation initiatives are necessary.
Negligible impact and no impact	Impacts considered so negligible that they are not relevant to take into consideration when implementing the project

A few criteria forms parts of the assessment of environmental impacts. Table below lists the most significant criteria. The likelihood of occurrence or the risk of an environmental impact-taking place has been divided

into three groupings in the **Error! Reference source not found.**; however, as is most often the case in r espect of impacts on the natural environment, this division will be more varied and detailed.

Table 6-3: List of Criteria for Assessment of Environmental Impacts (Annex III of EU-EIA Directive (2014/52/EU)

Criteria	Factor
Importance of the issue	• Importance to international interests • Importance to national interests • Importance to regional interests • Importance to local interests • Importance in respect of the area with direct impact • Negligible or not important
Persistence	• Permanent impact (non-reversible) in the life of the project • Temporary for >5 years • Temporary for 1-5 years • Temporary for <1 year
Likelihood of occurrence	• High (>75 %) • Medium (25-75 %) • Low (<25 %)

Furthermore, it is important to consider whether the impact is caused directly by the project or indirectly as a derived effect of a direct impact. **Cumulative impacts** must also be assessed; determining the impact from combined activities or other projects locally or regionally. **Error! Reference source not found.**,**Error! Re ference source not found.** and **Error! Reference source not found.** indicate the process of assessing the magnitude of individual environmental impacts relating to a project. The following is a description of the Table:

Column 1 states the degree of disturbance: The extent of the disturbance is assessed as high, medium or low. The determination of this is based on the potentially severity of the impact, looking at the impact on some specific issues (e.g. a species), not considering the Importance of the issue, the likelihood of occurrence, or the persistence.

Column 2 assesses whether the issues (e.g. species, habitat, etc.) is important to international, national/regional or entirely local nature conservation interests.

Column 3 indicates the likelihood that the assessed disturbance occurs.

Column 4 shows the persistence of the impact. By combining these four factors the magnitude of impact is found in **Column 5**.

Table 6-4: Assessment of Degree of Impact (High Degree of Disturbance) (Based on Annex III of EU-EIA Directive, 2014/52/EU)

Degree of Disturbance	Importance	Likelihood of Occurrence	Persistence	Magnitude of Impact
High	International Interest	High (>75%)	Permanent (>5 years)	Major
			Temporary (1-5 years)	Major
			Short Term (0-1 years)	Moderate
		Medium (25-75%)	Permanent (>5 years)	Major
			Temporary (1-5 years)	Major
			Short Term (0-1 years)	Moderate
		Low (<25%)	Permanent (>5 years)	Moderate
			Temporary (1-5 years)	Moderate
			Short Term (0-1 years)	Minor
	National or Regional Interest	High (>75%)	Permanent (>5 years)	Major
			Temporary (1-5 years)	Moderate
			Short Term (0-1 years)	Moderate
		Medium (25-75%)	Permanent (>5 years)	Moderate
			Temporary (1-5 years)	Moderate
			Short Term (0-1 years)	Minor
		Low (<25%)	Permanent (>5 years)	Moderate
			Temporary (1-5 years)	Minor
			Short Term (0-1 years)	Minor
	Local Interest (important for the area directly affected or for the immediate surrounding)	High (>75%)	Permanent (>5 years)	Moderate
			Temporary (1-5 years)	Moderate
			Short Term (0-1 years)	Minor
		Medium (25-75%)	Permanent (>5 years)	Moderate
			Temporary (1-5 years)	Minor
			Short Term (0-1 years)	Negligible
		Low (<25%)	Permanent (>5 years)	Minor
			Temporary (1-5 years)	Negligible
			Short Term (0-1 years)	Negligible
	Negligible/Not Important	High (>75%)	Permanent (>5 years)	Negligible or none
			Temporary (1-5 years)	Negligible or none
			Short Term (0-1 years)	Negligible or none
		Medium (25-75%)	Permanent (>5 years)	Negligible or none
			Temporary (1-5 years)	Negligible or none
			Short Term (0-1 years)	Negligible or none
		Low (<25%)	Permanent (>5 years)	Negligible or none
			Temporary (1-5 years)	Negligible or none
			Short Term (0-1 years)	Negligible or none

Table 6-5: Assessment of Degree of Impact (Medium Degree of Disturbance) (Based on Annex III of EU-EIA Directive, 2014/52/EU)

Degree of Disturbance	Importance	Likelihood of Occurrence	Persistence	Magnitude of Impact
Medium	International Interest	High (>75%)	Permanent (>5 years)	Major
			Temporary (1-5 years)	Moderate
			Short Term (0-1 years)	Moderate
		Medium (25-75%)	Permanent (>5 years)	Moderate
			Temporary (1-5 years)	Moderate
			Short Term (0-1 years)	Minor
		Low (<25%)	Permanent (>5 years)	Moderate
			Temporary (1-5 years)	Minor
			Short Term (0-1 years)	Minor
	National or Regional Interest	High (>75%)	Permanent (>5 years)	Moderate
			Temporary (1-5 years)	Moderate
			Short Term (0-1 years)	Minor
		Medium (25-75%)	Permanent (>5 years)	Moderate
			Temporary (1-5 years)	Minor
			Short Term (0-1 years)	Minor
		Low (<25%)	Permanent (>5 years)	Minor
			Temporary (1-5 years)	Minor
			Short Term (0-1 years)	Negligible
	Local Interest (important for the area directly affected or for the immediate surrounding)	High (>75%)	Permanent (>5 years)	Moderate
			Temporary (1-5 years)	Minor
			Short Term (0-1 years)	Minor
		Medium (25-75%)	Permanent (>5 years)	Moderate
			Temporary (1-5 years)	Minor
			Short Term (0-1 years)	Negligible or none
		Low (<25%)	Permanent (>5 years)	Minor
			Temporary (1-5 years)	Minor
			Short Term (0-1 years)	Negligible or none
	Negligible/Not Important	High (>75%)	Permanent (>5 years)	Negligible or none
			Temporary (1-5 years)	Negligible or none
			Short Term (0-1 years)	Negligible or none
		Medium (25-75%)	Permanent (>5 years)	Negligible or none
			Temporary (1-5 years)	Negligible or none
			Short Term (0-1 years)	Negligible or none
		Low (<25%)	Permanent (>5 years)	Negligible or none
			Temporary (1-5 years)	Negligible or none
			Short Term (0-1 years)	Negligible or none

Table 6-6: Assessment of Degree of Impact (Low Degree of Disturbance) (Based on Annex III of EU-EIA Directive, 2014/52/EU)

Degree of Disturbance	Importance	Likelihood of Occurrence	Persistence	Magnitude of Impact
Low	International Interest	High (>75%)	Permanent (>5 years)	Moderate
			Temporary (1-5 years)	Minor
			Short Term (0-1 years)	Minor
		Medium (25-75%)	Permanent (>5 years)	Moderate
			Temporary (1-5 years)	Minor
			Short Term (0-1 years)	Negligible
		Low (<25%)	Permanent (>5 years)	Minor
			Temporary (1-5 years)	Minor
			Short Term (0-1 years)	Negligible
	National or Regional Interest	High (>75%)	Permanent (>5 years)	Moderate
			Temporary (1-5 years)	Minor
			Short Term (0-1 years)	Negligible
		Medium (25-75%)	Permanent (>5 years)	Minor
			Temporary (1-5 years)	Negligible or none
			Short Term (0-1 years)	Negligible or none
		Low (<25%)	Permanent (>5 years)	Minor
			Temporary (1-5 years)	Negligible or none
			Short Term (0-1 years)	Negligible or none
	Local Interest (important for the area directly affected or for the immediate surrounding)	High (>75%)	Permanent (>5 years)	Negligible or none
			Temporary (1-5 years)	Negligible or none
			Short Term (0-1 years)	Negligible or none
		Medium (25-75%)	Permanent (>5 years)	Negligible or none
			Temporary (1-5 years)	Negligible or none
			Short Term (0-1 years)	Negligible or none
		Low (<25%)	Permanent (>5 years)	Negligible or none
			Temporary (1-5 years)	Negligible or none
			Short Term (0-1 years)	Negligible or none
	Negligible/Not Important	High (>75%)	Permanent (>5 years)	Negligible or none
			Temporary (1-5 years)	Negligible or none
			Short Term (0-1 years)	Negligible or none
		Medium (25-75%)	Permanent (>5 years)	Negligible or none
			Temporary (1-5 years)	Negligible or none
			Short Term (0-1 years)	Negligible or none
		Low (<25%)	Permanent (>5 years)	Negligible or none
			Temporary (1-5 years)	Negligible or none
			Short Term (0-1 years)	Negligible or none

6.4 Potential Environmental and Social Impacts

6.4.1 Mobilization/ Pre Construction phase

6.4.1.1 Loss of biodiversity (Fauna and Flora)

During the mobilization phase of a girl's school construction project in Kaliua District, there can be potential impacts on biodiversity and the natural environment. The clearing of land, excavation, and construction activities may result in the direct loss or alteration of habitats for various plant and animal species.

The destruction or fragmentation of natural habitats can lead to the displacement or loss of indigenous flora and fauna. This can disrupt ecological processes and negatively impact the local biodiversity. Additionally,

the use of heavy machinery, noise, and dust generated during construction activities can further disturb and displace species.

This impact is considered direct negative of short-term duration with moderate significance.

6.4.1.2 Atmospheric air pollution due to emissions of exhaust and fugitive gases

Emissions from combustion of diesel in machineries and equipment during the mobilization/ pre-construction phase. The major pollutants will be CO, NOx, CH_4, NO_2, O_3 and SO_2 and these will be monitored accordingly for which various points will be identified and the measurement will be taken by S500 Aeroqual Air Quality Monitor.

The construction facilities and materials will be transported to the proposed project site using trucks from various places. Transportation of these facilities and materials have the potential to emit pollutants such as CO2, NOx, SOx, and particulate matters which may have an impact on the ambient air quality resulting to an impact on global warming and effect on human health to workers on duty. Considering the size of the project being small it is assumed that at least 3 trucks will be used to mobilize construction facilities and materials.

This is a **direct, moderately negative** impact of very low magnitude with a site-specific extent and short-term duration with low risk.

6.4.1.3 Climate change due to vehicle movement, bush clearance

When bushes and forests are cleared, the carbon stored in vegetation and soil is released into the atmosphere as carbon dioxide (CO2), a greenhouse gas. Trees and vegetation absorb CO2 during photosynthesis, helping to regulate atmospheric CO2 levels. Clearing large areas of bushes at the proposed site disrupts this natural carbon cycle and leads to increased CO2 concentrations, contributing to the greenhouse effect and global warming.

Also bushes act as carbon sinks by absorbing CO2 from the atmosphere and storing it in their biomass and soils. When they are cleared, these carbon sinks are diminished or lost entirely. This reduction in natural carbon storage capacity exacerbates the buildup of CO2 in the atmosphere, accelerating climate change.

This is an in**direct, minor negative** impact of very low magnitude with a site-specific extent and long-term duration with low risk.

6.4.1.4 Employment Opportunity

During the mobilization and construction phase of the project in Kaliua district, there are potential employment opportunities that can arise. Construction projects typically requires a diverse workforce, including skilled and unskilled labor, engineers, architects, and other professionals. The project can contribute to the local economy by creating employment opportunities for individuals in the surrounding communities.

By engaging local labor, the project can provide job opportunities and income generation for the local population. This can help alleviate unemployment rates and improve the economic well-being of individuals and families in the Kaliua district. Additionally, the project can enhance skills and capacity development within the construction sector, empowering workers with valuable experience and expertise.

This is a **direct, major positive impact** of very high magnitude with short-term duration.

6.4.2 Construction phase

6.4.2.1 Atmospheric Air Pollution due to emissions of exhaust and fugitive gases

Emissions from combustion of diesel in machineries and equipment during the construction phase. The major pollutants will be CO, NOx, CH_4, NO_2, O_3 and SO_2 and these will be monitored accordingly for which various points will be identified and the measurement will be taken by S500 Aeroqual Air Quality Monitor.

Construction facilities and materials will be transported to the proposed project site using trucks from various places. Transportation of these facilities and materials have the potential to emit pollutants such as CO2, NOx, SOx, and particulate matters which may have an impact on the ambient air quality resulting to an impact on global warming and effect on human health to workers on duty. Considering the size of the project being small it is assumed that at least 3 trucks will be used to mobilize construction facilities and materials.

This is a **direct, moderately negative** impact of very low magnitude with a site-specific extent and short-term duration with low risk.

6.4.2.2 Hearing impairment, communication interference, stress, fatigue due to increased noise levels from construction vehicles and machinery

During the construction phase of a regional girl's secondary school construction project in Kaliua district, there may be potential noise impacts. The activities involved in the construction process, such as excavation, foundation work, heavy machinery operation, and transportation of construction materials, can generate significant noise levels.

The mentioned noise impacts can affect both the immediate vicinity of the construction site and surrounding areas. Nearby residents may experience increased noise levels, leading to potential disturbances and inconvenience.

Any unwanted sound (“noise”) produced as a result of construction activities is expected to be intermittent and of relatively short duration, and will be limited to those periods during which construction activities are occurring. The contractor shall ensure that the vehicles and machinery undergo routine maintenance and outsourced vehicles and machinery shall be checked for compliance with applicable regulations. Vehicles shall be controlled by ensuring that they all have functioning mufflers.

This is a **direct, minor negative impact** of low magnitude with short-term duration and Low Risk

6.4.2.3 Public Health

During the construction phase of a regional girl's school in the Kaliua District Council, there may be potential public health impacts. These impacts can arise from various factors associated with the construction activities and the surrounding environment.

One of the primary concerns is the potential for air pollution. Construction activities often generate dust and emissions from machinery, vehicles, and construction materials. The release of particulate matter and harmful gases can contribute to poor air quality in the vicinity of the construction site. This can have negative health effects, particularly for vulnerable individuals such as children, the elderly, and those with respiratory conditions.

Additionally, noise pollution from the construction activities can also impact public health. Prolonged exposure to excessive noise levels can lead to stress, sleep disturbances, and other adverse health effects, including cardiovascular issues.

This is an **indirect, moderately negative** impact of very low magnitude with a site-specific extent and medium term duration with low risk.

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

During the construction phase of the project in the Kaliua District, there are potential occupational health and safety impacts that need to be considered. The construction industry carries inherent risks, and it is essential to prioritize the well-being and safety of the workers involved in the project.

Construction activities involve various tasks, such as excavation, heavy machinery operation, lifting and handling of materials, and working at heights. These activities can expose workers to hazards such as falls, accidents, electrical risks, and exposure to harmful substances. It is crucial for the project to adhere to occupational health and safety regulations and guidelines to minimize these risks and ensure a safe working environment.

This is a **direct, major negative impact** with high magnitude, long-term duration and significant risk.

6.4.2.5 Degradation of natural beauty (loss of environmental aesthetics), outbreak of diseases and injuries due to improper management of surrounding waste materials (Solid and Liquid Waste)

During construction phase of the project, there may be potential impacts related to solid and liquid waste. Construction activities often generate various types of waste, including construction debris, packaging materials, and wastewater.

Solid waste can accumulate from excavation, and general construction activities. Without proper waste management practices in place, this waste can contribute to environmental pollution and pose health and safety risks. It is important for the project to implement appropriate waste management strategies, such as segregating waste, recycling materials when feasible, and disposing of non-recyclable waste at authorized waste disposal facilities.

Liquid waste can be generated from activities such as concrete mixing, equipment cleaning, and site dewatering. If not properly managed, liquid waste can contaminate soil and water bodies, leading to adverse environmental and health effects. The project should establish measures to collect, treat, and dispose of liquid waste in accordance with local regulations and best practices.

This a **direct, major negative impact** with short term duration and significant risk

6.4.2.6 Road accidents from traffic congestion during the transportation of materials

During the construction phase of a girl's school in Kaliua District Council, there can be potential risks of road accidents. The increased movement of heavy construction vehicles, equipment, and materials can pose hazards to both construction workers and the general public.

The transportation of construction materials and equipment to the project site may involve the use of large trucks and other vehicles, which can increase traffic congestion and the likelihood of accidents. The presence of construction vehicles on the roads, combined with the disruption caused by ongoing construction activities, can create unsafe conditions for motorists, pedestrians, and workers.

This is an **indirect negative impact,** medium magnitude with short term duration and low risk

6.4.2.7 Depletion of water resources

The construction process typically requires significant amounts of water for activities such as mixing concrete, dust suppression, and general site maintenance. In an area already facing water scarcity, the extraction of water for construction purposes can exacerbate the existing shortage, putting additional strain on local water sources. This depletion may adversely affect the respective communities and nearby communities of Igagala Ward and Wachawaseme Village and ecosystems that rely on these water resources for drinking, agriculture, and other livelihood activities.

Furthermore, increased demand for water during construction could lead to competition and conflicts over water access between the school project and surrounding communities. To mitigate these impacts, careful planning, water conservation measures, and alternative water sources such as rainwater harvesting or water recycling systems should be considered to minimize the project's water footprint and ensure sustainable water management practices are implemented throughout the construction phase.

This is a **direct, major negative** impact of very high magnitude with a site-specific extent and short-term duration with high risk.

6.4.2.8 Employment Opportunity

During the construction phase of the project, there are potential employment opportunities that can arise. Construction projects typically requires a diverse workforce, including skilled and unskilled labor, engineers, architects, and other professionals. The project can contribute to the local economy by creating employment opportunities for individuals in the surrounding communities.

By engaging local labor, the project can provide job opportunities and income generation for the local population. This can help alleviate unemployment rates and improve the economic well-being of individuals and families in Kaliua District Council and national wise. Additionally, the project can enhance skills and capacity development within the construction sector, empowering workers with valuable experience and expertise.

This is a **direct, major positive impact** of very high magnitude with short-term duration.

6.4.3 Operation Phase

6.4.3.1 Atmospheric air pollution and effect on human health due to emissions of exhaust and fugitive gases

During the operation there can be potential air pollution impacts. These impacts are primarily associated with the transportation activities and energy consumption within the school premises.

Transportation-related air pollution can result from the daily commute of teachers, and staff to and from the school. Depending on the mode of transportation chosen, emissions from vehicles can contribute to air pollution and have adverse effects on air quality.

Another significant source of air pollution during the operation phase is the energy consumption within the school premises. Traditional energy sources, such as fossil fuels, can contribute to air pollution through the emission of greenhouse gases and particulate matter.

The impact of air pollution is considered to be minor indirect negative of long-term duration and of moderate significance

6.4.3.2 Disturbance of surrounding community due to increased noise levels

During the operation phase of the project in Kaliua District Council, there can be potential noise pollution impacts. These impacts are primarily associated with the activities and operations within the school premises.

The operation of a school involves various sources of noise, including student activities, teaching and learning activities, playgrounds, and transportation. The increased presence of students and staff within the school can contribute to an overall increase in noise levels, which can potentially disturb the surrounding community.

This impact is considered to be indirect negative of long term duration and of moderate significance.

6.4.3.3 Aesthetic degradation, environmental pollution and outbreak of diseases and injuries due to improper management of surrounding hazardous and non- hazardous solid waste materials

During the operation phase of a girl's school construction project in Kaliua District Council, there can be potential solid waste impacts. These impacts are primarily associated with the daily activities and operations within the school premises.

The operation of a school generates various types of solid waste, including food waste, paper and cardboard, plastic packaging, and other non-biodegradable materials such as sanitary pads. Improper management of these waste can lead to environmental pollution, health hazards, and aesthetic degradation.

Hazardous waste can include materials such as laboratory chemicals, electronic waste, batteries, fluorescent bulbs, and other substances that can pose a risk to human health to both the students, staff and surrounding community and the environment if not properly managed.

This impact is considered to be direct negative of long term duration and of high significance.

6.4.3.4 Aesthetic degradation, environmental pollution and outbreak of diseases and injuries due to improper management of surrounding liquid waste

During the operation phase of a girl's school construction project in the Kaliua District Council, there can be significant impacts associated with liquid waste. Liquid waste includes wastewater generated from various sources such as kitchen, toilets, cleaning activities, and other daily operations within the school.

If not properly managed, liquid waste can have adverse effects on the environment and public health. Improper disposal or untreated wastewater can contaminate water bodies, including rivers, lakes, and groundwater sources, leading to pollution and the spread of waterborne diseases. It can also negatively impact aquatic ecosystems and the biodiversity they support such as the present in the project site area.

This impact is considered to be direct negative of long term duration and of high significance.

6.4.3.5 General health and safety impacts

During the operation phase of a girl's school construction project in Kaliua District Council, there can be significant impacts associated with general health and safety.

One significant health concern is indoor air quality, which can be affected by poor ventilation, the presence of dust and allergens. Inadequate ventilation and the accumulation of pollutants can lead to respiratory issues and allergies among students and staff. Another important aspect is sanitation and hygiene. Insufficient access to clean toilets, hand washing facilities, and proper waste management can contribute to the spread of diseases and compromise personal hygiene practices.

Accidents and injuries are also potential hazards in schools. Slippery floors, unsafe playground equipment, and inadequate safety measures can increase the risk of accidents, resulting in injuries among students. Fire safety is another crucial consideration, as the lack of proper fire prevention and emergency response plans can jeopardize the safety of individuals within the school premises.

Furthermore, the ergonomics of the learning environment should be addressed. Poorly designed furniture, improper workstation setups, and lack of ergonomic considerations can lead to musculoskeletal issues and discomfort among students and staff. Security is also a concern, with the potential for unauthorized access, bullying, or other safety threats that can affect the overall well-being of students.

This impact is considered to be indirect negative of long term duration and of high significance.

6.4.3.6 Loss of School Resources due to fire out break

When a fire happens while school is in operation, it can cause the school to lose important resources. These resources include things like textbooks, computers, science equipment, classroom supplies, library books, and even administrative documents. The fire can damage or destroy these items, making it difficult for students to continue their education and for teachers to carry out their lessons. It can also disrupt extracurricular activities like sports and arts programs. Replacing these resources can be expensive and take time, which can disrupt the normal operation of the school. It's important for schools to have fire safety measures in place to prevent these incidents and to have insurance to help cover the costs of recovery.

This impact is considered to be indirect negative of long term duration and of high significance

6.4.3.7 Benefit to the Government

The operation of the school generates economic benefits for the government. The presence of a well-functioning educational institution attracts students from the local community and neighboring areas. This results in increased enrollment, which can lead to the generation of revenue through school fees and other related income sources. These financial resources can be utilized by the government to further improve the quality of education, invest in educational infrastructure, and enhance the overall educational system in the region.

Therefore, this impact is considered direct positive of long term duration and of high significance.

6.4.3.8 Employment Opportunities

During the operation phase of a girl's school project in Kaliua District Council, there can be significant employment opportunities. Once the school is completed and operational, it requires a diverse range of staff to facilitate its day-to-day functioning. These employment opportunities can benefit the local community by providing jobs and contributing to the local economy.

The operation of a girl's school involves various positions, including teaching staff, administrative personnel, support staff, security personnel, and maintenance workers. These roles offer employment opportunities for individuals with different skills and qualifications, including teachers, administrators, cleaners, and security personnel. By hiring local residents for these positions, the project can provide job opportunities and contribute to the livelihoods of individuals in the Kaliua District Council.

Moreover, the school's operation can create indirect employment opportunities in related sectors. Local businesses may benefit from supplying goods and services to the school, such as food, stationery, uniforms, and maintenance materials. This can stimulate economic activity and foster the growth of small businesses within the community (Igagala Ward and Wachawaseme Village).

This impact of employment and training is considered direct positive of long term duration and of high significance.

6.4.3.9 Depletion of water resources

The daily activities within the school, such as cooking, cleaning, and sanitation, require a consistent and sufficient supply of water. In an area already facing water scarcity, the additional demand from the school's operations can exacerbate the existing shortage, placing further stress on local water sources. This depletion not only affects the school's ability to function effectively but also impacts surrounding communities that rely on the same water sources for their daily needs.

Moreover, if the school is unable to secure an adequate water supply, it may resort to unsustainable practices such as over-extraction from boreholes or reliance on water trucking, which further strain the local water resources and exacerbate the problem. To address these challenges, it's essential for the school to implement water conservation measures, explore alternative water sources such as rainwater harvesting or groundwater recharge, and engage in community partnerships to ensure sustainable water management practices that minimize the impact on the local water resources.

This impact is considered direct negative of long term duration and of high significance

6.4.3.10 Impacts associated with demographic change

During the operation phase of a girl's school construction project in Kaliua District Council, there are several impacts associated with demographic change. Firstly, the establishment of a new school attracts students from the surrounding areas, which can lead to an increase in the local population. Families may choose to move closer to the school to ensure easy access to education for their children. This influx of families can result in changes in the demographic composition of the region, such as increased population density and changes in age distribution.

Also, the presence of a girl's school can contribute to empowering young girls and women, leading to changes in their social and economic roles within the community. Education plays a crucial role in promoting gender equality and empowering women to participate actively in society. By providing access to education for girls, the school project can result in increased female participation in various sectors, including employment, leadership positions, and decision-making processes. This can lead to a more balanced and diverse demographic landscape, with improved gender representation and opportunities for women in the region.

Furthermore, the operation of the girl's school can have long-term impacts on the overall development and growth of the region. Access to quality education has the potential to enhance the skills and capabilities of individuals, leading to improved job prospects and economic opportunities. As a result, the region may experience positive demographic changes, such as a decrease in unemployment rates, an increase in income levels, and a more educated workforce. These changes can contribute to the overall development and prosperity of the community.

This impact is considered direct positive of long term duration and of high significance

6.4.4 Decommissioning Phase

In case of decommissioning the following impacts may happen;

6.4.4.1 Degradation of the landscape, health hazards and danger to the public as illegal activities are attracted as a result of abandoned infrastructures

During the demolition phase of a girl's school construction project in Kaliua District Council, there may be impacts associated with abandoned infrastructures. These abandoned infrastructures, if not properly managed and repurposed, can have negative consequences for the surrounding environment and community.

One of the main impacts is the visual blight caused by abandoned structures. These abandoned buildings can create an unsightly appearance in the area, affecting the aesthetic value of the surroundings.

Also, abandoned infrastructures can become safety hazards. Without proper maintenance and security measures, these structures may deteriorate over time, leading to structural instability and potential risks such as collapsing walls or roofs. These hazards pose a threat to public safety, especially if the abandoned infrastructures are accessible to unauthorized individuals, including children.

Furthermore, the presence of abandoned infrastructures can attract illegal activities and contribute to social issues. Such structures may become hotspots for vandalism, squatting, or illicit activities, which can further degrade the surrounding environment and pose risks to the community's well-being.

This impact is considered indirect negative of long term duration of high significance

6.4.4.2 Loss of revenue to the government

This phase can result in the temporary cessation of economic activities and revenue generation in the affected area.

Businesses operating in the demolished structures may experience disruptions or even closure during this phase, leading to a decline in their revenue. This, in turn, can result in a decrease in tax contributions to the government. Additionally, the demolition phase itself may involve the displacement of informal businesses or street vendors who rely on the affected area for their livelihoods. As a result, these individuals may experience income loss, which affects their ability to pay taxes and contribute to the government's revenue stream.

The impact is considered to be direct negative of long-term duration and of high significance.

6.4.4.3 Unemployment

During the demolition phase of a girl's school construction project in Kaliua District Council, there may be impacts associated with unemployment. The demolition process often leads to the displacement of workers who were employed in the buildings or structures being demolished. This displacement can result in temporary or even long-term unemployment for these individuals.

This is a direct minor negative impact with low magnitude, long-term duration and significant risk

6.4.4.4 Injuries and fatal accidents

During the demolition phase of a girl's school construction project in Kaliua District Council, there may be impacts associated with injuries and fatal accidents. Demolition work involves the dismantling, removal, and disposal of existing structures, which can be inherently hazardous if not managed properly. The presence of heavy machinery, falling debris, and unstable structures can increase the risk of accidents and injuries for both workers and nearby individuals.

This is an **indirect moderately negative** i**mpact, medium magnitude** with long term duration and significant risk of high significance

6.4.5 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 6-7: Identified Residual Impacts

SN	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

6.4.6 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

6.5 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 6-8 shows the risk assessment criteria.

Table 6-8: Risk Assessment

N	Impact &Aspect Description	Nature	Magnitude	Extension	Duration	Significance of Impact	Probability of Occurrence	Risk
	Mobilization/Construction phase							
1	Loss of biodiversity due to bush clearing	Direct	High	DIA	Long-term	Major	Definite	Significant Risk
2	Effect on human health due to change in ambient air quality caused by emissions from exhaust gases and dust from vehicles and earth works	Direct	Very low	IIA	Long-term	Moderate	Probable	Low Risk
4	Soil erosion due to bush clearance	Direct	Very low	RIIA	Short-term	Minor	Probable	Low Risk
5	Climate change (global warming) due to emissions from vehicle movement, bush clearance	Indirect	Very low	NIA	Long-term	Minor	Probable	Low Risk
6	Degradation of natural beauty, greenhouse emissions and outbreak of diseases due to mismanagement of waste generated (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	Conflicts due to landownership as each region has to acquire land for school construction	Indirect	Very low	DIA	Short-term	Minor	Probable	Low Risk
9	Injuries and fatal accidents to workers due to heavy duties taking place	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	Hearing impairment, stress, headaches, fatigue due to noise and vibration pollution from transportation of material and equipment	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	Effect on human health due to change in ambient air quality caused by emissions from exhaust gases and dust from vehicles and earth works	Direct	High	DIA	Short-term	Major	Probable	Low Risk
3	Hearing impairment, stress, headaches, fatigue due to noise and vibration from vehicle movement, equipment and material used during construction	Direct	Low	DIA	Short-term	Minor	Probable	Low Risk

N	Impact &Aspect Description	Nature	Magnitude	Extension	Duration	Significance of Impact	Probability of Occurrence	Risk
	Mobilization/Construction phase							
4	Injuries and fatal accidents to 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
6	Employment Opportunities (activities will require man power)	Direct	High	NIA	Long-term	Major	Definite	Negligible Risk
7	Degradation of natural beauty, greenhouse emissions and outbreak of diseases due to mismanagement of waste generated (solid and liquid waste) from construction materials, bush clearance and sanitary facilities	Direct	High	DIA	Short-term	Major	Definite	Significant Risk
8	Depletion of water resources	Direct	High	IIA	Short-term	Major	Definite	Significant Risk
9	Unemployment due to decommissioning of construction activities	Indirect	Medium	NIA	Short-term	Moderate	Definite	Low Risk
	Operation Phase							
1	Employment Opportunities due to recruiting of teachers and other staff for school operation	Direct	High	NIA	Long-term	Major	Definite	Negligible Risk
2	Degradation of natural beauty, greenhouse emissions and outbreak of diseases due to mismanagement of waste generated (solid and liquid waste) from sanitary facilities, classrooms, offices, Dormitories, dining area and other areas within the school compound	Direct	High	IIA	Long-term	Major	Definite	Significant Risk
3	Health and safety (due to fire outbreak and poor housekeeping within the school compounds)	Direct	Medium	DIA	Long-term	Moderate	Probable	Significant Risk
4	Loss of school resources due to fire outbreak	Indirect	High	DIA	Long-term	Major	Probable	Significant Risk
5	Impacts associated with demographic change	Direct	High	NIA	Long-term	Major	Definite	Significant Risk
6	Impacts associated with depletion of water resources	Direct	High	IIA	Long-term	Major	definite	Significant Risk
7	Benefit to the government through taxes from the employed staff (economically and man power)	Indirect	High	NIA	Long-term	Major	Very low	Negligible Risk
	Decommissioning Phase							

N	Impact &Aspect Description	Nature	Magnitude	Extension	Duration	Significance of Impact	Probability of Occurrence	Risk
	Mobilization/Construction phase							
1	Degradation of the urban landscape and danger to the public as illegal activities are attracted due to abandoned infrastructure as a result of the project decommissioning	Indirect	Medium	DIA	Medium-term	Minor	Probable	Low Risk
2	Unemployment due to decommissioning of the project	Direct	High	NIA	Short-term	Minor	Definite	Negligible Risk
3	Degradation of natural beauty, injuries due to solid waste from dismantling of buildings	Direct	Low	DIA	Long-term	Minor	Very low	Low Risk

6.6 Consideration of Alternatives

6.6.1 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.

6.6.2 Project Site Alternative

The selection criteria for the location depends on the availability/ease access and ownership of the proposed land parcel for Geita 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:

f) No-Go alternative,
g) Design and technological considerations
h) Location

6.6.3 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.

6.6.4 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 Wachawaseme Village-Igagala ward. The utilization of prototype will involve the fit in exercise to include all experts in the respective district.

6.6.5 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.

6.6.6 Water Source Alternative

The proposed project is advised to have alternatives to source water apart from drawing water from RUWASA. 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.

6.6.7 Waste water management Alternative

An alternative source for wastewater management in a school operation, besides septic tanks and soak away pits, is the implementation of a wastewater treatment plant. This plant can be designed to treat wastewater generated from various sources within the school, including toilets, kitchen sinks, and showers. The treated water can then be reused for non-potable purposes such as irrigation, flushing toilets, or cleaning. Additionally, greywater recycling systems can be installed to treat wastewater from sinks and showers for reuse in activities like irrigation or toilet flushing. Implementing such systems not only helps in reducing water consumption but also minimizes the environmental impact of wastewater discharge, contributing to a more sustainable and eco-friendly school operation.

6.6.8 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 Kaliua District Council before proposing the project area to PO-RALG.

CHAPTER SEVEN

7 ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES

7.1 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 7-1.

Table 7-1: 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.

7.2 Mobilization/Construction Phase

7.2.1 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
iii. Introduction of vegetation cover in all unpaved areas to prevent surface runoff
iv. Indigenous vegetation and trees in areas that will not be impacted by the project shall not be disturbed
v. Avoid planting non-native and exotic species on the site; and

vi. Provision of adequate drainage facilities to control surface runoff.

7.2.2 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.

7.2.3 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.

7.2.4 Public Health from poor housekeeping and waste management

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

7.2.5 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.
v. Supervision by competent engineer should be done throughout the project implementation. The engineer shall ensure that material used at work are updated to meet the required standards

7.2.6 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.

7.3 Operation Phase

7.3.1 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.

7.3.2 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.

7.3.3 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.

7.3.4 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

7.3.5 Fire hazards risks

i. The architecture of the proposed building should ensure speedy evacuation in the eventually of a fire. The hallways, corridors and exist from all the building should be of sufficient widths and dimensions to enable easy and speedy evacuation;
ii. A fire plan and evacuation plan should be in place;
iii. The water reservoir specifically for firefighting should be installed;
iv. Fire extinguishers and reels should be placed at strategic location;
v. Procedures to follow in emergency cases such as fire outbreaks should be displayed at the site to ensure safe and speedy evacuation of personnel;
vi. Fire alarm should be installed at strategic places;
vii. All workers and residents should be educated about the fire hazards, firefighting methods and precautionary measures against the fire outbreak;
viii. Good housekeeping should be maintained at all building to reduce the fire risk;
ix. Emergence assembly point should be allocated; and
x. Electrical installation should be carried out by a competent and licensed electrician

7.3.6 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.

7.4 Decommissioning Phase

7.4.1 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.

7.4.2 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.

7.4.3 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. Implementation of fire alarms and smoke detectors specifically within dormitory areas to swiftly detect and alert occupants in the event of a fire hazard. This enhances early warning and evacuation procedures, reducing the risk of injuries or fatalities.
iii. Strategic placement of fire hydrants at multiple locations throughout the school premises, complemented by a sufficient number of fire extinguishers. This ensures a comprehensive and quick response to potential fire incidents, allowing for effective suppression and control.
iv. Installation of fire extinguishers and fire blankets in every building within the school compound. This broadens the coverage for immediate response to fire emergencies, empowering occupants to take swift action to suppress small fires before they escalate, and providing additional safety measures.
v. 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 EIGHT

8 ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

8.1 Introduction

This chapter layouts the systematic plans packaged as the Environmental and Social Management Plan (ESMP). The goal of the ESMP 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.

The ESMP developed proposes that the Project Implementation Team (PIT) develop and document policies to address Environment, Safety and Health; and Community concerns. Further the ESMP proposes Environmental Action Plans to address, sewage, solid waste, noise, dust and occupational injuries.

Additionally, management needs to develop and put in place management plans to address sewage, solid waste, dust, noise, resource use and occupational injuries during construction/mobilization, and operation phases of the school. To achieve this management need to put in place and document policies that govern its operations, including safety, health and welfare of workers and local community as well as the students.

This ensure that management and project contractor avail necessary finances to ensure necessary systems are put in place to address safety, health and welfare of all workers during Construction, mobilization and management of noise, solid waste and sewage and from the operation of the school.
This ESMP for the project consists of the following:-

- Management policies;
- Management Plans; and
- Decommissioning plan

8.2 Management Policies

The PIT needs to develop and document management policies that guide operations of the proposed Girls Secondary School. The policies are vital in that:

- They enable management to develop and maintain sound relations with stakeholders;
- They enable management put in place measures and structures that care for the safety, health and welfare of all users;
- They ensure that management plan for, and put in place, monitoring programmes that ensure company activities confirm to stipulated environmental standards; and
- They ensure that management assumes its corporate responsibility for its activities with regard to conservation of the environment as well as for the wellbeing of the neighbouring community.

Among other policies developed, the PIT should considerer developing local community policy

8.2.1 Local Community Policy

The Local Community Policy are developed by PIT to ensure that the school management develops and maintains sound relations with the local community on mutual respect and active partnership. The policy should highlight on ways the management should as described in Environmental and Social Commitment Plan, Environmental and Social Management Framework as well as Stakeholders Engagement Plan and the SS10 which include the following:-

- Work with the local community and relevant government departments and agencies to achieve sustainable community development;
- Come up with ways of enhancing information flow from management to the community and other project beneficiaries, and vice visa;
- Community capacity building

8.2.2 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.

8.2.3 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.

8.3 Management Plans

The following management plans has to be fully operational and entrenched within the operations of Kagera River Girls Secondary School:

- Solid waste management plan;
- Sewage management plan;
- Resources conservation plan;
- Air quality management plan;
- Occupational injuries management plan and,
- Management of chemical waste
- Complaints management plan

8.3.1 Solid Waste Management Plan

Solid wastes from the daily operations and other related activities will be mainly papers, glass, cans and food wastes. Quantity of the solid waste generated from the project is substantial. We recommend that management should put in place a sound waste collection and disposal system by:

- Training staff and students on sorting their waste at source.
- Ensure sorting is done by separation of various waste type making it easier for subsequent handling;
- Waste receptacle for the segregated waste types must be put in place close to points of solid waste generation to ensure that waste is properly managed;
- Ensuring that no burning of dry waste in the open.

This measures and recommendation should be put in place with the objective of ensuring that handling, management and disposal of solid waste does not result in environmental nuisance pollution.

Continuous monitoring of waste disposal practice from the operations, implementation of recommendations and mitigation measures made in this report with respect to disposal of solid waste ensures that a condition subjected to environmental approval with respect to solid waste management and a disposal is adhered to.

8.3.2 Occupational Hazards Management Plan

Occupational health and safety hazards is similar to those of other facilities which involve the movement of people. In addition, occupational health and safety issues that may be specifically associated with operations include the following:

- Physical hazards
- Biological hazards
- Exposure to dust/particulate matters
- Exposure to sources of noise
- Chemical exposure due to presence of Laboratory

Physical hazards include exposure to same-level fall hazards due to slippery conditions, the use of machines and tools, principally for sampling purposes, and the potential for strains from the lifting heavy equipment.
Project activities may include a variety of situations in which workers can be exposed to lifting, carrying, and repetitive work and work posture injuries.

The objective of the Occupational Hazards Management Plan (OHMP) is to ensure that the workers do not get any occupational hazards. The OHMP covers possible occupational hazards such as falls, dust inhalation, high noise levels and collapse of structures under construction.

8.3.3 Resource Conservation Management Plan

Water resource is scarce within the Kaliua District in general. Available water sources at the project site are from RUWASA. Water use requirements is relatively low. Water is required for raw materials cleaning as well as general cleanness and in the sanitary facilities.

The objective of the Resource Conservation Management Plan (RCMP) is to ensure that implementation and associated facilities do not result in shortage, completion and depletion of local water and energy resources. The RCMP covers available local sources of water and energy resources, their current usage and demand and requirements for the project.

The RCMP is achieved by continuous monitoring and management of local water and energy resources, implementation of recommendations and mitigation measures made in this report in respect to management of water and energy resources and ensuring the conditions subjected to license approval with respect to water and energy resources management are adhered to.

8.3.3.1 Water Conservation Management

It is that the management must put in place the following measures to conserve local water resources.

- Monitoring water use regularly;
- Water serving devices such as push taps should be installed;
- Employees and students should be trained and sensitized on water conservation techniques;
- Leakages including loose taps be promptly fixed to avoid water loss.

8.3.3.2 Energy Conversation Management

Electrical energy supply within the project is from the national grid and diesel generator. The area just like the rest of the country has a huge potential for solar energy but this is unutilized. Electrical energy use for the project will include lighting, charging electronic devices and cooling as well as office equipment e.g. printers, water dispenser, scanners etc.

The ESMP for energy conservation should include the following:

- Regular maintenance of equipment;
- Installation of solar panels to harness solar energy for use;
- Use of energy serving devices;
- Employees should be trained and sensitized on energy conservation techniques; and
- Ensure security lighting is switched off during daytime

8.4 Coordination and Review of the ESMP

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 ESMP 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.

8.5 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 8-1: 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 district shall involve its experts for advice and for potential flora stocks for re-generation of disturbed vegetation in plant areas ▪ Introduction of vegetation cover in all unpaved areas to prevent surface runoff ▪ Indigenous vegetation and trees in areas that will not be impacted by the project shall not be disturbed ▪ Avoid planting non-native and exotic species on the site; and ▪ Provision of adequate drainage facilities to control surface runoff.	Kaliua District Council under PO-RALG Environmental Management Act, Cap.191	1,000,000
	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.	Kaliua District Council under PO-RALG along with the Contractor Public Health Act, Cap.242 and Environmental Management (Air Quality Standards) Regulations, 2007	2,000,000
	Communication interference, stress,	▪ The contractor should adhere to relevant noise regulations and guidelines set by the authorities.	Kaliua District Council under PO-	1,000,000

Phase	Potential Aspect/Impacts	Management/Mitigation Measures	Responsibility and guiding legal framework	Estimated Costs [TZS]
	fatigue due to increased noise levels from construction vehicles and machines	▪ 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.	RALG along with the contractor Public Health Act, Cap.242 and Environmental Management (Quality Standards for Controlling Noise and Vibration Pollution) Regulations, 2007	
	Public Health from poor housekeeping and waste management	▪ Construction site should be sealed off from non-construction workers i.e. the general public ▪ 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.	Kaliua District Council under PO-RALG 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	3,000,000

Phase	Potential Aspect/Impacts	Management/Mitigation Measures	Responsibility and guiding legal framework	Estimated Costs [TZS]
	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. ▪ Supervision by competent engineer should be done throughout the project implementation. The engineer shall ensure that material used at work are updated to meet the required standards	Kaliua District Council under PO-RALG along with the Contractor Occupational Health and Safety Act, 2003	3,000,000
	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.	Kaliua District Council under PO-RALG along with the contractor Public Health Act, 2009 and Occupational Health and Occupational Health and Safety Act, 2003	1,000,000
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.	School Administration along with Kaliua District Council under PO-RALG	10,000,000

Phase	Potential Aspect/Impacts	Management/Mitigation Measures	Responsibility and guiding legal framework	Estimated Costs [TZS]
		▪ 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.	Public Health Act, Cap.242 and Environmental Management (Air Quality Standards) Regulations, 2007	
	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. ▪ 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.	School Administration along with Kaliua District Council under PO-RALG Public Health Act, Cap.242 and Environmental Management (Quality Standards for Controlling Noise and Vibration Pollution) Regulations, 2007	10,000,000
	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.	School Administration along with Kaliua District Council under PO-RALG	15,000,000

Phase	Potential Aspect/Impacts	Management/Mitigation Measures	Responsibility and guiding legal framework	Estimated Costs [TZS]
		▪ 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.	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 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 Kaliua District Council under PO-RALG Public Health Act, Cap.242, Environmental Management	15,000,000

Phase	Potential Aspect/Impacts	Management/Mitigation Measures	Responsibility and guiding legal framework	Estimated Costs [TZS]
			(Water Quality Standards) Regulations, 2007 and Environmental Management (Hazardous Waste Control and Management) Regulations, 2021	
	Fire hazards risks	▪ The architecture of the proposed building should ensure speedy evacuation in the eventually of a fire. The hallways, corridors and exist from all the building should be of sufficient widths and dimensions to enable easy and speedy evacuation; ▪ A fire plan and evacuation plan should be in place; ▪ The water reservoir specifically for firefighting should be installed; ▪ Fire extinguishers and reels should be placed at strategic location; ▪ Procedures to follow in emergency cases such as fire outbreaks should be displayed at the site to ensure safe and speedy evacuation of personnel; ▪ Fire alarm should be installed at strategic places; ▪ All workers and residents should be educated about the fire hazards, firefighting methods and precautionary measures against the fire outbreak; ▪ Good housekeeping should be maintained at all building to reduce the fire risk; ▪ Emergence assembly point should be allocated; and ▪ Electrical installation should be carried out by a competent and licensed electrician	School Administration along with Kaliua District Council under PO-RALG The Fire and Rescue Force Act, Cap 427 of 2007	8,000,000

Phase	Potential Aspect/Impacts	Management/Mitigation Measures	Responsibility and guiding legal framework	Estimated Costs [TZS]
	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. ▪ 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.	School Administration along with Kaliua District Council under PO-RALG Public Health Act, 2009 and Occupational Health and Safety Act, 2003	10,000,000
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.	Kaliua District Council under PO-RALG 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	20,000,000

Phase	Potential Aspect/Impacts	Management/Mitigation Measures	Responsibility and guiding legal framework	Estimated Costs [TZS]
			(Control and Management of Electrical and Electronic Equipment Waste) Regulations, 2021	
	Safety Hazards	▪ Effective communication and coordination among project stakeholders, including contractors, workers, and relevant authorities, are vital for maintaining a safe working environment. ▪ 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.	Kaliua District Council under PO-RALG Public Health Act, 2009 and Occupational Health and Safety Act, 2003	1,000,000
	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				**78,000,000**

CHAPTER NINE

9 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.

9.1 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 9-1: 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	Kaliua District Council under PO-RALG along with the contractor	300,000
	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	Kaliua District Council under PO-RALG along with the contractor	300,000
	Loss of biodiversity (both Flora and Fauna)	Biodiversity	As minimum disturbance as possible	Project area	Before commissioning and once every three months	Kaliua District Council under PO-RALG	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 Kaliua District Council under PO-RALG	800,000
	Waste generation	Waste disposal Inspection of amount of waste not contained in specified	Zero waste	Transfer stations and disposal areas	Monthly	Kaliua District Council under PO-RALG along with the contractor	200,000

Phase	Potential Impacts	Parameters to be Monitored	Target Level/Standard	Monitoring Area	Monitoring Frequency	Responsibility	Estimated Cost
		collection containers/skips					
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	Kaliua District Council under PO-RALG	1,000,000
	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	Kaliua District Council under PO-RALG 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 and Kaliua District Council under PO-RALG	3,000,000
	Employment Opportunity	Employees	Local procurement and Local employment	Number of Employees	Quarterly	Kaliua District Council under PO-RALG	N/A

Phase	Potential Impacts	Parameters to be Monitored	Target Level/Standard	Monitoring Area	Monitoring Frequency	Responsibility	Estimated Cost
	General Health and Safety hazards	Accident and incident register	Zero incidents and accidents	School compound	Once every six months	School Administration along with Kaliua District Council under PO-RALG	2,000,000
Decommissioning phase	Injuries and fatal accident	Accident and incident register	Zero accident	Project area	Monthly	Kaliua District Council under PO-RALG	2,000,000
	Unemployment	NSSF remittance	All employees	School Compound	Once every year	Kaliua District Council under PO-RALG	N/A
Total							10,600,000

9.2 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.

9.3 Awareness and education

The project proponent with collaboration with contractor or local workers shall encourage environmental awareness among his foremen 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 TEN

10 RESOURCE EVALUATION/COST BENEFIT ANALYSIS

10.1 Introduction

Chapter 7 and 8 of this EIS report have documented the cost/impacts of the project to Tabora 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.

10.2 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.
Total project investment cost is TZS 4 billion in this regards monitoring costs which are less are more less than project costs, therefore this project is resourceful viable.

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

10.3 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.

10.4 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 be storage rooms and temporally office that will be constructed with engineering standards at the site especially at Wachawaseme Village nearby or within project area

10.5 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 ELEVEN

11 DECOMMISSIONING PLAN

11.1 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.

11.2 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.

11.3 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.

11.4 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.

11.4.1 Decommissioning Plan for a Project's Construction

Table 11-1: Decommissioning Plan for the School's Construction Phase

Task	Description	Estimated Cost
Health and Safety	Detail safety protocols for decommissioning	8,000,000
Legal and Regulatory Compliance	Address permits and regulations	1,500,000
Removal of Equipment	Remove construction machinery and equipment	3,000,000
Waste Disposal	Dispose of construction waste responsibly	1,500,000
Site Restoration	Restore the site to its original state	1,000,000
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	5,000,000
Total Estimated Annual Cost		20,000,000

11.4.2 Decommissioning Plan for the Project's Operation

Table 11-2: 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 TWELVE

12 CONCLUSION AND RECOMMENDATIONS

12.1 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 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.

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

12.2 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

TABORA

TANSHEQ SENSA 2022 TAMISEMI

SEQUIP – ENVIRONMENTAL AND SOCIAL IMPACT ASESSMENT

S/N	Name/ Jina	Title/ Cheo	Contacts/ Mawasiliano	Signature/ Sahihi
1.	Balozi Batilda S. Burian	RC-Tabora	0715-752794	[signature]

S/N	Name/ Jina	Title/ Cheo	Contacts/ Mawasiliano	Signature/ Sahihi
	Dr. John R. Mboya	RAS	0754290711	[signature]

S/N	Name/ Jina	Title/ Cheo	Contacts/ Mawasiliano	Signature/ Sahihi
1.	ROBERT TOYI	Ag REO	0784210619	[signature]
2	NDIMI MAYALA	SURVEYOR	0766-731354	[signature]
3.	BRYTEAN A-KALATWA	Ag DEMO	0784600039	[signature]
4	Abrahaman H. Mndeme	Afisa Mazingira(M)	0782-353388	[signature]
05	ERICK J GAGALLA	TANSHEQ	0769457766	[signature]
6	Richard Marcoin	SEQUIP - CO	0784794992	[signature]
7.	Eng. Gwalawa Mwalgwa	TANSHEQ LTD	0784 477810	[signature]

TANSHEQ TAMISEMI

SEQUIP – ENVIRONMENTAL AND SOCIAL IMPACT ASESSMENT

SN	Name/Jina	Tittle/Jina	Contacts/Mawasiliano	Date/Tarehe	Signature/Sahihi
1.	INSP MAROSA J. KILAVO	OC- LEGAL	0717-158253	04/05/2023	[signature]

SN	Name/Jina	Tittle/Jina	Contacts/Mawasiliano	Date/Tarehe	Signature/Sahihi
1	SALUM MWANDARIK	OHJ (OSHA)	0717356651	28/04/23	[signature]
2	REGINA MBALAWA	TANESCO	0788336461	28/04/2023	[signature]
3					

S/N	Name/ Jina	Title/ Cheo	Contacts/ Mawasiliano	Signature/ Sahihi
1.	SADIKI S. KITEBO	AEK- IGAGALA	0620636683	[signature]
2-	RAHEL ISAYA MASALI	VEO - WACHAWASENE	0628028864	[signature]
3.	NDAKELETSE A. BAJORA	AFISA MAKINGIRA	0676192175	[signature]
4	MASHAKA AMRANI	MJUMBE	0786358927	[signature]
	MERESIANA ATHUMANI MASHORA			[thumbprint]
	MWANNE MIHINGAMO			Mihingamo
	NDAISABHA SPRINGI			N. S
	MASUDI RASHIDI	MJUMBE		Masude
	WILBROAD JONAM LUPINDA	MWENYE SHAMBA	0719588260	[signature]

S/N	Name/ Jina	Title/ Cheo	Contacts/ Mawasiliano	Signature/ Sahihi
	SHIFAA HAMISI NYANGE	WAEO IGAGALA	0689395254	[signature]
	NASIBU KASATO	M/KITI TAWAETU	0622701505	[signature]
	SHELLA A. TOM	VE MIAKIDA MASH	0782568010	[signature]
	MAWAZO NYANGE	MJUMBE SKUJI	0755517292	[signature]
	JUMA I LUSERA	MKITI-TAWI	0687585839	[signature]
	RAMADHAN MAULID SAIDI	M/KITI UVCCM KATA	0787100959	[signature]
	STEPHANIA MESHAKI	MJUMBE	0683137760	[signature]
	KAMUKO MOHAMED	MJUMBE	0744130445	K.MKAMO
	ZERA FURAISHA	MJUMBE		[signature]
	BADEKE SEMANI	MJUMBE K/SIASA		[signature]
	MJONGA A SAMUDDO	MJUMBE	0626517442	[signature]
	HAMISI HALCHA	MJUMBE	0624233350	[signature]

S/N	Name/ Jina	Title/ Cheo	Contacts/ Mawasiliano	Signature/ Sahihi
	THOMAS EMMANUEL	Teduwarian	0759798588	[signature]
	THABIT S. KASAGULA	VE	0765264413	[signature]
	JOYCE S. KINYEGA	Mwenye Eneo	0754944624	[signature]
	NYAMPAZI S. KINYEGA	—11—	0717665573	[signature]
	BEHEWA H MASUDI	MJUMB KAMATI SUS	0786819683	Hamisi
	NASSORO SHABANI	KATIBU WAZAZI KANDA	0693297074	[signature]
	NDIYUNZE-RAMADHANI	KATIBUWAZAZI	0624936043	[signature]
	JACKOBO - DANIELY	KATIBU CCM	0628180744	[signature]
	HASAN R MTOMERA	— 11 —	0742318038	[signature]
	EMANUELY MASHINGWA LUHAGA	— 11 —	0710333105	[signature]
	MAGANGA D MKELEMI	MJUMBE	0733408069	[signature]
	KASEMBO WAYEYENE	Katibu Mwenyekiti/ccm	0768893168	[signature]

S/N	Name/ Jina	Title/ Cheo	Contacts/ Mawasiliano	Signature/ Sahihi
	KITEMOS S. KIDTEEA	MJUMBE	0621123577	[signature]
	VICENT PAUL	— 11 —	0656051730	[signature]
	NTEBRULE SAID	— 11 —	0762194841	[signature]
	FITIYE COSMAS	— 11 —		Cosmas
	KATUGA MOHAMEDI	— 11 —		[signature]
	SUNDAY JUMA	— 11 —		[signature]
	ZAWADI JUMANN	— 11	0754607731	[signature]
	RIZIKI JOJI	— 11		R. J
	MALIA FULENKI	— 11		M. F
	TATU NHANGA	— 11		T NHANGA
	SOFIA NHANGA	— 11		S- NHANGA

S/N	Name/ Jina	Title/ Cheo	Contacts/ Mawasiliano	Signature/ Sahihi
	TELEZIA AMLI	— 11		T. A
	EMILI RASHINDI	— 11		E. R
	LEJINA MNUMBWA	— 11		R. M
	MWAMJIA SPRING	Mwenye eneo	0745003382	[signature]
	AMINA KAZUBA	— 11		A. K
	IDA PAULO	— 11 —		I. P
	SABHINZIRA - NESTOLI	— 11 —		S. N

S/N	Name/ Jina	Title/ Cheo	Contacts/ Mawasiliano	Signature/ Sahihi
	JOSEPH KAZIMOTO	MKS/Kijiji cha Sembo	0712808200	

S/N	Name/ Jina	Title/ Cheo	Contacts/ Mawasiliano	Signature/ Sahihi
	UFUKU SPRINGI		0717215740	
	CHRISPINE THOMAS		0714985511	
	ANDREA ADOLPH		— " —	A-A
	DOTTO SAID		0712668718	
	MVUMBA NKOMBE		0626701259	
	KATABANSA SPRINGI		0715234039	
	KASATO JUMA			K. Juma
	MOSHI NKOMANTO			
	WASENGE FABIANO			
	MUHAMEDY MALILO			MUDI
	KULWA KAZUBA		0626170159	
	KAJENGE MARIRO		0683334867	KAJENGE

MHUTASARI WA KIKAO CHA SERIKALI YA KIJIJI KUJADILI UPATIKANAJI WA ENEO LA UJENZI SHULE YA SEKONDARI KUILICHOFANYIKA TAREHE 16.12.2020

AGENDA :

I KUFUNGUA KIKAO

2 KUJADILI UPATIKANAJI WA ENEO LA KUJENGA SHULE

3 KUFUNGA KIKAO

1 KUFUNGUA KIKAO

Katibu alisimama na kuwasalimu wajumbe wote waliohudhuria kikao hicho maalumu na kumkaribisha M\kiti serikalim ya kijijim ili afungue kikao hicho ambapo alisimama na kuwashukuru wajumbe wote kwa mahudhurio ya mazuri huku akiwaomba kuchangia hoja zao na maoni yao yenye kuleta maendeleo ndani ya kijiji kiao kilifunguliwa mnamo saa Tatu asubuhi

2 KUJADILI UPATIKANAJI WA ENEO LA UJENZI WA SHULE YA SEKONDARI

Katibu alisimama na kufafanua agenda hii kuwa halmashauri kupitia serikali kuu wanaleta mradi wa ujenzi wa shule ya sekondari kijiji kwetu na serikali ya kijiji kwa kushirikiana na wananchi wanatakiwa kupata eneo zuri lenye ukubwa usipungua ekali 50 ili liwezekuklidghi vigezo vya eneo hilo kutumika kujenga shule hiyo ya sekondari

Katibu alimkaribisha m\kiti ili awakaribishe wajumbe waweze kuchangia agenda hii ili kuwez\esha kupatikana eneo lenye vigezo vya kujenga shule hiyo . M\kiti aliendelea kueleza kuwa tunatakiwa kupata eneo lenye uwezo wa kujenga shule hiyo maalumu .

Ambapo mjumbe mmoja alisimama na kusema kuwa wachawaseme tuna maeneo makubwa na mengi yenye vigezo hivyo vya kujenga shule hiyo alipendekeza maeneo mawili kuwa yanafaa kabisa kujenga shule hiyo .Eneo la kwanza alipendekeza kitongoji cha wachawaseme lililopo shule ya msingi wachawaseme ambalo lina ukubwa wa ekali 40 huku mwananchi anayepakana na eneo hilo akikubali kutoa eneo lake liweze kuunganishwa na eneo la shule ili litimie ekali 60 kwani yeye ana ekali ishirini katika eneo hilo.

Eneo la pili alilopendekeza ni eneo lililopo kitongoji cha Tulieni linalopakana na shule pia upande za pili wa barabara kaskazini ambapo alisema wananchi wanaomiliki maeneo hayo wanaweza kukubali kachia maeneo ya kwa manufaa ya jamii kubwa na alieleza kuwa eneo hilo lina ukubwa wa zaidi ya ekali hamsini {50} na kuendelea .

Baada ya mapendekezo hayo wajumbe kwa pamoja walipendekeza eneo lililopo kitongoji cha Tulieni ndilo linalofaa kwa mradi huu wa sekondari ambapo kwa pamoja wajumbe na wananchi

walioalikwa walikubaliana waitwe wahusika wa maeneo hayo kuja na kuelezwa lengo la serikali kuu la kufeta mradi huu wenye manufaa kwa jamii ili waweze kukubali kuyatoa maeneo yao kupisha ujenzi wa shule hii ianze kwani hatuwezi kupoteza fursa hii ya mradi huu mkubwa upite kwani hata ofisi ya mkurugenzi mtendaji wa wilaya ya kaliua imeliona linafaa kujenga shule hiyo .

Mjumbe mwingine aliyechangia ni Ndugu Kabungaya Ndangwa aliyealikwa kama mzee maarufu hapa kijijini alisimama na kusema kuwa maeneo hayo yaliyopendekezwa wananchi wapo tayari kuyatoa kwa ajili ya ujenzi wa shule hiyo ya sekondari na wao wanajua kuwa masada mkubwa kutoa serikalinin hivyo hawapo tayari kupoteza fursa hiyo .

Ndugu **UFYULU SPRINGI KINYEGA** alisimama na kusema kuwa familia yao ni moja wa wamiliki wa maeneo katika eneo hilo na wao wapo tayari kuyatoa maeneo yao ilim yatumike kujenga shule hiyo .

Mazungio

Wajumbe wote kwa pamoja na wageni waalikwa walikubaliana wamiliki wa maeneo hayo waitwe mara moja ilim waweze kutoa ruhusa ya maeneo yao kutumika kujenga shule hiyo yenye hadhi kubwa na masaada mkubwa kwa wananchi wa wachawasenene na taifa kwa ujumla .

M/kiti aliwashukuru wajumbe wote kwa ushirikianom wao na mapendekezo yao mazuri na kuagiza wote waitwe ili waweze kutoa majibu yao juu ya maeneo yao ili tuweze kupita na mtalamu wa aridhi toka halmashauri aliyeletwa kwa ajili ya kupima maeneo hayo .

3 KUFUNGA KIKAO

Katibu alimkaribisha M/kiti ili afunge kikao hicho cha dharuran m/kiti alisimama na kuwashukuru wajumbe wote kwa michango yao mizuri ambayo imesaidia kupatikan eneo kubwa lenye kutosheleza ujenzi wa shule hiyo haku akiwaomby wajumbe wachache kufanya haraka zaidi wanita walengwa wa maeneo hayo wije na kujadili na kukubali kutoa maeneo yao kwa manufaa ya jamii kubwa ya watanzania kikao kilgungwa mnamo saa nne na robo asubuhi

UTHIBITISHO

ISSA B. BAROBEGWA
KATIBU

SERIKALI YA KIJIJI
MACHAWASENE

MABULA LUHEMEJA
M/KITI S/KIJIJI

MAHUDHURIO YA WAJUMBE WA WAMONCHA WA KUTOA MATENGO KWA ASILI YA UJENZI WA SHULE.

N	JINA KAMILI	CHEO	MUDA	SAHIHI
1.	MABULA LWEMEJA	M/KITI	11.17	[illegible]
2.	SAIDI GUGUZA		11:17	[illegible]
3	JOSEPH KAZIGE	M/KITI GONGO		
4	EMMANUEL THOMAS			
5	SAIDI ISSA MAGANGA	MJUMBE	11-17	[illegible]
6	MAGANGA DAMIANO		11-17	[illegible]
7	EMMANUEL THOBI	MJUMBE	11.17	[illegible]
8	SHUKURU MESHACK		11.17	[illegible]
9	STEPHANIA MESHACK		11.17	[illegible]
10	LAURENTI LUYAGWA	MJUMBE		[illegible]
	VICENT PAUL		11.17	
	SAID RAMADHANI MANOLA	—"—	11.17	[illegible]
	MWANING MUHAMADI	—"—	11.17	[illegible]
	NYAMPASI SPERANZA	—"—	11.18	[illegible]
	UFYULU SPRING	—"—	11.18	[illegible]
	KABANGATA NDANGULA	—"—	11.18	[illegible]
	SIMA N. LUHUMBIKA	—"—	11.18	[illegible]
	MERESIANA ATHUMANI	—"—	—"—	[illegible]
	GOBILIVA FEDRICK	—"—	11.18	
	KRISTINA ATHUMANI	—"—	11.18	
	MWANJIA GELEWASI	—"—	11.18	
	JOYCE S. KINYEGA	—"—	11.18	
	KUSMA S. KINYEGA	—"—	—"—	[illegible]
	MARY G. HIBUA	—"—	11.20	[illegible]
	ECCA B. BARABEGWA	WEO	11:25	[illegible]
		VEO	11:25	[illegible]

SERIKALI YA KIJIJI
CHAWASHE

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.	Kaliua District Executive Director	
2.	Kaliua District Secondary Education Officer	
3	Fire and Rescue Office-Kaliua District	
4	TANESCO	
5	Wachawaseme Ward Executive Officer	
7	Igagala Health Centre	

APPENDIX III: CERTIFICATE OF OCCUPANCY

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

Telegrams: LANDS
Telephone: 2121241-9
In reply please quote:
Ref. No. LR/T 18209

LAND REGISTRY,
P.O Box 1191,
Dar es salaam
Date: 14 Sep, 2023

KALIUA DISTRICT COUNCIL
P O Box 83 KALIUA

Sir/Gentlemen/Madam,

RE: TITLE NO: 18209 LAND OFFICE NO: 896833
PLOT NO. 1 BLOCK A AT WACHAWASEME

I have the honour to enclose herewith duplicate of the Certificate of Title Numbered as above please.

REGISTRAR OF TITLES

Copy to: Commisioner for Lands
Your LD File No: KDC/10101/3 refers

Land Form 23 A.

TANZANIA

THE LAND ACT 1999
(NO. 4 OF 1999)

CERTIFICATE OF OCCUPANCY

(Under Section 29)

Date of Issue: 14/09/2023
Title Number: 13209 TEA
Land Office Number: 896833
Land: PLOT NO 1 BLOCK 'A' MACHANASEME IN KALIUA DISTRICT COUNCIL

Term: SIXTY SIX (66) YEARS

TITLE No. 18209
REGISTERED ON 19-09-2023
AT 03:00 H

Land Form No. 22

TANGANYIKA STAMP DUTY ACT
Stamp Duty Shs 200/=
On Original Receipt No 923211201
of 196823 of 12-09-2023
Stamp Duty Officer

THE UNITED REPUBLIC OF TANZANIA

TANGANYIKA STAMP DUTY ACT
Stamp Duty Shs 100/= Paid
Receipt No 923211201196823
of 12-09-2023
Stamp Duty Officer

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

CERTIFICATE OF OCCUPANCY
(Under section 29)

Title No. 18209 TBR
L.O. No **896833**
File No. KDC/LD/10101

The 14th day of September Two thousand twenty three

THIS IS TO CERTIFY that **KALIUA DISTRICT COUNCIL** as established under The Local Government (District Authorities) Act No.7 of 1982 of P.O. Box 83, **KALIUA** (Hereinafter called "the Occupiers") 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 **sixty six** years from the first day of **July two thousand and twenty three** according to the true intent and meaning of the Land Act and subject to the provisions thereof and to regulations made there under 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 **(Tsh.5,000/=)** only, a year in advance on the first day of July in every year of the term without and 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 on 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 **KALIUA DISTRICT 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"**).

(v) Not erect or commence to erect on the land buildings except in accordance with building plans and specifications which shall have been first approved by the **Authority.**

3. **USER**: The land shall be used for **Education Buildings** purposes only. Use Group "K" use class (c) as defined in Urban Planning (Use Classes) Regulations, 2018.

4. The occupiers shall not subdivide the land or assign, sublet or otherwise dispose of or deal with the whole or any part of it any building on it without the precious written consent of the Commissioner.

5. The occupiers shall deliver to the commissioner notification of disposition in prescribed form before or at the time disposition is carried out together with the payments of all **premier,** taxes and dues prescribed in connection with that disposition.

6. The President may revoke the right for good cause and in public interest.

KALIUA DISTRICT

INSET SHOWING DETAILS OF PLOT

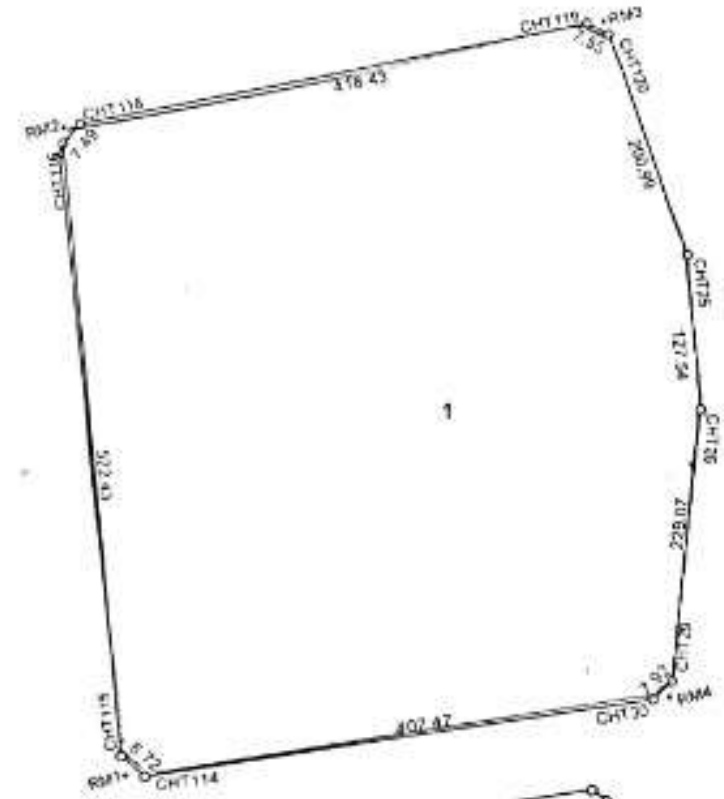
LOCATION WACHAWASEME

BLOCK A

PLOT No 1

L.O No.695833

AREA 247243 SQM



This plan, prepared in accordance with Registered plan No.184251, is approved for the purpose of Land Registration Act cap 334.

For Director of Surveys and Mapping

Date 12/09/2023 Surveys and Mapping Division
Ministry of Lands, Housing and Human Settlement Development.

ssue of the plan implies no guarantee
mission of the title by the Government.

SCHEDULE

All that Land known as **Plot No. 1 Block "A"** situated **at Wachawaseme in Kaliua District** containing **Two hundred forty seven thousand two hundred forty three (247,243) square meters** shown for identification only edge red the plan attached to the certificate and defined on the registered survey plan numbered **184251** 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 **hereby KALIUA DISTRICT COUNCIL** accept the terms and conditions contained in the foregoing Certificate of Occupancy.

SEALED with a COMMON SEAL of the said)
THE KALIUA DISTRICT COUNCIL and)
DELIVERED)
In presence of us this.....day of.....2023)

Witness's
Name ..... JERRY DAIMON MWAGA)
)
Signature .....)
)
Postal Address ..... P.O Box 83, KALIUA)
)
Qualification ..... DISTRICT EXECUTIVE DIRECTOR

Witness's
Name ..... JAPHAEL M. LUFUNGIJA)
)
Signature .....)
)
Postal Address ..... 83 KALIUA)
)
Qualification ..... DISTRICT COUNCIL CHAIRMAN)

APPENDIX IV: LEASE AGREEMENT OF LAND PROVISION

Jamhuri ya Muungano wa Tanzania

OFISI YA RAIS

TAWALA ZA MIKOA NA SERIKALI ZA MITAA

Telegrams: **MKUUMKOA**
Telephone:026-2604058/2604116
Fax: 026 - 2604274
E-mail:
rastabora@tamisemi.go.tz
Tafadhali unapojibu taja:

Ofisi ya Mkuu wa Mkoa,
S.L.P. 25,
TABORA.

Kumb.Na. DA/70/198/03/4

29 Desemba, 2020

KATIBU MKUU,
Tawala za Mikoa
na Serikali za Mitaa(TAMISEMI),
Mtaa wa TAMISEMI,
Mji wa Serikali-Mtumba,
S.L.P 1923
41185**DODOMA.**

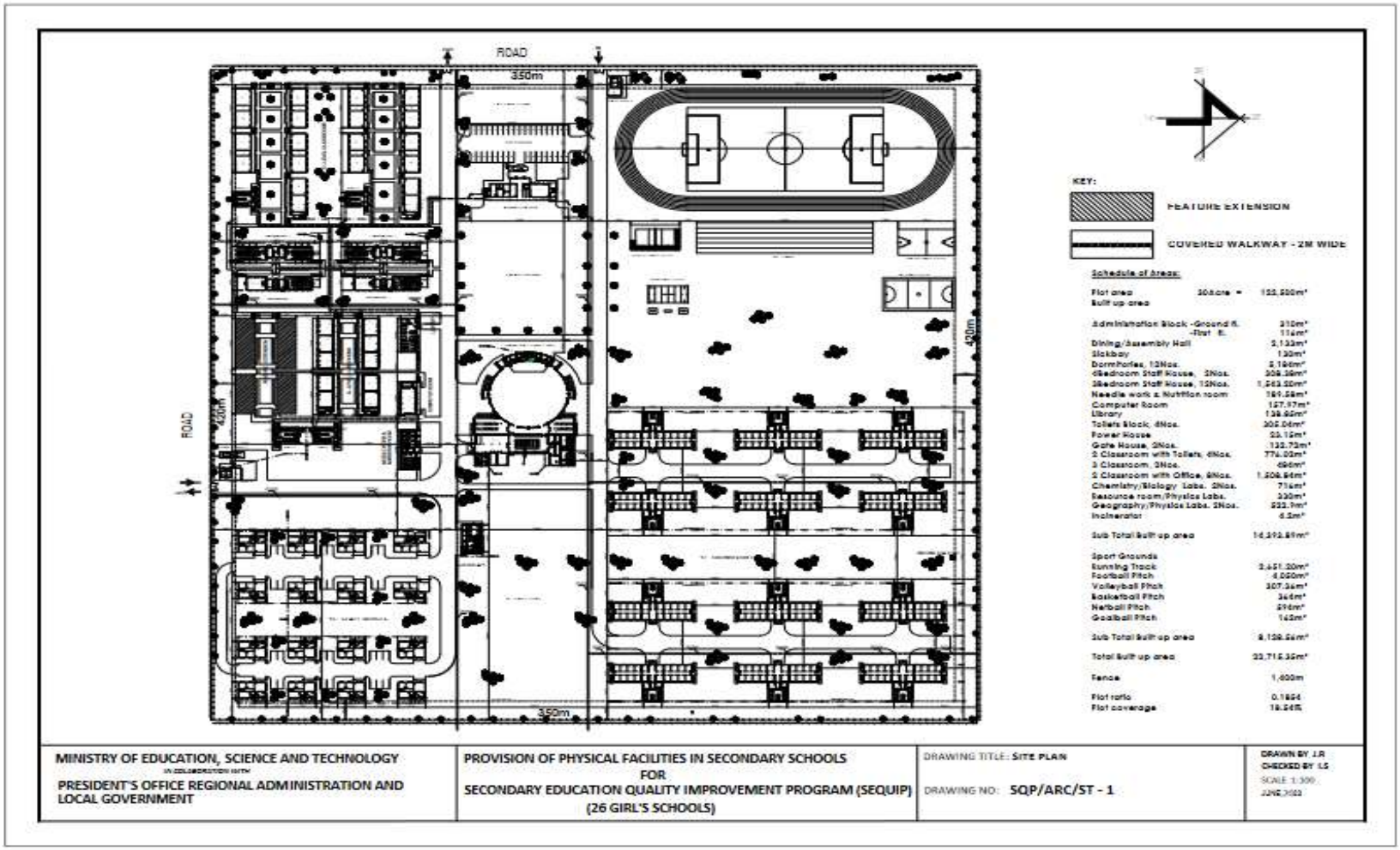
YAH: KUTEULIWA KWA HALMASHAURI YA WILAYA YA KALIUA KUTEKELEZA MRADI WA UJENZI SHULE YA KITAIFA YA WASICHANA.

1. Husika na somo tajwa hapo juu.
2. Ofisi ya Katibu Tawala Mkoa inaomba kutoa taarifa kwako ya eneo lililokubaliwa kutekeleza mradi wa ujenzi wa shule ya wasichana ya kitaifa. Shule ya Kitaifa ya Wasichana itajengwa katika kijiji cha Wachawaseme (ISAWIMA) kilichopo katika Kata ya Igagala, Tarafa ya Igagala Wilaya ya Kaliua.
3. Tayari maelekezo yametolewa kwa Mkurugenzi wa Halmashauri ya Wilaya ya Kaliua kuhakikisha kuwa eneo tajwa limefanyiwa maandalizi ya awali ikiwemo uthibitisho wa umiliki wake na kwamba huduma za kijamii kama umeme na maji vinapatikana kwa ajili ya shule.
4. Mkoa umeendelea kusisitiza matumizi ya Sheria, Kanuni na Taratibu za fedha kuzingatiwa katika utekelezaji wa mradi huu wa Kitaifa.
5. Naomba kuwasilisha.

MSALIKA R. MAKUNGU
KATIBU TAWALA MKOA
TABORA

KATIBU TAWALA WA MKOA
TABORA.

APPENDIX V: SITE LAYOUT PLAN



APPENDIX VI: NON-TECHNICAL EXECUTIVE SUMMARY

NON-TECHNICAL EXECUTIVE SUMMARY FOR ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT (ESIA) FOR THE PROPOSED CONSTRUCTION OF REGIONAL GIRLS SECONDARY SCHOOL TO BE LOCATED ON PLOT NO.1, BLOCK "A" AT WACHAWASEME VILLAGE, IGAGALA WARD, KALIUA DISTRICT IN TABORA 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:
The National Environment Management Council (NEMC), **Central Zone** **P. O. BOX 2724** **Dodoma — Tanzania** **Email: nemcdodoma@nemc.or.tz** **Telephone: +255 262963859** **Direct Line:+255 262963860**	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:

Trained school guidance and counselling teachers;
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;
Training of school heads and School Boards on GBV, safe school issues etc.;

i. School and classroom monitoring system for early identification of and intervention on girls at risk of drop out; and
ii. 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).

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 Wachawaseme village, Igagala ward in Kaliua-Municipal- Tabora Region and is bordered by individual owned farm to the West, South and East, while in North there is Tabora - Kigoma Regional.

The proposed site can be easily accessed by using Tabora- Kigoma trunk road at 21km from Kaliua District Council on the right-hand side of the road within Igagala Ward.

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

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:

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,2010

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

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 Kaliua District, District Environmental Management Officer (DEMO) and District Secondary Education Officer (DSEO)
- Ward Exevutive Officer (WEO)
- Wachawaseme 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:

- This project will have positive impact to our community, it will motivated both parents and children to love school than before,

- People from different places of the country will come here for studying and working, therefore we will economically and socially develop.
- They got the area from the villagers of Wachawaseme willingly and they have the signed MoM from the community.

Stakeholders were concerned about:

- They have been called most of the time since 2020 regarding this project but no implementation have been done, therefore they need only to see the construction have started.

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

i. No-Go alternative,
ii. Design and technological considerations
iii. Location alternative
iv. Energy alternative
v. Water resource alternative
vi. Waste water treatment 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 umegawanywa katika sehemu kuu nne:

Sehemu ya 1: Kuwawezesha Wasichana kupata 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 Mbabadala 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 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 na Upatikanaji wa Mradi

Eneo lililopendekezwa la mradi lipo kijiji cha Wachawaseme, kata ya Igagala katika Halmashauri ya Manispaa ya Kaliua, Mkoa wa Tabora, na linapakana na mashamba ya watu binafsi upande wa Magharibi, Kusini, na Mashariki, huku upande wa Kaskazini kukiwa na Mkoa wa Tabora - Kigoma.

Eneo lililopendekezwa linaweza kufikiwa kwa urahisi kwa kutumia barabara kuu ya Tabora-Kigoma umbali wa kilometa 21 kutoka Halmashauri ya Wilaya ya Kaliua kwenye upande wa kulia wa barabara ndani ya Kata ya Igagala.

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 utekelezaji wa SEQUIP kwa ujumla, zitasaidia kuongeza idadi ya wanafunzi wanaojiunga na 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 Wilaya 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

• Kurejesha maeneo ya kuchimba kokoto kwenye hali salama Zaidi

Gharama za Mradi

Jumla ya Gharama za Mradi ni shilingi bilioni nne za Kitanzania.

Mfumo wa Kisheria

Sera muhimu za kisekta na zisizo za kisekta 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 zizingatie 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 Kaliua, Afisa usimamizi wa mazingirawa wilaya na Afisa wa Afya wa Wilaya (DHO)

• Afisa Mtendaji wa Kata (WEO)

• Mwenyekiti wa kijiji cha Rwambaizi

• 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:

- Mradi huu utakuwa na athari chanya kwa jamii yetu, utawachochea wazazi na watoto kuipenda shule zaidi kuliko hapo awali.
- Watu kutoka maeneo mbalimbali nchini watakuja hapa kusoma na kufanya kazi, hivyo tutakuwa na maendeleo ya kiuchumi na kijamii.
- Walipata eneo hilo kutoka kwa wakazi wa kijiji cha Wachawaseme kwa ridhaa yao na wana hati ya makubaliano iliyosainiwa (MoM) kutoka kwa jamii.

Wadau walikuwa na wasiwasi kuhusu:

- Tangu mwaka 2020, wameitwa mara kwa mara kuhusu mradi huu lakini hakuna utekelezaji uliofanyika. Kwa hiyo, wanahitaji tu kuona ujenzi umeanza.

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 Wasichana ya Mkoa, imetambua idadi ya athari ambazo zinaweza kutokea wakati wa ujenzi na uendeshaji wa mradi uliopendekezwa.

Tathmini imeangalia athari za kibiolojia, kiuchumi na kitamaduni za shughuli zilizopendekezwa 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 na 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