ENVIRONMENTAL AND SOCIAL IMPACT STATEMENT
FOR
THE PROPOSED ESTABLISHMENT OF GIRLS SECONDARY SCHOOL AT SOLYA VILLAGE, SOLYA WARD, MANYONI DISTRICT IN SINGIDA REGION

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EXECUTIVE SUMMARY

Introduction

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

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

Component 1: Empowering Girls through Secondary Education and Life Skills

Creating Safe Schools: Implementation of the Safe Schools Program including:
This will involves 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.; School and classroom monitoring system for early identification of and intervention on girls at risk of drop out; and Community-based mechanism for safe passage to school.

Promoting Girls' Completion of Secondary Education through Quality Alternative Education Pathways including:
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; 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;
Enhancing access to Alternative Education Pathways through (i) expansion of the network of AEP centers; and (ii) tuition fee subsidies for vulnerable girls; A quality package for strengthening student learning in Alternative Education Pathways will also be implemented; Environmental and Social Management Framework –Tanzania - Secondary Education Quality Improvement Project (SEQUIP)

Component 2: Digitally-Enabled Effective Teaching and Learning

Effective Teaching and Learning ; 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); Equitable, gender-balanced teacher deployment to schools; In-service teacher training/continuous professional development (CPD) to improve classroom teaching practice for secondary English, Mathematics and Science teachers ; 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

Digitally-enabled Teaching of Math Sciences and English: Development of an ICT in Education Strategy and plan for secondary education and 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 per cent 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 **Reg.No:NEMC/EIA/0034** ,the offices located 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 Description
The Project will apply the Environmental and Social Standards (ESSs), as a requirement for the Bank financing. The Government has prepared this Environmental and Social Management Framework (ESMF) for the application of the following Environmental and Social Standards: Assessment and Management of Environmental and Social Risks and Impacts

The proposed project site is administratively located at Solya village, Solya ward in Manyoni District-Singida Region and is bordered by small bushes to the West, South and East, while in North there is Dodoma-Singida Highway.

Location and Accessibility
The proposed site for school construction is located at Solya Village, Solya Ward in Manyoni District Singida region which fall under the following coordinates $5^0$49'13.1"S, $34^0$58'23.3"E.

The proposed project area can be easily accessed from Dodoma by using the Dodoma-Singida Highway, which is about 108.9 kilometers from Dodoma City. It can also be accessed from Singida by using the Singida-Dodoma Highway, which is about 136.9 kilometers.

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,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),
- District Executive Director (DED) in Manyoni District and District Environmental Officer (DEMO), DSEO, As DE
- Ward officials including VEO at Solya village and WEO of Solya ward
- OSHA

Stakeholders Opinions and Concerns

The stakeholder consultations identified both positive opinions and negative concerns. Stakeholders had positive opinions of the project in terms of:

- Education opportunities to the specific project area and surrounding communities
- Rising of Solya Ward's economy as a result of population increase

Stakeholders were concerned about:

- During project implementation, citizens of the specific ward and Tanzanians as whole should be given priority in terms of employment opportunities since they are bordered with Burundi

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.

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 Singida Region, District, and the Ward Executive Officer for Solya Ward, the Village Chairperson for Solya 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.

ACRONYMS AND ABBREVIATIONS

ADB	African Development Bank
AEP	Alternative Education Program
AIDS	Acquired Immune Deficiency Syndrome
AOI	Area of Interest
APHA	American Public Health Association
ARAP	Abbreviated Resettlement Action Plan
BOD	Biological Oxygen Demand
BS	British Standard
CBOs	Community Based Organisations
CDP	Community Development Program
CH_4	Methane
CO	Carbon Monoxide
CO_2	Carbon Dioxide
COD	Chemical Oxygen Demand
CPD	Continuous Professional Development
dB	Decibels
DC	District Commissioner
DED	District Executive Director
DEMO	District Environment Management Officer
DEO	District Education Officer
DMD	Disaster Management Department
DOE	Director Of Environment
DP	Development Partner
DRC	Democratic Republic of Congo
EBRD	European Bank for Reconstruction and Development
EIA	Environment Impact Assessment
EIS	Environmental Impact Statement
EMA	Environmental Management Act
EMP	Environmental Management Plan
EPFIs	Equator Principle Financial Institutions

ESCP	Environmental and Social Commitment Plan
ESDP	Education Sector Development Plan
ESF	Environment and Social Framework
ESIA	Environment and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environment and Social Management Plant
ESS	Environment and Social Standards
EU	European Union
FI	Financial Intermediaries
FYDP	Five Year Development Plan
GBV	Gender Based Violence
GCA	Game Controlled Areas
GCLA	Government Chemistry Laboratory Authority
GCS	Geographic Coordinate System
GDP	Gross Domestic Product
GIIP	Good International Industry Practices
GS Pipe	Galvanized steel
HIPC	Heavily Indebted Poor Country
HIV	Human Immunodeficiency Virus
ICT	Information and Communications Technology
IFC	International Finance Institution
IPF	Investment Project Financing
ISO	International Organization for Standardization
IST	Implementing Supporting Team
IUCN	International Union for Conservation of Nature
LGAs	Local Government Authorities
LPG	Liquefied Petroleum Gas
m	meter
MoEST	Ministry of Education, Science and Technology
NAPA	National Adaptation Programme Of Action
NEMC	National Environment Management Council
NEP	National Environment Policy
NESC	National Environmental Standards Compendium

NGOs	Non-Governmental Organisations
NOx	Oxides of Nitrogen
NSGRP	National Strategy for Growth and Reduction of Poverty
O	Oxygen
O_3	Ozone
OHS	Occupational Health and Safety
OIP	Other Interested Parties
OP	Operational Policy
OPC	Ordinary Portland Cement
OSHA	Occupational Safety and Health Authority
OSPAR	Oil Spill Prevention Administration And Response
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
ppm	Parts per million
PVC	Polyvinyl Chloride
RAO	Region Academic Officer
RAP	Resettlement Action Plan
RAS	Region Administrative Secretary
RC	Region Commissioner
RCDO	Regional Community Development Officer
REMO	Region Management Officer
REO	Region Education Officer
SEP	Stakeholder Engagement Plan
SEQUIP	Secondary Education Quality Improvement Project
SIA	Social Impact Assessment
SO_2	Sulfur dioxide
TANESCO	Tanzania Electric Supply Company

TBS	Tanzania Bureau of Standards
TDV	Tanzania Development Vision
ToR	Terms of Reference
TSP	Total Suspended Particulates
TZS	Tanzania Standards
URT	United Republic of Tanzania
US EPA	United State Environmental Protection Agency
VEC	Valued Environmental Component
VEO	Village Executive Officer
VG	Vulnerable Group
VOCs	Volatile Organic Compounds
WASH	Water Sanitation and Hygiene
WB	World Bank
WBMS	World Bureau of Metal Statistics
WEO	Ward Executive Officer
WHO	World Health Organization
WSSA	Water Supply and Sanitation Authority

LIST OF EXPERTS WHO COONDUCTED THE STUDY

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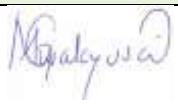
1.	Eng. Gwakisa Mwakyusa		
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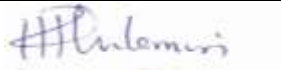
3.	Eng. Anamary Philemon	Monitoring and Waste Management Expert	
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1 INTRODUCTION

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, (URT, 2019).

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 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, (URT, 2019).

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

These SEQUIP interventions are aligned with the Government's Education Sector Development Plan (ESDP) (2016/17–2020/21) and related strategies. SEQUIP design also draws on lessons learned from previous and ongoing World Bank and Development Partner (DP) support to education in Tanzania.

Overall, SEQUIP will contribute to increasing total enrolment in secondary school by 1.8 million students and increase the number of girls graduating from both secondary schools and alternative secondary education pathways. Over its lifetime, the Project will directly benefit about 6.5 million new and existing secondary school students, including 3.2 million girls. 1 SEQUIP will help more girl's transition from lower to upper secondary education, including girls who had to leave lower secondary government schools due to pregnancy

1.2 Objectives of the study

a. To establish before a decision is taken by any person, authority, corporate body or unincorporated body including the Government and local government authorities intending to undertake or authorize the undertaking of any activity impacts that may likely or to a significant extent affect the environment or have environmental effects on those activities;
b. To promote the implementation of the Act and all laws and decision making process through which the goal and objective in paragraph (a) may be realized;
c. To encourage the development of procedure for information exchange, notification and consultation between organs and persons when a proposed activity is likely to have significant environmental effects on trans boundary or an environment bordering regions, districts, municipalities, towns and villages;
d. To ensure that environmental considerations are explicitly addressed and incorporated into the development decision making process;
e. To anticipate and avoid, minimize or offset the adverse significant biophysical, social and other relevant effects of development proposal;
f. To protect the productivity and capacity of natural systems and the ecological processes which maintain their functions; and
g. To promote development that is sustainable and optimizes resources use and management opportunities.

1.3 Scope of the Study

The ESIA was conducted in accordance to 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.

1.4 Land requirement for the project

Land is public property and rights to the land are issued in the form of residential leases and certificates of rights to occupancy. The construction of new school in Manyoni district 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 Manyoni District was previous owned by the community. As per construction directives from PO-RALG, specific land size requirement is 25 acres areas. But Singida like other region has put aside about 80 acres for the construction.

1.5 Study Approach and Methodology

The approach to this exercise was structured such as to cover the requirements under the Environment Impact Assessment and Audit Regulations, 2005. It involved largely an understanding of the project background, the preliminary designs and the implementation plan as well as commissioning.

In addition, baseline information was obtained through physical investigation of the project site areas, desktop studies, and public consultations with members of the community in the project areas, survey, photography, and discussions with the project Proponent.

The methodology used in this study follows specific procedures and guidelines set by the EIA & Audit Regulations of 2005. The study adopted the following the process for conducting the Impact Assessment is closely related to the flowchart in Figure 1-1.

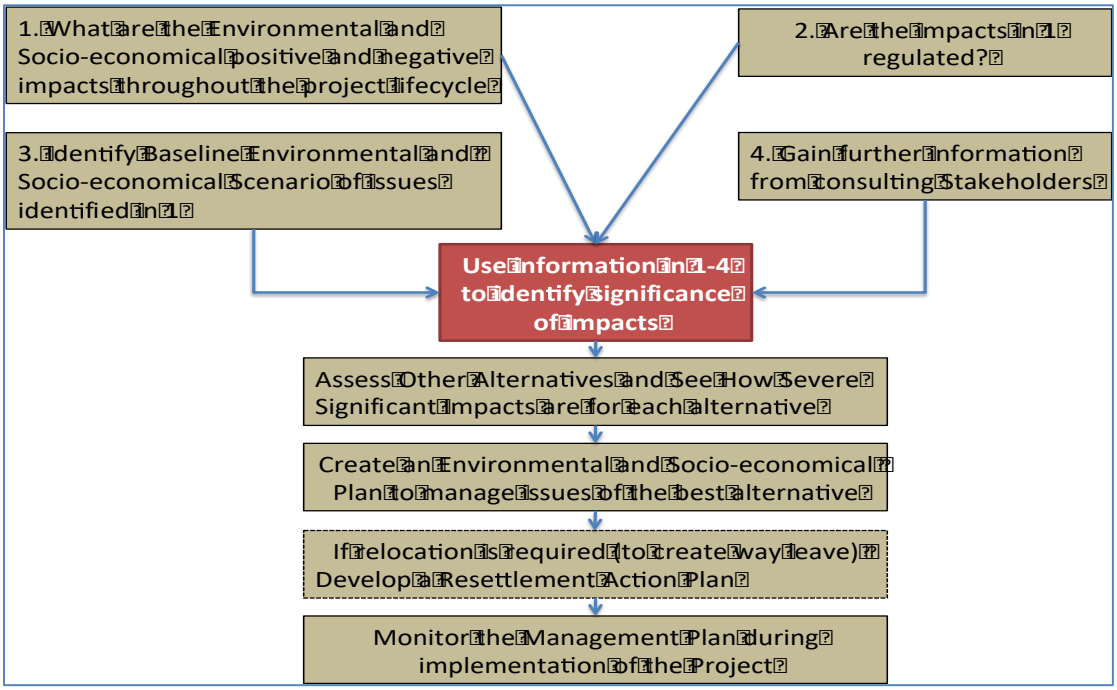

Figure 1-1: Environmental and Social Impact Assessment Process

1.5.1 Issues Associated with the Proposed Project

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

1.5.2 Regulatory Framework with Associated Issues

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

1.5.3 How the Situation is Currently (Baseline Situation)

In order to gauge the extent of impact, it is crucial to establish the status quo (**Error! Reference source not found.**). The consulting team conducted the baseline study of the current level of impacts. This involved a specialized study on flora and fauna, air, soil and water. It also covered socioeconomic issues, noise, and vibration etc. The aim of ascertaining the baseline it to appreciate to what extent the proposed project can alleviate or exacerbate the current situation.

1.5.4 Issues from Key Stakeholders

This EISA also reports on the following:

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

1.5.5 Assessment of Impacts (Both Good and Negative)

This critically reviews and analyses interaction between the proposed project and the existing environment. In this analysis, the consultant distinguished between significant positive and negative

impacts, direct and indirect impacts, and immediate and long-term impacts. Impacts, which are unavoidable or irreversible, are also identified. Wherever possible, impacts are described quantitatively in terms of environmental costs and benefits.

1.5.6 Consideration of Alternatives

This environmental assessment also involved an analysis of reasonable alternatives to meet the ultimate project objective. This analysis included any alternatives examined while developing the proposed project, and that from an environmental, socio-cultural or economic point of view may be sounder than the proposed project. This also includes the 'no action' alternative, which assesses environmental conditions without project.

It is described how the alternatives compare in terms of potential impacts, costs, suitability under local conditions, as well as institutional, training, and monitoring requirements. To the extent possible, costs and benefits of each alternative are quantified, incorporating the estimated costs of any associated mitigating measures. Finally, this report described the reasons for selecting the proposed project over the other alternatives.

1.5.7 Developing an Environmental Management Plan

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

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

1.5.8 Developing an Environmental Monitoring Plan

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

1.6 Content of the Report

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

Table 1-1: Content of the Report

Chapter	Description
1. Introduction	Overview and objective of the study, methodology and outline of the report
2. Project Background and Description;	This chapter describes: • The executing entities of the project and their respective roles in the project • The project's geographic location, preferably illustrated with appropriate maps • Summary of the project (project objective(s), expected

Chapter	Description
	results/outcomes, outputs and main activities • Implementation arrangements.
3. Policy, Administrative and Legal Framework;	Describe the policy, legal and administrative framework within which the project takes place and identify any laws and regulations that pertain to environmental and social matters relevant to the project. This includes regulations about environmental and/or social impact assessments to which the project must adhere as well as laws implementing host country obligations under international law. If applicable. Where pertinent, consider legal frameworks for promoting gender equality. Flag any areas where the project might fall short on compliance.
4. Baseline or Existing Conditions;	The main purpose of this section of the ESIA report is to provide an understanding of current environmental and social conditions that form the baseline against which project impacts can be predicted and measured during project implementation. For moderate-risk projects that require only a partial ESIA and no scoping study, this section also provides an opportunity to substantiate the results of the ESMS screening by confirming potential impacts and/or identifying other potential impacts.
5. Stakeholder Identification and Analysis	The purpose of the stakeholder identification and analysis is to understand potential impacts on stakeholders and to clarify who should be involved in the ESIA process and how. This should be able to elaborate: • stakeholders' interests in and expectations from the project; • how they might influence the project (positively or negatively; • a first appraisal or estimation of how their livelihoods could be impacted by the project (positively or negatively); and • How they should be involved in the ESIA based on the information in the three items above.
6. Assessment of Impacts and Identification of Alternatives	This step is the heart of the ESIA; it itemizes and describes the identified impacts, makes predictions in terms of their probability, and assesses their significance. When analyzing the risks not only direct impacts should be taken into consideration but also indirect impacts such as inadvertent knock-on effects or cumulative effects that materialize through interaction with other developments, impacts occurring at the project site or within the project's wider area of influence and impacts triggered over time The purpose of the analysis of alternatives is to identify other options, including not implementing the project, to achieve the project objectives and compare their impacts with the original proposal. This step is required only for high-risk projects where the identified impacts are very significant.
7. Impacts Management or Environmental Mitigation Measures	A main output of the ESIA process is a strategy for managing risks and mitigating impacts. The identification of mitigation measures is done in consultation with affected groups and is guided by the mitigation hierarchy. The mitigation hierarchy implies that all reasonable attempts must first be made to avoid negative social or environmental impacts. If avoidance is not possible without challenging the conservation objective of the project, measures should be taken to minimize the impacts to acceptable levels and address remaining residual impacts with adequate and fair compensation measures.

Chapter	Description
8. Environmental and Social Management Plan	This is a risk management strategy is documented in an Environmental and Social Management Plan (ESMP) that describes: the mitigation measures developed during the ESIA, an implementation schedule and required resources and responsibilities. The technical and operational feasibility, cultural adequacy and sustainability of proposed measures must be demonstrated as well as requirements for capacity building and institutional strengthening, where relevant.
9. Environmental and Social Monitoring Plan	The ESMP should also indicate how the measures designed to avoid impacts will be monitored for effectiveness.
10. Resource Evaluation or Cost Benefit Analysis	This chapters intends to internalize all costs associated with management of environmental and social impacts while comparing with the benefits which could be derived from implementation of the project
11. Decommissioning;	How decommissioning of the project shall be affected and restoration of the site
12. Summary and Conclusions	An overview of the study as well as conclusion from experts regarding the findings
13. References	List of all sources of information used in the report
14. Appendices	Detailed descriptions which are important for the study but cannot be included in the main body

2 PROJECT BACKGROUND AND DESCRIPTION

2.1 Background

This project aim to increase access to secondary education and provide responsive learning environments for girls in Singida region and improve completion of quality secondary education for girls. The school construction in Manyoni district will contribute to addressing key challenges to girls accessing the education and this school.

2.2 Project Location and Accessibility

2.2.1 Project Location

The project area is located at Solya Village, Solya Ward, Manyoni District in Singida Region. Singida Region is one of Tanzania's 31 administrative regions. Singida Region, to the north it shares borders with Simiyu Region; Arusha, Manyara and on the east borders Dodoma. To the south it shares borders with Iringa and Mbeya while on the west there is Tabora Region.

Manyoni District is one of the six districts in the Singida Region of Tanzania. The district capital is the town of Manyoni. The district is bordered to the north by the Ikungi District, to the east by the Dodoma Region, to the south by the Iringa Region, to the southwest by the Mbeya Region and to the west by the Tabora Region.

Solya ward is among the five wards of Kilimatinde division, Manyoni District in Singida region central part of Tanzania along the Singida-Dodoma high way.

The proposed site for school construction is located at Solya Village, Solya Ward in Manyoni District Singida region which fall under the following coordinates -5^{0}49’13.1”S, 34^{0}58’23.3”E

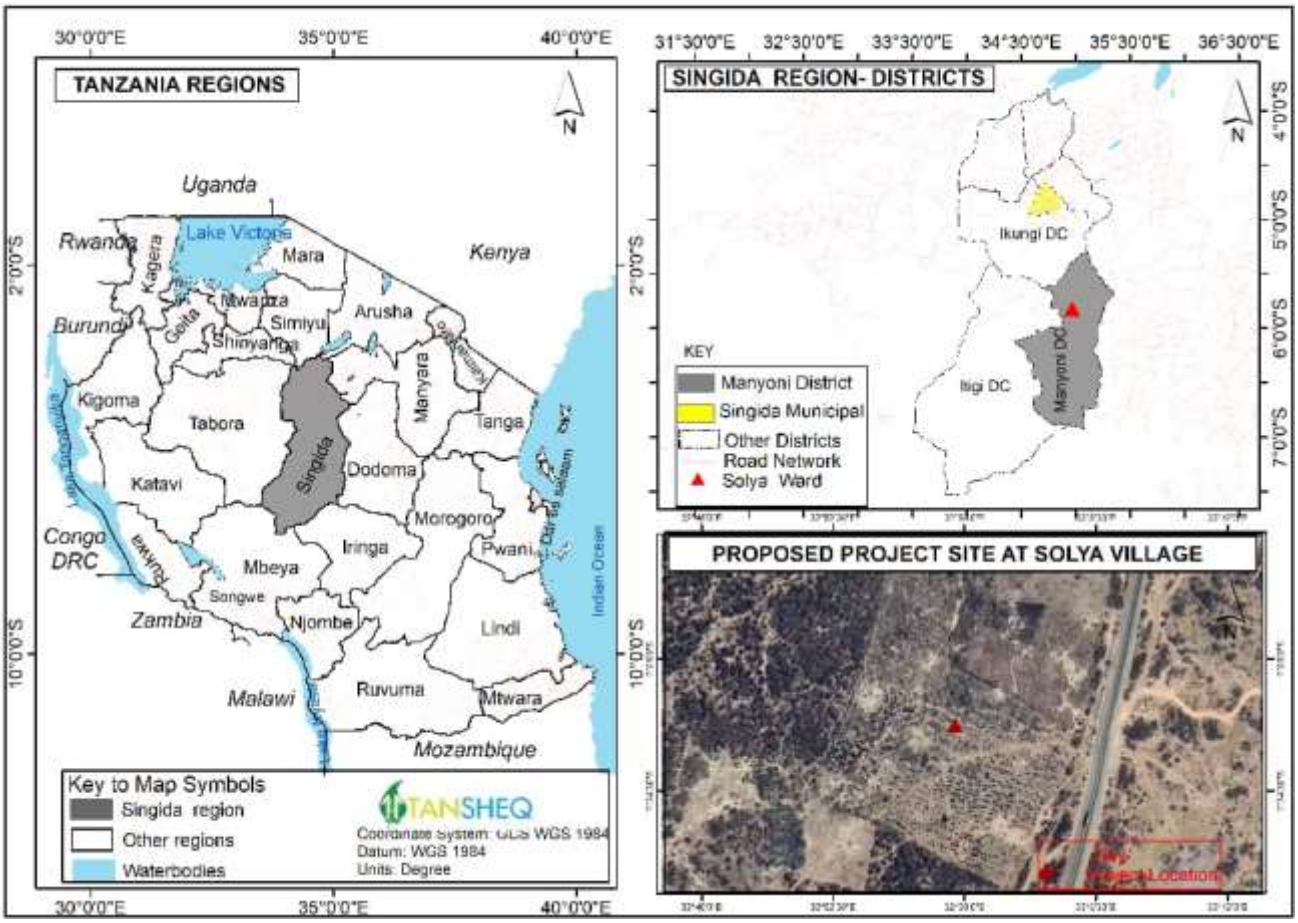

Figure 2-1: Map of the proposed project area

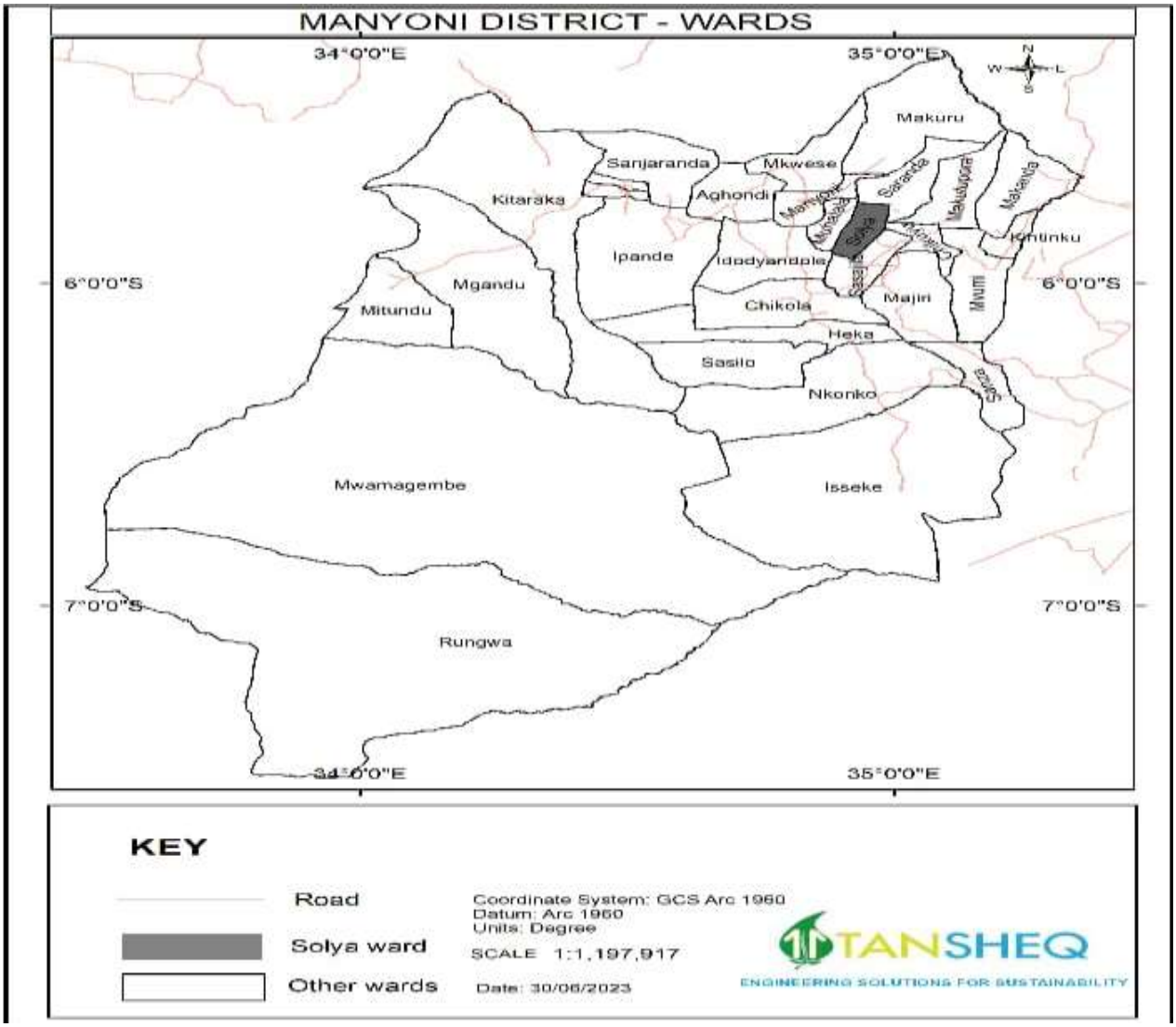

Figure 2-2: Wards in Manyoni District Council

2.2.2 Project Accessibility

The proposed project area can be easily accessed from Dodoma by using the Dodoma-Singida Highway, which is about 108.9 kilometers from Dodoma City. It can also be accessed from Singida by using the Singida-Dodoma Highway, which is about 136.9 kilometers.

2.2.3 Current Situation in vicinity proposed site.

Project site

The construction activities have already taken place on the project site. All the building are new building which are in some are in finishing process while other are in linter stage as shown in Figure 2-3.

Figure 2-3: Current situation on the project site

Surroundings

The proposed school site is surrounded by small bushes all the side of the project site, but in one side there is Dodoma Singida Highway

.

Figure 2-4 :Project Surrounding Area

2.3 Project Planning and Design

2.3.1 Overview

Project planning and all designs are prepared as per SEQUIP design and the overall objective for the development is 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 ongoing school construction has both ordinary and advanced level with capacity of accommodating students between 1000 and 1100 students. The construction package has the following package

2.3.2 Classrooms

The classrooms are designed following Education Bulletin number 1 of 2007 which directs capacity of each classroom level, 30 students for advance and 40 students for ordinary level. However each classroom has capacity of 40 students.

The construction has to take place in two phases, the first of which has already started and involves the construction of 12 classrooms within six blocks, followed by the second phase, which will involve the construction of six classrooms. The proposed project adheres 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.

2.3.3 Laboratories

Education Bulletin Number 1 of 2007 explains the capacity and set-up of the laboratory building for each level at 40 students. The scheduling of materials for Singida Region adheres to the bulletin as required; the following laboratory rooms are constructed:

- Physics and geography lab
- Chemistry and biology lab,

Details on the design of the laboratory can be accessed at https://www.tamisemi.go.tz/michoro-ya-ujenzi. and the design layout .

2.3.4 Administration blocks

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

2.3.5 Toilets

The toilet facility consists of one block with 16 holes to be built separately, as shown on the schedule; however, some classrooms, as well as the dormitory and dining hall, have sanitary rooms.

2.3.6 Generator room

This is a source of power at school and the incorporated premises such as staff quarters. One generator room has to be constructed.

2.3.7 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 has enough dinning space to all students since it is boarding school, meal will be served. According to the designs of the dining hall, it has the capacity of 2000 students.

2.3.8 Teachers' house

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

2.3.9 Dormitories

These dormitories are the place where students stay. The student housing must also aim to provide healthy and acoustically pleasant environments for the protection, comfort, and productivity of the students. The dormitories are constructed to meet the SEQUIP objectives.

2.3.10 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.

2.4 Project Activities

The envisaged project activities can be broadly categorized in three phases as listed in Table 2-1

- Mobilization and Construction
- Operational phase
- Decommissioning phase

Table 2-1 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,

Project Phase	Activities
	offices and washrooms • Meeting and Conferences • Health. Safety and security as well as social issues.
Decommissioning phase	• Expansion and maintenance

2.4.1 Pre-Construction/ Mobilization Phase

The mobilization phase of the project, which takes an average of three months, entailed the following activities:

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

Materials used during mobilization Phase

The following materials used 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 was obtained from either Dar es Salaam, while sand, aggregates, and timber was obtained locally.

Equipment used during mobilization phase

The major equipment was used during mobilization phase of the project will 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)

Labour required during mobilization phase

Both skilled and unskilled labor were required in the mobilization phase of the project, which included:

- ❖ Electrical Engineer for the Installation of Electrical Infrastructure
- ❖ Water Engineer or Technician for Installation of Water Infrastructure
- ❖ Construction worker for construction activities

- ❖ Manual workers are needed for bush clearing and other manual work at the project site.

Wastes Generated during mobilization phase

Mobilization phase of the project generated the waste shown in Table 2-2: Waste generated During Mobilization Phase below.

Table 2-2: Waste generated During Mobilization Phase

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

Treatment and disposal of waste generated during mobilization phase

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

- During site clearing, topsoil and green cutting disposed in old borrow pits or other areas approved by the Engineer
- Concrete and cement blocks waste 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 was disposed by recycling. Has collected and stored; until enough quantities are obtained before being disposed of by the Contractor. The metal scraps disposing companies shall be approved by the Engineer.
- Non degradable wastes such as plastic, PVC pipes, and plastic bottles collected and transported and given freely to plastic factories where they will be recycled.
- Temporary pit latrines was constructed at active mobilization sites (camp sites) for the disposal of sanitary wastes.

2.4.2 Construction Phase

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

I. Earth works to facilitate widening and re-alignment of the road. Earth works entailed the following activities:
   - ❖ Clearing and grubbing (clearing of vegetation, including trees).

II. Extraction of naturally-occurring construction materials. This includes:
   - ❖ Excavation and transport of natural sand, gravel, and sub-base materials to construction sites
   - ❖ Stone quarrying (including blasting), crushing and transport of crushed aggregates to construction sites

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

IV. Transport of construction materials from source to site such as roof, steel, woods, nails, rope,

Materials Required during Construction Phase

During the project construction, the following materials required as shown in Table 2-3 :

Table 2-3 Materials required During Construction Phase

No	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	Stone crusher dust and sand pits (to be established by Contractors)
3.	Crushed aggregate	Concrete works (Structural works) and construction	Local available
4.	Steel reinforcement bars	Reinforced concrete works construction of structures,	Dar /imported
5.	Steel shutters and form works	Concrete works	Dar
6.	Soft timber	Production of timber formworks and shutters	Locally
7.	Nails	Nails for fixing timber form works	Dar es salaam/
8	Water	Drinking, concrete works, dust suppression	Rivers and Manyoni Water Supply and sanitation Authority

Labour recruited during construction phase

Both skilled and unskilled labor recruited in the construction phase of the project, which will include:

- Civil Engineer for construction activities
- Manual workers are needed for caring sand, gravels, cement, bricks and other related activities at the project site.

Wastes generated during Construction Phase

The wastes generated during construction phase of the project is a result of construction and equipment maintenance. The wastes which is generated during construction phase of the project are shown in Table 2-4.

Table 2-4: Wastes generated during Construction Phase

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

Treatment and disposal of wastes generated during construction phase

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

2.4.3 Operation phase

The operation 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.

Material required during operation phase

Material required during the operation phase will include tables, chairs, books, chalk, a printing and photocopy machine, laboratory equipment and specimens, and water utilities.

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
- Cooks

1.1.1.2 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, classroom, office,
- liquid waste from sanitary facilities, canteens, and kitchens
- Hazardous waste such as sanitary pads

2.4.4 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 wastes such as waste oil, sewage, solid wastes (plastics, wood, metal, papers, etc.) at the workshop, site office etc. to authorized dumpsite
- ❖ Restoration of material borrows areas to safer condition.

Materials required During Decommissioning 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, labour, water, and energy will also be required.

Equipment Required During Decommissioning Phase

The equipment required during demobilization phase will include vehicles and trucks for transport of wastes,

Wastes Generated During Decommissioning Phase

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

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

Treatment and disposal of wastes generated during decommissioning phase

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

or burnt.

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 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 during project operation.

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 Project Associated Facilities

Associated facilities are defined by the International Finance Corporation (IFC) as facilities that are not funded as part of the project and that would not have been constructed or expanded if the project did not exist and without which the project would not be viable (IFC 2012).

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 analysed 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 and 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 Singida region has identified the following activities in the category of associated facilities;

- Energy
- Water Supply System
- Store rooms and offices

2.5.1 Access Roads

The development of access roads is necessary to provide access to workers during construction phase to materials and equipment from one place to another within the project area, staff and students within the school during operation due to the nature of the area (farm). Access route design must take several factors into account, including existing ground strength, expected weather conditions and the nature of the area.

2.5.2 Energy

The development of any school needs energy utilities, either electricity or gas. The presence of energy is unobserved but crucial to the functioning of a school for different purposes such as lighting, printing, and other related activities that need energy within a school compound. The project will adopt the existing utility system available in the specific region and district, whereas the developer will attain electricity from TANESCO.

2.5.3 Water supply system

The project will require water for different activities for the project 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. The amount of water required during construction of the project estimated to be 5800 litres per day.

During operation phase, Water will be used for domestic uses, cleaning and for sanitation which which will depend on the number of the student to be admitted to school at the specific time. . The project will adopt the existing water system available in the specific district, whereas the project owner will obtain water from Manyoni Water Supply and Sanitation Authority (Manyoni WSSA).

2.6 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

2.6.1 Fire

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

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

2.6.2 Collapse.

The result analysis showed that the major factors responsible for building collapse are usage of substandard building materials, non-involvement of relevant and qualified professionals,

defective design, and poor maintenance culture Poor Workmanship/Supervision Natural Occurrences.

The remedies to mitigate the problems are but not limited to the professional bodies through their government regulatory bodies need to ensure effective monitoring to control quackery and ensure violators are punished, building and construction permit should be adhered, ensure the use of professional people during construction etc.

2.7 Project Cost

Total Project Cost is four billion Tanzanian shillings

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 11 (2): Every person has the right to access education, and every citizen shall be free to pursue education in a field of his choice up to the highest level according to his merits and ability.

Article 11 (3): The Government shall make efforts to ensure that all persons are afforded equal and sufficient opportunity to pursue education and vocational training in all levels of schools and other institutions of learning.

According to this statements the government of the United Republic of Tanzania has put more effort to ensure every citizen of Tanzania has a right to education by constructing girls secondary school in Manyoni district Singida region.

3.3 National Development Vision 2025

A Tanzanian who is born today will be fully grown up, will have joined the working population and will probably be a young parent by the year 2025. Similarly, a Tanzanian who has just joined the labour force will be preparing to retire by the year 2025.
What kind of society will have been created by such Tanzanians in the year 2025? What is envisioned is that the society these Tanzanians will be living in by then will be a substantially developed one with a high quality livelihood.
Abject poverty will be a thing of the past. In other words, it is envisioned that Tanzanians will have graduated from a least developed country to a middle income country by the year 2025 with a high level of human development. The economy will have been transformed from a low productivity agricultural economy to a semi-industrialized one led by modernized and highly productive agricultural activities which are effectively integrated and buttressed by supportive industrial and service activities in the rural and urban areas. A solid foundation for a competitive and dynamic economy with high productivity will have been laid. Consistent with this vision, Tanzania of 2025 should be a nation imbued with five main attributes;

- High quality livelihood. • Peace, stability and unity.
- Good governance,
- A well-educated and learning society;

- A competitive economy capable of producing sustainable growth and shared benefits.

3.4 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.

3.5 Relevant Policies

3.5.1 National Environmental Policy (2021)

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

The NEP enables sectorial and cross-sectorial policy analysis to mainstream environmental considerations into all aspects of planning and development. The proponent will adhere to the policy through conducting EIA so as to conserve natural environment around the project site, which will help to minimize the occurrence of the environmental problems.

3.5.2 Cultural Policy, 1997

Section of the 3.2.1 of the Cultural Policy stipulates that "all land development shall be preceded by Cultural Resource Impact studies. Furthermore, Section 3.1.5 states that "mechanisms shall be established to enable the nation to identify, own and preserve national treasurers e.g. art, objects, natural resources minerals as well as archaeological, paleontological and botanical remains".
Project proponent must abide with this policy during construction and operation phase in order to preserve indigenous culture.

3.5.3 Antiquities Policy of 2008

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

3.5.4 National Forest Policy, 1998

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

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

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

3.5.5 National Water Policy, 2002

The main objective of the Policy is to develop a comprehensive framework for sustainable development and management of the nation's water resources. Specifically, on the environment the objective is to have a water management system that protects the environment, ecological system, and biodiversity. The policy emphasizes that water related activities will have to be planned to enhance or to cause least detrimental effects on the environment.

To protect ecological systems and biodiversity which, together, are important part of sustainable water resources system the policy provides a guide for determining water for the environment, in terms of quantity and quality, and levels, for both surface and groundwater resource.

The policy emphasizes the use of best available scientific information for both temporal and spatial water requirements to maintain the health and viability of riverine and estuary ecosystems, and associated flora and fauna. Public awareness on good land-use practices is insisted to contain the erosion problem.

3.5.6 National Energy Policy, 2015

The Policy, among others, focuses on utilization of various energy resources in a sustainable and environmentally friendly manner. The Policy recognizes that energy is a prerequisite for the proper functioning of all sub-sectors of the economy.

The Policy stresses the use of renewable and alternative energy sources such as wind, solar, mini hydropower generators and use of liquefied petroleum gas (LPG) as well as natural gas.

The use of alternative energy sources such as biogas, briquettes both for domestic and industrial uses is encouraged to minimize the use of charcoal and firewood to prevent massive deforestation.

3.5.7 National Health Policy, 2007

The overall objective of the National Health Policy, 2007 is to improve the health and well-being of all Tanzanians. In line with environmental health, Policy seeks to protect community health by enhancing sustainable environmental health.

The Policy emphasizes on community adherence to environmental health standards; Improvement of waste management systems including disposal of hospital wastes; educating health service providers on the importance of environmental health in their working areas; and putting in place laws and procedures for conservation and protection of the environment in the health sector.

3.5.8 Occupational Health and Safety Policy 2009

The main objectives of OHS Policy are to reduce the number of work-related accidents and diseases in Tanzania. This required the adoption and implementation of a culture to prevent OHS hazards by Government, Employers and Employees. The effective prevention of work - related accidents and ill- health will have enormous social and economic benefits.

These include improvements in productivity and competitiveness and the quality of life of the working population. The effective management of many safety hazards will contribute to improved levels of public health and safety.

The effective control at source in workplaces of hazardous substances will improve levels of public health and minimize environmental pollution the policy emphasizes on Sustainable safe and healthy working conditions and environment at all workplaces for the entire diversity of the workforce contributing to broad based economic growth.

3.5.9 National Water Policy, 2002

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

3.5.10 National Land Policy, 1995

The National Land Policy of 1995 aims at developing a coherent and comprehensive framework that defines land tenure and enables proper management and allocation of land in urban and rural areas. Among other things, the Policy advocates the protection of land resources from degradation, for sustainable development.

The policy addresses several environmental issues such as land use planning, which take into consideration the land capability, ensures proper management of land resources, promotes resource sharing and multiple land use techniques in areas of conflicting land use, and involve community in resource management, land use and conflict resolution.

3.5.11 National Human Settlements Development Policy, 2000

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

3.5.12 The Construction Industry Policy (2003)

This policy promotes among other things, application of cost effective and innovative technologies and practices to support socio-economic development including utilities and ensure application of practices, technologies and products which are not harmful to both the environment and human health.

Manyoni District Council must use technologies and products not harmful to both the environmental and human health by providing feasible alternatives and appropriate mitigation measures.

3.5.13 The 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. For project sustainability the project proponent will have to closely observe the above policy.

3.5.14 The National Employment Policy, 2008

The major aim of this policy is to promote employment mainly of Tanzania Nationals. Relevant sections of this policy are (i) 10, which lays down strategies for promoting employment and section 10.1 is particularly focusing on industry and trade sectors (ii) 10.6 which deals with employment of special groups i.e. women, youth, persons with disabilities and (iii) 10.8 which deals with the tendencies of private industries to employ expatriates even where there are equally competent nationals.

3.5.15 National Population Policy, 2006

The Policy recognizes the impacts of population growth on natural resources and environment. The policy goal is to prepare and implement coordinated urban, rural and regional development plans for rapid development in the country and to reduce the rate of rural-urban migration.

3.5.16 National Transport Policy, 2003

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

3.5.17 National Women and Gender Policy, 2000

The key objective of the Policy is to provide guidelines that will ensure that gender sensitive plans and strategies in all sectors and institutions are developed. While the Policy aims at establishing strategies to eradicate poverty, it emphasizes gender equality and equal opportunity for both men and women to participate in development undertakings and to value the role played by each member of society.

Specifically, this Policy advocates for opportunities for both men and women in projects including construction works and related activities, and for women to be involved at all levels of the project from planning to implementation.

On employment strategies for women, Section 30 of the Policy requires presence of equal employment opportunities between men and women depending on required qualifications at all level. In addition, there should be records of exact number of women and men at levels in order to assist monitoring and follow-ups, less bureaucratic special system in the provision of business licences especially to women working in the informal sector.

The Client must adopt such an approach during all stages of the implementation of this project that is in line with the aims of this Policy.

3.5.18 The National Research and Development Policy, 2010

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

3.5.19 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 specific objectives of the Policy are to have:

- System, structures and flexible procedures to enable Tanzanians develop themselves in various ways in academic and professional streams;
- Education and training with quality standards recognized nationally, regionally and internationally;
- Availability of various educational opportunities and training in the country;

- Increase of human resources according to priorities of the Nation;
- Effective management and operation of education and training in the country;
- Sustainable education funding system and training in the country; and
- Education and training system based on issues cross

3.5.20 National Biotechnology Policy, 2020

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

3.6 Legal Framework

3.6.1 Environmental Management Act, 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.

3.6.2 The Education Act, Cap. 353

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

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

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

3.6.3 Water Resource Management Act, Cap.331;

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

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

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

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

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

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

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

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

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

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

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

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

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

3.6.7 The Electricity Act, Cap.131;

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

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

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

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

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

If construction commences it will be the 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.

3.6.9 Occupational Health and Safety Act, Cap.297

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

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

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

3.6.10 The Public Health Act, Cap.242;

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

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

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

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

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

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

The act mandates that employers:

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

The project will employ skilled and unskilled labour

3.6.13 The Fire and Rescue Force Act, Cap 427

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

3.6.14 Water Supply and Sanitation Act, Cap.272

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

3.6.15 Disaster Management Act No. 7 of 2015

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

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

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

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

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

3.6.17 The Land Use Planning Act, Cap. 116;

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

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

3.6.18 The Contractors Registration Act, Cap.235;

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

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

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

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

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

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

The project involving the construction of a girls' secondary school in the Singida region aligns with the National Child Act, Cap. 13 R.E of 2019. It promotes the rights and welfare of children by providing quality education, addressing gender disparities, and ensuring the

safety and well-being of girls. By implementing this project, Tanzania takes a significant step towards realizing the objectives set forth in the National Child Act.

3.6.20 Engineers Registration Act, Cap 63;

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

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

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

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

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

3.6.22 Workers' Compensation Act, Cap.263

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

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

3.6.23 The Persons with Disabilities Act, Cap 183

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

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

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

3.6.24 The Standards Act, Cap 130

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

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

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

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

- TZS 860: 2005 Municipal and Industrial Wastewaters – General Tolerance Limits for Municipal and Industrial Wastewaters: This standard provides permissible limits of

important environmental parameters such as BOD, COD, pH, colour, temperature range, total suspended solids and turbidity. It also gives permissible limits of a range of inorganic and organic components. All effluents discharged from the project will need to comply with these specifications.

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

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

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

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

3.6.25 The Occupier Liability Act, Cap 64

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

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

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

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

3.7 National Regulations

3.7.1 The Environmental Impact Assessment and Audit Regulations 2005 as amended 2018

The EMA outlines principles for management, impact and risk assessments, prevention and control of pollution, waste management, environmental quality standards, public participation, compliance, and enforcement. It assigns environmental management responsibilities to sector ministries and their departments and agencies, including regional and local authorities.

A National Environmental Advisory Committee advises all sectoral ministries, while the Minister of Environment has the power to approve or disapprove projects on environmental grounds. The key administrative responsibilities for environmental management in Tanzania rest with the Minister of Environment under the Vice President's Office.
However, environmental performance—that is, setting environmental standards and quality levels—also depends directly on the devolved responsibilities to key sector ministries in charge such as mining, transportation, agriculture, water, energy, natural resources, and tourism.

The National Environmental Management Council (NEMC), under the Vice President's Office, is the command-and-control agency in charge of environmental compliance, while the President's Office Regional Administration and Local Government (PO-RALG) is responsible for coordinating the implementation of all governing policies, acts, and regulations regarding environmental conservation at the local government authorities (LGAs) and monitoring the performance of LGAs. Sector ministries are responsible for ensuring that all activities are carried out in an environmentally sustainable manner

3.7.2 Other Environmental Regulations

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

Environmental Management (Air Quality Standards) Regulation, 2007:

Gives 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 the evaluation of impact significance

Environmental Management (Soil Quality Standards) Regulation, 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.

Environmental Management (Water Quality Standards) Regulation, 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.

Environmental Management (Control of Ozone Depleting Substances) Regulation, 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 favour 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.

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.

The Environmental Management (Hazardous Waste Control and Management) Regulation, 2021;

These regulations are specifically designed to control and manage hazardous waste to protect human health and the environment, The regulations require adherence to proper

handling, storage, transportation, treatment, and disposal methods for hazardous materials such as chemicals, paints, solvents, and other potentially harmful substances.

The regulations promotes the responsible management of hazardous waste, including the use of eco-friendly alternatives, proper labeling and storage, and appropriate training for staff involved in handling these materials.

Contractor should comply with the regulations to ensure the implementation of appropriate measures to prevent pollution, minimize risks to human health, and safeguard the local ecosystem which will contributes to a safe and sustainable educational environment.

Environmental Management (Solid Waste Management) Regulation, 2009 as amended in 2016.

These regulations aim to establish guidelines for the effective management and disposal of solid waste to protect public health and the environment.

The regulations emphasize the adoption of sustainable waste management practices, including waste reduction, recycling, and proper disposal methods. The project should incorporate waste management infrastructure such as waste bins, recycling facilities, and composting areas within the school premises.

It also necessitates raising awareness among students, staff, and the community about the importance of responsible waste disposal and the benefits of recycling.

The contractor and PIT must comply with the regulations so as to promote a clean and healthy environment, reduces environmental pollution, and encourages a culture of waste reduction and recycling.

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.

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

These regulations are put in place to address the proper handling, disposal, and management of electrical and electronic waste (e-waste) to protect the environment and public health.

The regulations require adherence to environmentally responsible practices, including the proper disposal and recycling of electrical and electronic equipment. This ensures that any obsolete or damaged equipment, such as computers, printers, and other electronic devices, is managed in an environmentally friendly manner, minimizing the negative impact on the ecosystem.

Contractor should comply with regulations to ensure that the project promotes sustainable practices, reduces e-waste pollution, and contributes to the overall environmental well-being.

3.7.3 The Fire and Rescue Force (Fire Precautions in Buildings) Regulations, 2015

These regulations are designed to ensure the safety of occupants in buildings by establishing fire safety measures and standards. In the context of the school project, adherence to these regulations becomes imperative to create a secure learning environment.

The construction process must incorporate fire safety features such as fire-resistant materials, adequate emergency exits, fire alarm systems, and fire extinguishers in strategic locations throughout the school building, also the regulations emphasize the need for proper fire escape routes, clear signage, and training on evacuation procedures for students and staff.

Contractor should comply with the requirements and be equipped with the necessary fire safety measures, reducing the risk of fire-related incidents and safeguarding the well-being of all occupants.

3.7.4 The Fire and Rescue Force (Safety Inspection and Certificates) Regulations, 2008 As Amended In 2017

These regulations establish the legal framework for ensuring fire safety standards in buildings, including educational institutions, According to the regulations, a safety inspection must be conducted during the construction phase to assess compliance with fire safety standards.

This inspection verifies that the building materials, electrical systems, fire protection measures, and emergency exits meet the required safety codes. The project management team and contractors must ensure that all construction activities adhere to these regulations to minimize the risk of fire incidents.

Upon completion of the construction, the school will need to obtain a fire safety certificate, which is issued after a final inspection by the Fire and Rescue Force. This certificate serves as confirmation that the school's premises comply with the necessary fire safety standards and have adequate fire prevention and protection measures in place. It signifies that the building is safe for occupancy and that appropriate fire safety protocols have been implemented.

The regulations also require periodic inspections and renewal of the fire safety certificate to ensure ongoing compliance with fire safety standards. The school administration will be responsible for regularly reviewing and updating their fire safety measures to maintain a safe environment for students, staff, and visitors.

Contractor and PIT should comply with these regulations ensures that the construction and operation of the school prioritize fire safety and provide a secure environment for all occupants.

3.7.5 The Land (Compensation Claims) Regulations 2001

The Land Regulations 2001 were promulgated in terms of the Land Act, Act No. 4 of 1999 sections 12 & 179. The form of compensation is stipulated in Section 10 (1) of the Land Regulations 2001. Furthermore, the Regulations list the entities that are eligible for compensation and/or resettlement. If the person does not agree with the amount or method

of payment or is dissatisfied with the time taken to pay compensation, he /she may apply to the High Court.

The High Court shall determine the amount and method of payment and determine any additional costs for inconveniences incurred

3.8 World Bank Environmental and Social Framework

3.8.1 World Bank Environmental and Social Standards

The World Bank's Environmental and Social Framework sets out the Bank's commitment to sustainable development, through a Bank Policy and a set of Environmental and Social standards that are designed to support Borrowers' projects, with the aim of ending extreme poverty and promoting shared prosperity.

The E&S Framework comprises of: (1) Vision for Sustainable Development, which sets out the Bank's aspirations regarding environmental and social sustainability; (2) The World Bank Environmental and Social Policy for Investment Project Financing, which sets out the mandatory requirements that apply to the Bank; and (3) The Environmental and Social Standards, together with their Annexes, which set out the mandatory requirements that apply to the Borrower and projects.

The World Bank Environmental and Social Policy for Investment Project Financing sets out the requirements that the Bank must follow regarding projects it supports through Investment Project Financing. The Environmental and Social Standards set out the requirements for Borrowers relating to the identification and assessment of environmental and social risks and impacts and mitigation measures associated with projects supported by the Bank through Investment Project Financing.

The E&S standards are expected to: (a) support Borrowers in achieving good international practice relating to environmental and social sustainability, (b) assist Borrowers in fulfilling their national and international environmental and social obligations; (c) enhance non-discrimination, transparency, participation, accountability and governance; and (d) enhance the sustainable development outcomes of projects through ongoing stakeholder engagement.

The ten ESSs as per the WB ESF are: ESS 1: Assessment and Management of Environmental and Social Risks and Impacts; ESS 2: Labor and Working Conditions; ESS 3: Resource Efficiency and Pollution Prevention and Management; ESS 4: Community Health and Safety; ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement; ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources; ESS 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities; ESS 8: Cultural Heritage; ESS 9: Financial Intermediaries; and ESS 10: Stakeholder Engagement and Information Disclosure. Given the nature of activities of this project, with the exception of ESS 9: Financial Intermediaries almost all the ESSs will be relevant.

3.8.2 Project Classification According to the World Bank ESF

According to the WB ESF, The Bank will classify all projects (including projects involving Financial Intermediaries (FIs)) into one of four classifications: **High Risk, Substantial Risk, Moderate Risk or Low Risk.**

In determining the appropriate risk classification, the Bank takes into account relevant issues, such as the type, location, sensitivity, and scale of the project; the nature and magnitude of the potential environmental and social risks and impacts; and the capacity and commitment of the Borrower (including any other entity responsible for the implementation of the project) to manage the environmental and social risks and impacts in a manner consistent with the ESSs.

Other areas of risk may also be relevant to the delivery of environmental and social mitigation measures and outcomes, depending on the specific project and the context in which it is being developed. These could include legal and institutional considerations; the nature of the mitigation and technology being proposed; governance structures and legislation; and considerations relating to stability, conflict or security.

The Bank will disclose the project's classification and the basis for that classification on the Bank's website and in project documents. The Bank will review the risk classification assigned to the project on a regular basis, including during implementation, and will change the classification where necessary, to ensure that it continues to be appropriate. Any change to the classification will be disclosed on the Bank's website.

3.8.3 Other World Bank Instruments

Table 3-1 summarizes the Environmental and Social Standards (ESSs) that project entities responsible for the project implementation will apply during entire project cycle.

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

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: Labour 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

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

S/N	The Environmental and Social Standards (ESS)	Purpose/Objectives	Reason for its Application in the Project
	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, 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. These guidance are public documents that be accessed in the World Bank website12. Among the applicable guidance notes for SEQUIP are:

3.9.1 International Agreements, Conventions and Treaties

Tanzania has ratified or acceded to a large number of international treaties and conventions. Among those the following are relevant to the project.

UNFCCC/Kyoto Protocol

The Kyoto Protocol is an international treaty, which extends the 1992 United Nations Framework Convention on Climate Change (UNFCCC) that commits parties to reduce greenhouse gases emissions, based on the premise that

(a) Global warming exists; and

(b) Man-made CO_2 emissions have caused it.

Tanzania has implemented the UNFCCC since 1996 and has been undertaking climate change studies (implemented by the Division of Environment under the Vice President's Office) since 1992. Tanzania recognized the need for greater awareness of climate change and stated that a comprehensive awareness programme was planned.

The main challenge facing the country is a need to balance accelerated economic growth with a more efficient management of the environment and use of natural resources to ensure sustainability and address the climate change issue. In 2007 the Tanzania Vice President's Office, Division of Environment, produced the National Adaptation Programme of Action (NAPA).

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.

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.

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 on the basis of 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.

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".

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 Article (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".

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 on the basis of merit".

3.10 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. The **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, eradicate extremely poverty to all people everywhere, currently measured as people living on less than $ 1.25 a day Target 1.4 By 2030, ensure that all women and men, in a particular the poor and the vulnerable have equal rights to economic resources, as well as access to basic services, ownership and control over land and other form of property, inheritance natural resources, appropriate new technology and financial services include microfinance
Goal 3: Ensure health lives and promote for all at all stage	Target 3.5. Strengthen the prevention and treatment of substance abuse, including narcotic drug abuse and harmful use of alcohol.
Goal 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunity for all	Target 4.1 By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and Goal-4 effective learning outcomes

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

3.11 Institutional Framework

Authorities, institutions and sectors directly or indirectly related to the project development have been identified geographically by political boundaries as well as through regulations, institutional mandates and structures. These entities are adequately consulted in the ESIA process as prescribed through the institutional framework for environmental management.

The relevant institution for handling EIA requirements is the NEMC with input from the District Environment Management Committees; Ward Committees and Street Committees. According to the EMA of 2004 the institutional set-up for environmental management from a national level to village level includes:

- Minister Responsible for Environment;
- Director of Environment (DOE);
- National Environmental Management Council (NEMC);
- Sector Ministries;
- Regional Secretariats;
- Local Government Authorities, District, and Town Councils;
- Township, Village, Ward; Neighborhood (Kitongoji); and Street (Mtaa).

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

3.11.1 Minister Responsible for Environment

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

The Minister may issue general guidelines to the Sector Ministries, Government Departments, the Council, National Environment Advisory Committee, City, Municipal or District Environmental Management Committee, agency or any other public or private institution necessary for the purposes of implementation of or giving effect to the provisions of EMA.

The Minister may designate and shall, where appropriate, direct any of the before mentioned institutions and within specified time, to perform any function or do any activity or desist from performing any function or doing any activity as a result of which the environment or part of it is or may be seriously endangered or detrimentally affected.

3.11.2 Director of Environment (DOE)

The DOE heads the Office of the Division (Directorate) of Environment under the Office of the Vice President and is responsible for coordination, monitoring and assessment of various environmental activities.

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

3.11.3 National Environment Management Council (NEMC)

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

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

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

3.11.4 Sector Ministries

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

- Responsibility for ensuring compliance by the sector Ministry with the requirements of this Act;

- Responsibility for ensuring all environmental matters contained in other written law falling under sector ministry are implemented and report of their implementation is submitted to the Director of Environment; and

- Liaising with the Director of Environment and the Council on matters involving environment and all matters with respect to which cooperation or shared responsibility is desirable or required under this Act.

3.11.5 Regional Secretariats

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

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

3.11.6 Local Government Authorities

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

- Ensuring enforcement of EMA;
- Advising the Environment Management Committee on all matters relating to environment;
- Promoting environmental awareness relating to protection of the environment and the conservation of natural resources;
- Gathering and managing information on the environment and the utilization of natural resources;
- Preparing periodic reports on the state of the environment;

- The preparation, review and approval of environmental impact assessments for local investment by-laws on environmental management and on sector specific activities related to environment; and reporting to the Director of Environment and the Director General on the implementation of the EMA.

- The Environment Management Committee is responsible for functions set out under the Local Government Act. In addition, they perform functions as

prescribed by the EMA and they may be assigned by the Minister to carry out directives related to the promotion and enhancement of sustainable management of the environment.

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

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

3.11.7 Ward/Mtaa/Kitongoji Level

The District Council designates an Environment Management Officer for each administrative area of a township, ward, village, kitongoji (neighbourhood/hamlet) and mtaa (street).

The Environmental Management Officers are responsible for coordinating all functions and activities related to the protection of environment within their designated areas.

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

The project area is located at Solya Village, Solya Ward, Manyoni District in Singida Region. Singida Region is one of Tanzania's 31 administrative regions. To the north, it shares borders with Simiyu Region; Arusha, Manyara and on the east borders Dodoma. To the south it shares borders with Iringa and Mbeya while on the west there is Tabora Region.

Manyoni District is one of the six districts in the Singida Region of Tanzania. The district capital is the town of Manyoni. The district is bordered to the north by the Ikungi District, to the east by the Dodoma Region, to the south by the Iringa Region, to the southwest by the Mbeya Region and to the west by the Tabora Region.

Solya ward is among the five wards of Kilimatinde division, Manyoni District in Singida region central part of Tanzania along the Singida-Dodoma high way.

The proposed site for school construction is located at Solya Village, Solya Ward in Manyoni District Singida region which fall under the following coordinates -5^{0}49’13.1”S, 34^{0}58’23.3”E

The proposed project area can be easily accessed from Dodoma by using the Dodoma-Singida Highway, which is about 108.9 kilometers from Dodoma City. It can also be accessed from Singida by using the Singida-Dodoma Highway, which is about 136.9 kilometers.

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 Solya village was once used for agricultural activities by the community which has size of 70 acres. Current activities which takes place in the project construction where by classroom building has already constructed they are in finishing process.

Figure 4-1: Current activities in the project Site

4.3.2 Displacement and Relocation

No people relocation is envisaged for this location,

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

The location is surrounded by small bushes in three side of the project area but in one side there is Dodoma-Singida Highway.

4.4 Socio-Economic Baseline

4.4.1 Background

A development envelope (Area of Interest - AOI) is situated at Solya Village, Solya Ward, Manyoni District, and Singida Region. Details of the study area for the Social Impact Assessment (SIA) is in Table 4-1

Table 4-1: Study Areas for the SIA

Study Area	Explanation	Area of concern
Site-specific study area	Area likely to experience impacts associated with project infrastructure and activities	The project footprint, excluding the access roads, etc. (to be defined at the conclusion of the scoping phase)
Local study area	Areas likely to experience impacts related to population influx, etc.	The neighboring settlements in Solya ward

Study Area	Explanation	Area of concern
Regional study area	Area likely to experience economic impacts of the project	Manyoni (since most of the development envelope falls within this district). This is set against the backdrop of Singida Region and Tanzania as a whole

4.4.2 Administrative Set up

The project site fall under Solya village headed by Village Executive Officer (VEO) and village chairperson, in, Solya ward headed by ward executive officer (WEO) and ward council, in Manyoni Districts headed by District commissioner (DC) and District Executive director (DED) in Singida region under Region Administrative Secretary (RAS)

4.4.3 Land Area and Land Use Pattern

Manyoni District Council is one of Six Councils in Singida Region. It is located in the Southern East part of the Region. It covers an area of 14,118 km 2 which is equivalent to about 28.6% of the region area of 49,341km 2 .54% (7,650km 2) of the Council is occupied by Game Reserves (Rungwa, Muhesi and Kizigo), the area suitable for Agricultural activities is about 847 km 2, 1,835 km 2 is the area suitable for grazing, 3,645 km 2 is the area covered with forest and 141.18 km 2 is the area suitable for residence.

4.4.4 Climate and Physical Features (Soil, Topography and natural vegetation)

Climate

4.4.4.1.1 Rainfall

The District Council forms part of the semi-arid central zone of Tanzania which experiences low rainfall and short rainy seasons which are often erratic with fairly widespread drought in one year out of four. Total rainfall ranges from 500mm to 700mm per annum with a high geographical, seasonal and annual variation.

There are two rather well-defined seasons, the short rainy season during the months of December to March or sometimes going to April and the long dry season from April to November.

4.4.4.1.1.1 Temperature

The temperature in Manyoni District Council varies according to altitude but generally range from about 20o C in July to 30o C during the month of October. Moreover, temperature differences are observed between day and night and may be very high with hot afternoons going up to 32^{o}C and chilly nights going down to 15^{o}C. Manyoni District Council Profile 2020

4.4.4.1.1.2 Relative humidity.

The annual mean, maximum and minimum monthly mean daily relative humidity are 80.6%, 86.0% (February) and 73.4% (July) respectively.

4.4.4.1.2 Physical Features, Soil, Topography and natural Vegetation

The area including large area of Nkonko Division is a high terrain and valleys with stream of water flowing towards east in the swamp area of Bahi. Loam soil brownish red in color is in high terrain and clay soil that is in grayish to black color is in valley areas. Natural vegetation is Miombo woodland.

The Northeast area that includes almost entire division of Kintinku, wards of Sanza, Sasajila, Majiri and some areas of wards of Manyoni and Makuru is plain terrain or with small valleys with water which is flowing to the wetland area of Bahi. Soil changes from loam with brownish color in the high terrain areas and black clay soil toward wetland area of Bahi. Natural vegetation in this area is a mixture of shrub and grasses together with natural vegetation that grows in the wetland.

4.4.5 Population Characteristics

Ethnic Groups

The main indigenous ethnic groups in the Manyoni District Council are the Gogo, Sukuma, Nyaturu, Barbaig, Nyiramba, Sangu and Kimbu.

4.4.6 Population Density

Table 4-2: Population Density in Manyoni District Council according to 2022 Census

Council/Ward		Population			Sex Ratio	Number of Households	Average Household Size
		Both Sexes	Male	Female			
Manyoni District Council		**279,069**	**136,358**	**142,711**	**96**	**61,059**	**4.6**
1.	Manyoni	42,191	20,392	21,799	94	11,470	3.7
2.	Mkwese	8,374	4,271	4,103	104	1,549	5.4
3.	Muhalala	4,780	2,394	2,386	100	985	4.9
4.	Makuru	24,008	12,098	11,910	102	4,817	5.0
5.	Saranda	8,175	4,079	4,096	100	1,721	4.8
6.	Majiri	17,599	8,734	8,865	99	3,851	4.6
7.	Sasajila	11,189	5,416	5,773	94	2,349	4.8
8.	Solya	8,084	4,012	4,072	99	2,089	3.9
9.	Makutupora	9,416	4,627	4,789	97	2,036	4.6
10.	Makanda	13,729	6,618	7,111	93	2,976	4.6
11.	Kintinku	12,946	6,307	6,639	95	3,125	4.1
12.	Maweni	11,424	5,532	5,892	94	2,578	4.4
13.	Chikuyu	8,474	4,136	4,338	95	2,059	4.1
14.	Sanza	12,970	6,419	6,551	98	3,190	4.1
15.	Isseke	21,815	10,647	11,168	95	4,579	4.8
16.	Nkoniko	17,459	8,393	9,066	93	3,715	4.7
17.	Sasilo	15,845	7,756	8,089	96	2,505	6.3
18.	Heka	11,129	5,271	5,858	90	2,171	5.1
19.	Chikola	19,462	9,256	10,206	91	3,294	5.9

Source: NBS, 2022

4.4.7 Productive Sectors

Agriculture

Agriculture is the back born of the Council economy and about 80 percent of its residents depend on it as their main source of livelihood. According to UN classifications, agriculture comprises of crop production, livestock, forestry and hunting sub sectors. Others are fishing, beekeeping and tourism.

Fishery

Fishing activities in Manyoni District Council is very marginal and it is mainly carried for domestic consumption due to lack of water bodies like rivers, lakes and dams associated with unreliable rainfall in the Council. Since the activity is very marginal the contribution of fishing in the Council economy is significantly very low.

The Council has got only four minor dams for fishing namely Mwanzi, Kilimatinde, Chibumagwa and Sumugai/Bahi. In the Financial year 2015/2016 the Council has managed to collect high amount of Tshs. 2,200,000.00 from fishing industry and the financial year 2017/2018 the Council collect the minimum amount of Tshs. 2,346,000.00

Beekeeping

Beekeeping in Manyoni District Council is mainly carried out traditionally. The data in the table below indicates that the highest quantity of honey 146,000 litres valued was harvested in 2015 while the lowest, 92,874 litres was observed in 2017. Production of beeswax was at the peak in 2016 by harvesting 13,742 kgs while the lowest production was observed in 2017 in which 8,375 kgs of beeswax was harvested.

Tourism

Manyoni District Council has many tourist attractions though most of them are not well known. However, it lacks the well-developed infrastructure to bring the Council within the current tourist circuits.

The Council is far from the coastal belt and northern tourist circuits. Nevertheless, the ongoing construction Manyoni-Tabora to Kigoma tarmacked road, the completed construction of Dar es Salaam to Mwanza road as well as the development of the central line corridor would be an added advantage in the development of the tourism sector in this Council. About 54% of the Council area is occupied by Forest and Game Reserves namely Rungwa Game Reserves, Muhesi Game Reserve and Kizigo Game Reserve.

4.4.8 Health Sector

The status of public health services in any Council can be easily be visualized through the health infrastructure, availability and commitments of health practitioners, implementation of preventive and curative measures and availability of medicine. This part of social services covers sector development in terms of health facilities available in the Council, morbidity, mortality, and reportable communicable diseases.

Health Facilities

There are 2 Hospitals, 1 owned by the Government (Manyoni District Hospital) and Kilimatinde Hospital owned by Religious organization (Anglican Church). There are 2 Health Centres all owned by the Government. Also, there are 33 Dispensaries, among them 29 owned by Government, 4 owned by Religious organizations and Private. On the Other hand

there is one Health Centre of Makuru Ward and 5 Dispensaries (Magasai, Maweni, Chisingisa, Sasajila and Ntope) are under constructions.

Table 4-3**: Number of Health Facilities; Manyoni District Council 2015-2019**

Year	Hospitals			Health Centres			Dispensaries		
	Public	Private	Total	Public	Private	Total	Public	Private	Total
2015	1	1	2	2	0	2	29	4	33
2016	1	1	2	2	0	2	29	4	33
2017	1	1	2	2	0	2	29	4	33
2018	1	1	2	2	0	2	29	4	33
2019	1	1	2	2	0	2	29	4	33

Source: Manyoni District Council Socio- Economic Profile, 2019

4.4.9 Education Sector

Primary Education

The Council has 69 Primary Schools of which 68 Schools are Government Owned and 1 Private School. Among other factors, lack of private sector participation has slowed the development of primary education in the Council.

Table 4-4: Number of Primary Schools in Manyoni District Council; 2015-2019

Year	2015	2016	2017	2018	2019
Public	68	68	68	68	68
Private	1	1	1	1	1
Total	**69**	**69**	**69**	**69**	**69**

Source: Manyoni District Council Socio- Economic Profile, 2019

Secondary Education

Manyoni District Council had 30 Secondary Schools in 2015, the number declined to 19 Secondary Schools in 2016 to 2019 due establishment of Itigi Council. Among 19 Secodary Schools available in 2019, 16 are public, 2 owned by Religious Organisation and 1 owned by Jumuiya ya Wazazi CCM. Out of 19 Secondary Schools only one Secondary School (Mwanzi) has Advanced Students.

Table 4-5: Number of Secondary Schools; 2015-2019

No.	Ownership	2015	2016	2017	2018	2019
1.	**Government**	27	16	16	16	16
2.	**Private**	3	3	3	3	3
Total		**30**	**19**	**19**	**19**	**19**

Source: Manyoni District Council Socio- Economic Profile, 2019

4.4.10 Urban Water Supply

The urban population of Manyoni District Council is supplied by bore holes systems at large extent followed by hand dug wells and rain water harvest tanks.

Table 4-6: Number and Type of Urban Water Sources; Manyoni District

Charco/ Dam	Spring	Hand dug Well	Rain Water	Bore Holes
1	-	4	1	8

Source: Manyoni District Council Socio- Economic Profile, 2019

4.4.11 Sanitation

Manyoni District Council does not have a wastewater disposal system. Very few households have septic tanks and the most common way of disposing human waste is through traditional pit latrines.

4.5 Indigenous People

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

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

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

4.5.1 Methodology

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

Key Informant Interviews

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

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

Document Reviews

A review of relevant documents, including project documents such as ESMF, the Singida region Social Economic Profile, the Singida district Social Economic Profile, Stakeholder Engagement Plan (SEP) as well as VGPF development for SEQUIP.

Observations and site visits

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

4.5.2 Confirming the absence of Indigenous People in the project area

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

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

4.6 Air Quality within the Project Area

4.6.1 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 respectively.

4.6.2 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 4-7 shows the emission generating activities

Table 4-7: Emission Generating Activities

Activity	Emission
Site Clearance	Dust ($PM_{2.5}$, PM_{10}), CO_2 , NO_2
Vehicle movement	Dust ($PM_{2.5}$, PM_{10}), CO_2 , NO_2
Construction activities	Dust ($PM_{2.5}$, PM_{10}),

Waste (liquid and solid)	CH_4, CO_2,

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

Table 4-8 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 Area	0.00	0.003	0	0.00	0	0.023	0.036
Section A -5^{0}49'13.1"S, 34^{0}58'23.3"E	0.00	0.027	0	0.00	0	0.028	0.039
Section B -5^{0}49'13.1"S, 34^{0}58'33.3"E	0.00	0.019	0	0.00	0	0.031	0.046
Section C -5^{0}49'13.1"S, 34^{0}59'13.3"E	0.00	0.023	0	0.00	0	0.000	0.011
Section D -5^{0}49'13.1"S, 34^{0}57'20.3"E	0.00	0.024	0	0.00	0	0.005	0.003
Tanzania Standard [TZS 845:2005]	**20**	**0.1**	**0.0**	**10**	**0.05**	**0.05-0.08**	**0.05-0.116**

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

4.8 Noise and Vibration

The noise and vibration survey were 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 4023SD;
- 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

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

Table 4-9: Noise and Vibration data

Location	Noise Level [dBA]	Vibration [mm/s]
Project Area	34.1	1.6
Section A	39.3	1.0
Section B	44	0.5
Section C	43.1	0.6
Section D	43.8	0.3
Tanzanian Standards	**45**	**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 **Error! Reference source not found.**.

5 STAKEHOLDERS IDENTIFICATION AND INVOLVEMENT

5.1 Introduction

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

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

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

Stakeholders are identified as "those people and institutions that have an interest in the successful design, implementation and sustainability of the project and will either be negatively, positively or not at all impacted by the proposed development". Section 89 of the Environmental Management Act (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.

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**Error! Reference source not found.** 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 Objectives of the Consultation and Public Participation

I. Enhance transparency about the project
II. Promoting Inclusive Decision Making
III. Improving Project Design and Implementation
IV. Enhancing Sustainable Development

5.4 Methodology used in the consultation and public participation

Table 5-2: Methods of stakeholder Engagement

Methods of Stakeholder Engagement	
Correspondence by phone/email/Text/Instant messaging	Distribute project information to government officials, organizations, agencies and companies Invite stakeholders to meetings
One-on-one interviews	Solicit views and opinions Enable stakeholders to speak freely and confidentially about controversial and sensitive issues Build personal relations with stakeholders Recording of interviews
Focus group meetings	Allow a smaller group of between 8 and 15 people to provide their views and opinions of targeted baseline information Build relationships with Neighbouring communities Use a focus group interview guideline to facilitate discussions Record responses
Surveys	Gather opinions and views from individual stakeholders Gather baseline data Record data Develop a baseline database for monitoring impacts

5.5 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 particular 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

5.6 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 Region Academic Officer, (RAO), Regional Community Development Officer (RCDO).
- District Executive Director (Ag. DED) in Manyoni District and District Environmental Officer (DEMO), District Community Development Officer (RCDO).and Civil Engineer II, Community Development Officer, procurement Officer and Sociologist
- Initial meeting with village government, Ward officials including WEO of Solya ward, VEO of Solya village, Village and hamlet chairperson.
- Meeting with workers in 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.

5.6.1 Institutional Stakeholders

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

- Ministry of Home Affairs (Tanzania Fire and Rescue Force- Manyoni Office)
- Ministry of Labour and Employment (Occupational Safety and Health Authority, OSHA- Singida Office)
- Regional Government Regional Commissioner Region Academic Officer, (RAO), Regional Community Development Officer (RCDO).
- Local Government Authority District Executive Director (DED), District Environmental officer (DEMO), and WEO /VEO Ward/ Village).

5.6.2 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.

5.7 Main Concerns and Comments of Stakeholders

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

Table 5-3: Stakeholder Consultation Views

Consulted Institution	Personnel/Position	Concern/Issues	EIA Recommendations
Manyoni District Council	Eng. Gabriel Mayaya District Engineer	He is aware about the project, Is for construction of girls secondary school for the purpose of improving secondary Education EIA help to protect the health of neighboring community and workers nearly the project The project will provide employment opportunities to the local people Will improve trading activities around the project site	The project will consider local community in issuinging of employment opportunities
	Adeline Mwanisi – District Education Officer	She is aware about the project. They have been following all the procedures for project implementation, and so far everything is going as planned.	The project shall follow all procedures during all implementation phases by involving relevant stakeholders
Salum Mwendapole **OHI**	OSHA-DODOMA	• 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	The proponent will ensure the project comply with OSHA Act, 2003

		of 2003	
Solya Ward Executive Office	Asha Mmanywa **WEO**	She is aware about the project, through village meeting Loss of biodiversity and its habitat Lead to small business opportunity Improvement of social services	The proponent will make sure biodiversity is well conserved in all phases
Solya Village Executive Officer	Christina Nziku **VEO**	She is aware about the project, through village meeting Loss of biodiversity and animal habitat Employment Opportunities Improvement of social services	The proponent will ensure biodiversity is well conserved

Figure 5-1: Stakeholder Engagement

5.8 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.
Stakeholder Engagement Plan shall be prepared and implemented through all phases of the project

6 ASSESSMENT OF IMPACT 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.

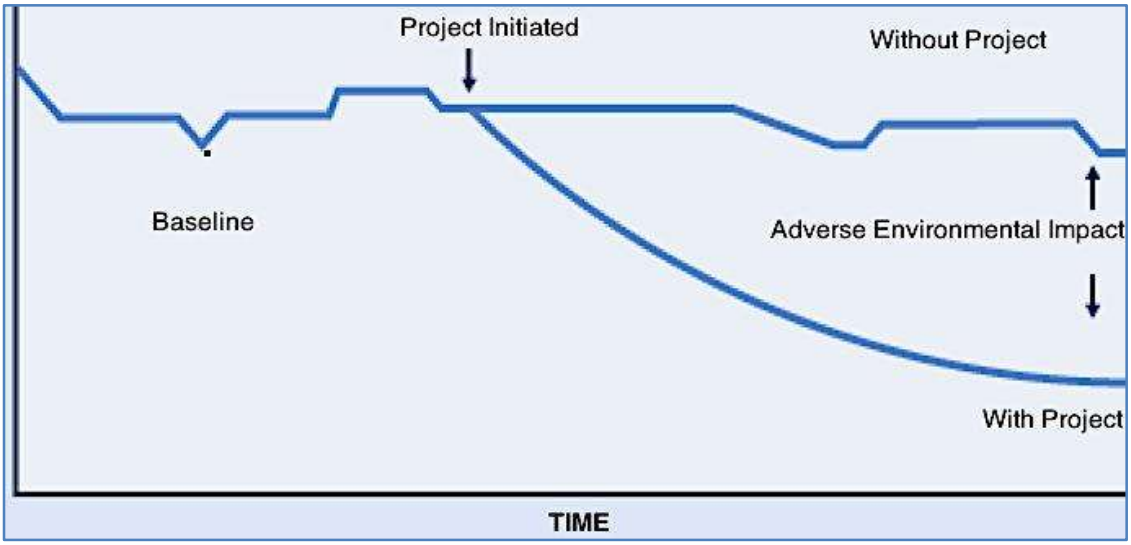

Figure 6-1: An Environmental Impact

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 measures 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

Magnitude of impact	Mitigation Measure
	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 respect 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! Reference 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 the Manyoni 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 is **major negative** impact High magnitude with a site-specific extent and long-term duration with significant risk.

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 long-term duration with low risk.

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

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6.4.1.8 Employment Opportunity

During the mobilization phase of the project in the Manyoni 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 Manyoni 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 long-term duration.

6.4.2 Construction phase

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 long-term duration with low risk.

Hearing impairment due to increased noise levels from construction vehicles and machinery

During the construction phase of a regional girl's secondary school school construction project in the Manyoni, 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

Public Health

During the construction phase of a regional girl's school in the Manyoni 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.

Injuries and fatal accidents due to occupational health and safety issues

During the construction phase of the project in the Manyoni 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.

Degradation of natural beauty, 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

Road accidents from moving trucks

During the construction phase of a girl's school in Manyoni 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

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 the Manyoni 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

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

Disturbance of surrounding community due to increased noise levels

During the operation phase of the project in the Manyoni 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.

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 the Manyoni 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.

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 Manyoni 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.

General health and safety impacts

During the operation phase of a girl's school construction project in the Manyoni 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.

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

Early Pregnancy

During school operations can happen when students lack proper education about sexual health and contraception. Peer pressure and relationships can lead to decisions without understanding the consequences. Limited access to reproductive health services and stigma around pregnancy can also contribute. Socioeconomic challenges and absent parental communication can leave students vulnerable. Media influence, substance abuse, and cultural norms may play a role. To prevent early pregnancies, schools should offer comprehensive sex education, provide access to reproductive health services, encourage open conversations, and create a supportive environment for students.

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

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.

Employment Opportunities

During the operation phase of a girl's school project in the Manyoni 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 Manyoni 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.

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

Impacts associated with demographic change

During the operation phase of a girl's school construction project in the Manyoni 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;

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 the Manyoni 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

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.

Unemployment

During the demolition phase of a girl's school construction project in the Manyoni 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

Injuries and fatal accidents

During the demolition phase of a girl's school construction project in the Manyoni 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**mpac**t**, 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	Mobilisation		• 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 6.17 show the risk assessment criteria.

Table 6-8: Risk Assessment for school construction at Singida Region

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

N	Impact &Aspect Description	Nature	Magnitude	Extension	Duration	Significance of Impact	Probability of Occurrence	Risk
	Mobilization/Construction phase							
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
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	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
5	Benefit to the government through taxes from the	Indirect	High	NIA	Long-	Major	Very low	Negligibl

N	Impact &Aspect Description	Nature	Magnitude	Extension	Duration	Significance of Impact	Probability of Occurrence	Risk
	Mobilization/Construction phase							
	employed staff (economically and man power)				term			e Risk
	Decommissioning 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

7 IDENTIFICATION OF ALTERNATIVES

7.1 Introduction

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

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

7.1.1 Project Site Alternative

The selection criteria for the location depends on the availability/ease access and ownership of the proposed land parcel for Pwani 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
i) Energy and:
j) Water

Location 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.

Design and technological consideration

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 designed prepared so far are prototypes to be utilized in specific site in this case the Secondary schools the utilization of prototype will involve the fit in exercise to include all experts in the respective district.

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 the clients safeguard team in the same line for projects which were not developed the consulting has 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.).

Alternative Water Source

As a water source for the proposed school construction, the original plan was to obtain water from the Pwani Water Supply and Sanitation Authority. However, considering an alternative, the availability of water for the school will now be determined by rainwater harvesting, which has been identified as a viable water source for the construction project. The responsible authority will ensure the construction of rainwater harvesting infrastructure within the school compound.

Alternative Energy

As an energy source for the proposed school construction, the initial plan was to rely on TANESCO (Tanzania Electric Supply Company) and a standby generator. However, after considering alternatives, it has been determined that the school will utilize solar energy as its primary energy source during operation. The adoption of solar energy will result in reduced environmental impact, conservation of resources, and cost savings. The responsible authority will oversee the installation of solar energy infrastructure to ensure its successful implementation for the school's energy needs.

On the other hand, during the operation phase, it is recommended to utilize alternative sources of energy for cooking instead of relying on firewood and charcoal. It is advised to employ natural gas as an energy source for cooking purposes. The adoption of natural gas will significantly diminish smoke emissions within the school compound.

8 ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES

8.1 Introduction

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

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

8.2 Pre-Construction phase

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

- Combustion of solid waste on the territories of site and camps is prohibited;
- A speed limit for trucks should be observed
- Bush clearance through burning should be avoided.

8.2.2 Loss of Biodiversity both Fauna and Flora

- Remove, without destroying, large Plants and ground cover where possible
- Replant recovered Plants and other flora from local ecosystem after construction
- The project proponent shall consult the experts for advice and for potential flora and stocks for re generation of disturbed vegetation in plant areas

8.2.3 Climate change due to vehicle movement, bush clearance

- **Transition to Low-Emission Vehicles**: Promote the adoption of low-emission vehicles, such as electric vehicles (EVs) or hybrid vehicles, which have lower or zero tailpipe emissions. Encourage incentives for purchasing EVs and develop charging infrastructure.
- **Improve Fuel Efficiency**: Encourage regular vehicle maintenance, proper tire inflation, and efficient driving practices to improve fuel efficiency and reduce emissions. Promote the use of cleaner fuels, such as biodiesel or renewable natural gas, where available.
- **Public Transportation and Carpooling**: Encourage the use of public transportation systems and carpooling to reduce the number of vehicles on the road. Develop and improve public transportation infrastructure to make it more accessible and convenient.

- **Restoration and Conservation:** Support initiatives for the restoration and conservation of natural habitats and ecosystems, as intact ecosystems contribute to carbon sequestration and climate regulation.

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8.3 Construction phase

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

- Combustion of solid waste on the territories of site and camps is prohibited;
- A speed limit for trucks should be observed
- Haul roads should be routinely maintained in good condition
- The project proponent shall plant indigenous trees and grasses over a period of time on area. This will prevent fine dust entering ambient area.
- The project proponent shall observe the standards for air quality throughout the operations and comply accordingly.
- Person Protective Equipment should be well observed

8.3.2 Hearing impairment due to increased noise levels from construction vehicles and machinery

- Machinery and equipment undergo regular inspection/maintenance; fitted with silencers and mufflers, use of noise insulation.
- Personal Protective Equipment: provide and enforce use by all personnel working in noisy zones;
- The contractor should adhere to relevant noise regulations and guidelines set by the authorities.
- Limiting the duration and intensity of noisy activities during sensitive hours.
- The contractor should also consider scheduling noisy activities during periods when they would cause the least disruption to nearby residents and businesses.

7.2.4 Public Health

i. Implementing dust control measures such as water spraying or covering loose materials to minimize dust emissions.
ii. Using low-emission equipment and vehicles can help reduce air pollution
iii. Scheduling and managing construction activities to minimize disruptions and noise levels during sensitive hours, particularly in close proximity to residential areas
iv. Furthermore, the contractor should prioritize regular monitoring and assessment of air quality and noise levels to ensure compliance with relevant standards and guidelines.

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

i. The contractor should implement proper safety protocols, including providing personal protective equipment (PPE) to workers and ensuring its proper use.

ii. Regular inspections of the construction site should be conducted to identify and address any safety concerns promptly.
iii. Effective communication and engagement with workers and contractors are crucial to fostering a culture of safety.
iv. Furthermore, the contractor should have clear emergency response procedures in place to handle any accidents or incidents that may occur during the construction phase.

8.3.4 Waste generation

i. Prepare site waste management plan prior to commencement of construction works
ii. Designate appropriate waste storage areas,
iii. Develop collection and removal schedule, and
iv. Institute system for supervision and monitoring.
v. Unusable construction waste will be disposed of at an approved dumpsite.

8.3.5 Road accidents from moving trucks

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

8.3.6 Employment Opportunities

- Employ locals for most of unspecialized labour
- Procure local for most consumables available within the district
- Manage local expectations by not overpromising
- Registering of discontent/complaints from the local community, if any, and proper response.

8.4 Operation Phase

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

i. The school can adopt renewable energy sources, such as solar panels and gas to meet the energy needs of the school such as lighting and cooking.
ii. The school should prioritize energy-efficient designs and equipment within the school. This can involve the use of energy-efficient lighting systems, insulation materials, and energy-saving appliances.

iii. The school can promote sustainable transportation options such as organizing carpooling initiatives for their staffs.
iv. Develop a comprehensive cleaning program that includes regular dusting, vacuuming, and cleaning of surfaces to minimize dust, allergens, and contaminants. Use environmentally friendly and non-toxic cleaning products.
v. Regular monitoring of air quality and implementation of appropriate air pollution control measures should also be undertaken.

8.4.2 Noise emissions

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

8.4.3 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. Construction of an incinerator for the management of the sanitary pads.

8.4.4 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 and analysis of water from the wetland should also be undertaken.

8.4.5 General health and safety

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

8.4.6 Employment Opportunities

i. **Support Staff Expansion**: Increase the number of support staff positions within the school, such as administrative staff, maintenance personnel, custodians, cafeteria workers, and IT technicians. This expansion can create more job opportunities and improve the overall functioning of the school.
ii. **Professional Development Programs**: Offer professional development programs and training opportunities for existing staff to enhance their skills and qualifications. This can include workshops, certifications, and specialized training in areas like technology integration, special education, counseling, and classroom management. By investing in professional growth, employees can gain additional expertise and increase their employability within the school.
iii. **Expanded Extracurricular Activities:** Develop a diverse range of extracurricular activities and programs within the school, such as sports teams, arts clubs, debate societies, and music groups. These activities often require additional staff, including coaches, trainers, instructors, and mentors, thereby creating more employment opportunities.
iv. **Community Engagement Initiatives**: Establish partnerships with community organizations, local businesses, and nonprofits to create collaborative programs and projects that involve students and require additional staff. These initiatives can include community service programs, internships, apprenticeships, and career development activities, thereby expanding employment opportunities.
v. **School-Based Enterprises**: Explore the establishment of school-based enterprises, such as school stores, cafeterias, or small-scale production units, where students can gain hands-on experience and create employment opportunities for support staff. These enterprises can be managed in collaboration with local businesses or as social enterprises to provide valuable learning experiences while generating employment

8.5 Decommissioning

8.5.1 Unemployment

- Preparing the workers to be employed anywhere else in the different sectors through provision of extensive training.
- Preparing the workers for forced retirement by providing skills for self-employment, wise investment.
- Ensuring that all employees are members of the National Social Security Fund and the employees should ensure that the Proponent contributions are made.

8.5.2 Abandoned infrastructure

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

8.5.3 Injuries and fatal accidents

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

9 ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

9.1 Introduction

The Environmental and Social Impact Assessment for the proposed project operation in has identified a number of impacts that are likely to arise during the site preparation and operation stage of the proposed project. The EIA has examined bio-physical, socio-economic and cultural effects of the proposed activity from mobilization, construction and operations/maintenance.

On evaluation of environmental impact, it is observed that the real benefits of 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 outlined in this report.

Where adverse impacts have been identified, the Environmental and Social Impact Assessment has examined the intensity, extent, duration and probability to which these impacts would be mitigated through the adoption of industry standard practice and guidelines and following local legislative requirements.

The Environmental and Social Management Plan (ESMP) presented in this report describes both generic good practice measures and site specific measures, the implementation of which is aimed at mitigating potential impacts associated with the proposed project activities.

The EMP provides the means of assessing the accuracy of the predicted project impacts and the monitoring of the effectiveness of the proposed mitigation measures contained in the EIA study report.

The ESMP should therefore indicate how the environmental concerns highlighted in the EIA would be managed. Proposed Project implementation team will monitor the implementation of key contractor parties and assess compliance with the provisions of the ESMP through its contractual mechanisms and management.

9.2 Objectives of the ESMP

The objectives of the ESMP are to:

- Adhere to and address necessary legal frameworks and other requirements;
- Promote environmental management and communicate the aims and goals of the project ESMP to all stakeholders;
- Incorporate environmental management into project design and operating procedures;
- Ensure all workers, contractors, sub-contractors and others involved in the project meet all legal and institutional requirements with regard to environmental management;
- Address issues and concerns raised in the project stakeholders' consultation process;
- Serve as an action plan for environmental management;
- Provide a framework for implementing commitments of the project (i.e. mitigation measures identified in the EIA);
- Prepare and maintain records of project environmental performance (i.e. monitoring, audits and compliance tracking); and
- Prepare an environmental monitoring plan whose aim is to ensure that the negative environmental impacts identified of this EIA are effectively mitigated by way of design, construction, operational and decommissioning stages of the project

The EMPs for port rehabilitation project consists of the following:

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

9.3 Management Policies

Project proponent shall develop and document management policies that guide operations of the Project. The policies are vital in that:

- They enable management to develop and maintain sound relations with stakeholders;

- They enable management to put in place measures and structures that care for the safety, health and welfare of all Proposed Project users;
- They ensure that management plan for, and put in place, monitoring programmes that ensure Project activities confirm to stipulated environmental standards; and
- They ensure that management assumes its corporate responsibility for its activities regarding conservation of the environment as well as for the wellbeing of the neighboring community.

The following policies are going to be in place:

- Environmental Management Policy;
- Occupational Health and Safety Policy; and
- Community Relations Policy.

9.4 Environmental Management Policy

The environmental policy developed should be one that enables the Project management and staffs to carry 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 covered in Chapter Four;
- That there are continuous environmental improvement and performance through monitoring of Project activities;
- Ensure that utilization of natural resources is optimal with measures in place to ensure resource availability for future generation;
- Awareness creation to the surrounding community regarding sustainable utilization of natural resources, protection of sensitive ecosystems and bio-diversity maintenance for communal livelihood; and
- Balancing between natural resource use, environmental conservation and economic development.

9.5 Occupational Health and Safety Policy

The Occupational Safety and Health Policy developed 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 to the 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, isolation rooms, machine guarding, acoustic insulating, etc.;
- Minimizing the hazard through design of safe work-systems and administrative or institutional control measures. Examples include job rotation, training safe work procedures, lock-out and tag-out, workplace monitoring, limiting exposure or work duration, etc.
- Providing appropriate personal protective equipment (PPE) in conjunction with training, use, and maintenance of the PPE.

9.6 Community Relations Policy

The Local Community Policy are developed by management 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 stakeholders, and vice versa;
- Community capacity building; and
- Active engagement of the local community in all project activities that impact on the local community.

9.7 Organizational Structure and Responsibilities

The overall organizational structure for environmental management on the project identifies and defines the responsibilities and authority of the various organizations and individuals involved in the project. The project structure and associated personnel shall be sufficient to ensure the required standard of environmental performance.

For the purposes of this document there shall be no distinction between developer and contracted companies and they shall be referred to collectively as the project management team

With regard to environmental management during the mobilization, construction, operation and decommissioning phase of the project, the principal responsibilities of each party within this structure will be detailed in the ESIA

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).

9.8 Coordination and Review of the EMP

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

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

The Environmental Manager shall ensure that any modifications are communicated, explained to and discussed with all affected parties (i.e. the authorities, subcontractors, Managers and any directly affected party who requests this information). All changes to the ESMP shall be submitted to NEMC for approval.

9.9 Reporting

In addition to all reporting requirements identified in the ESMP, records shall be kept by the Environmental Management office of all monitoring results, monitoring reports, incident records, audit reports and management reviews. Minutes of all environmental project meetings shall be submitted by the Contractors.

9.10 Stakeholders

The presence and involvement of several other stakeholders develop as the project begins and during implementation of the ESMP. Mindful that most project activities will take place at or around the project site, it will be the responsibility of Proponent to coordinate involvement of relevant government authorities and service providers to maintain the project schedules.

The roles and responsibilities of some of these key stakeholders are included in the ESMP, However the detailed and described responsibilities will be illustrated in the Environmental Impact Assessment Report.

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Table 9-1: Environmental and Socioeconomic Management Plan

Phase	Potential Impacts	Management/Mitigation Measures	Target Level/Standard	Responsibility	Estimated Costs [TZS]
Pre-Construction	*Atmospheric air pollution* due to emissions of exhaust and fugitive gases	• Combustion of solid waste on the territories of site and camps is prohibited; • A speed limit for trucks should be observed • Bush clearance through burning should be avoided	CO-4.5g/kWh NOx-1.1 g/kWh HC-8.0 g/kWh PM-0.612 g/kWh Smoke 0.15g/m	Manyoni District Council	1,000,000
	Loss of biodiversity (both Flora and Fauna)	• Remove, without destroying, large Plants and ground cover where possible • Replant recovered Plants and other flora from local ecosystem after construction • The project proponent shall consult the experts for advice and for potential flora and stocks for re generation of disturbed vegetation in plant areas	As minimum disturbance as possible	Manyoni District Council	
	Climate change due to vehicle movement, bush clearance	• **Transition to Low-Emission Vehicles**: Promote the adoption of low-emission vehicles, such as electric vehicles (EVs) or hybrid vehicles, which have lower or zero tailpipe emissions. Encourage incentives for purchasing EVs and develop charging infrastructure. • **Improve Fuel Efficiency**: Encourage regular vehicle maintenance, proper tire inflation, and efficient driving practices to improve fuel efficiency and reduce emissions. Promote the use of cleaner fuels, such as biodiesel or renewable natural gas, where	As minimum emission of greenhouse gases into the atmosphere	Manyoni District Council	Parts of Project cost

Phase	Potential Impacts	Management/Mitigation Measures	Target Level/Standard	Responsibility	Estimated Costs [TZS]
		available. • **Restoration and Conservation:** Support initiatives for the restoration and conservation of natural habitats and ecosystems, as intact ecosystems contribute to carbon sequestration and climate regulation			
Construction Phase	*Atmospheric Air Pollution* due to emissions of exhaust and fugitive gases	• Combustion of solid waste on the territories of site and camps is prohibited; • A speed limit for trucks should be observed • Haul roads should be routinely maintained in good condition • The project proponent shall plant indigenous trees and grasses over a period of time on area. This will prevent fine dust entering ambient area. • The project proponent shall observe the standards for air quality throughout the operations and comply accordingly. • Person Protective Equipment should be well observed •	CO-4.5g/kWh NOx-1.1 g/kWh HC-8.0 g/kWh PM-0.612 g/kWh Smoke 0.15g/m	Manyoni District Council	20,000,000
	Hearing impairment due to increased noise levels from	• Machinery and equipment undergo regular inspection/maintenance; fitted with silencers and mufflers, use of noise insulation.	As minimum emission as possible	Manyoni District Council	1,000,000

Phase	Potential Impacts	Management/Mitigation Measures	Target Level/Standard	Responsibility	Estimated Costs [TZS]
	construction vehicles and machinery	• Personal Protective Equipment: provide and enforce use by all personnel working in noisy zones; • The contractor should adhere to relevant noise regulations and guidelines set by the authorities. • Limiting the duration and intensity of noisy activities during sensitive hours. • The contractor should also consider scheduling noisy activities during periods when they would cause the least disruption to nearby residents and businesses. •			
	Injuries and fatal accidents due to occupational health and safety issues	• Noise will be limited to restricted times agreed to in the permit • Machinery and equipment undergo regular inspection/maintenance; fitted with silencers and mufflers, use of noise insulation. • Personal Protective Equipment: provide and enforce use by all personnel working in noisy zones; • Provide education to crew about noise-sensitive aquatic life; • Limit noise generating activities	As minimum emission as possible	Manyoni District Council	1,000,000 (for PPEs)
	Waste generation	• Prepare site waste management plan prior to commencement of construction works • Designate appropriate waste storage	Environmental Management (Solid Waste Management) Regulations,	Manyoni District Council	Part of Project cost

Phase	Potential Impacts	Management/Mitigation Measures	Target Level/Standard	Responsibility	Estimated Costs [TZS]
		areas, • Develop collection and removal schedule, • Unusable construction waste will be disposed of at an approved dumpsite	2009 as amended in 2016		
	Employment Opportunity	• Employ locals for most of unspecialized labour • Procure local for most consumables available within the District • Manage local expectations by not overpromising • Registering of discontent/complaints from the local community, if any, and proper response	Local procurement and Local employment	Manyoni District Council	Part of project cost
Operation Phase	Disruption of air quality and effect on human health due to emissions of exhaust and fugitive gases	• The school can adopt renewable energy sources, such as solar panels and gas to meet the energy needs of the school such as lighting and cooking. • The school should prioritize energy-efficient designs and equipment within the school. This can involve the use of energy-efficient lighting systems, insulation materials, and energy-saving appliances. • The school can promote sustainable transportation options such as organizing carpooling initiatives for their staffs. • Develop a comprehensive cleaning program that includes regular dusting, vacuuming, and cleaning of surfaces to minimize dust, allergens, and contaminants. Use environmentally friendly and non-toxic cleaning products.	TZS 845:2005 Air Quality – Specification; TZS 983:2007 Air Quality - Vehicular Exhaust Emissions Limits	Manyoni District Council	5,000,000

Phase	Potential Impacts	Management/Mitigation Measures	Target Level/Standard	Responsibility	Estimated Costs [TZS]
		• Regular monitoring of air quality and implementation of appropriate air pollution control measures should also be undertaken.			
	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	**45dBA** during a day and **35dBA** during night	Manyoni District Council	5,000,000
	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	Environmental Management (Hazardous Waste Control and Management) Regulations, 2021.	School Administration	15,000,000

Phase	Potential Impacts	Management/Mitigation Measures	Target Level/Standard	Responsibility	Estimated Costs [TZS]
		secure, properly labeled, and equipped with appropriate safety measures. • The school should also establish partnerships with authorized entities to ensure the waste is handled and disposed of in compliance with environmental regulations. • Designate bins specifically for the disposal of sanitary pads. These bins should be placed in female restrooms and other private areas, and they should have lids to maintain hygiene and provide privacy. • Construction of an incinerator for the management of the sanitary pads.			
	Employment Opportunity	• Employ locals for most of unspecialized labour • Procure local for most consumables available within the District • Manage local expectations by not overpromising • Registering of discontent/complaints from the local community, if any,	Local procurement and Local employment	Manyoni District Council	20,000,000
	Early Pregnancy	• Parental involvement • Peer education • Comprehensive sex education • Counselling services	No early pregnancy	Manyoni District Council	2,000,000
	Fire Outbreak	• Clear Exit paths • Emergency contacts • First aid training • Fire Fighting training	Zero incidents	Manyoni District Council	20,000,000

Phase	Potential Impacts	Management/Mitigation Measures	Target Level/Standard	Responsibility	Estimated Costs [TZS]
		• Regular inspection			
	General Health and Safety hazards	• 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	Zero incidents and accidents	Manyoni District Council	1,000,000

Phase	Potential Impacts	Management/Mitigation Measures	Target Level/Standard	Responsibility	Estimated Costs [TZS]
		address and prevent bullying incidents. •			
Decommissioning	Injuries and fatal accident	• 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. •	Zero accident	Manyoni District Council	1,000,000
	Unemployment	• Preparing the workers to be employed anywhere else in the different sectors through provision of extensive training. • Preparing the workers for forced retirement by providing skills for self-employment, wise investment. • Ensuring that all employees are members of the National Social Security Fund and the employees should ensure that the Proponent contributions are made.	All employees	Manyoni District Council	N/A

10 ENVIRONMENTAL AND SOCIAL MONITORING PLAN

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

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

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

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

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

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

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

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

10.1 Parameters are Monitored

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

Table 10-1**: Environmental and Social Monitoring Plan**

Phase	Potential Impacts	Parameters to be Monitored	Target Level/Standard	Monitoring Area	Monitoring Frequency	Responsibility	Estimated Cost
Pre-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 Area	Monthly	Manyoni District Council	5,000,000
	Loss of biodiversity (both Flora and Fauna)	Biodiversity	As minimum disturbance as possible	Project area	Before commissioning and once every three months	Manyoni District Council	N/A
	Climate change due to vehicle movement, bush clearance	Greenhouse gases (CO2,CH4,NO2,O3 and HCFCs)	As minimum emission of greenhouse gases into the atmosphere	Established Monitoring area	Monthly	Manyoni District Council	2,000,000
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	Manyoni District Council	5,000,000
	Hearing impairment due to increased noise levels from construction	Noise and vibration level	As minimum emission as possible	Established Monitoring Point	Once Every three months	Manyoni District Council	10,000,000

Phase	Potential Impacts	Parameters to be Monitored	Target Level/Standard	Monitoring Area	Monitoring Frequency	Responsibility	Estimated Cost
	vehicles and machinery						
	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	Manyoni District Council	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	Manyoni District Council	700,000
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	Manyoni District Council	5,000,000
	Noise emissions	dBA	Noise and Vibration Levels Regulations (United Republic of Tanzania, 2011) 45 dBA (Leq) Day and 35 dBA (Leq)	Established Monitoring Area	Once every six months	Manyoni District Council and School Administration	4,000,000

Phase	Potential Impacts	Parameters to be Monitored	Target Level/Standard	Monitoring Area	Monitoring Frequency	Responsibility	Estimated Cost
			Night and baseline of 50dBA (Leq)				
	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	1,000,000
	Employment Opportunity	Employees	Local procurement and Local employment	Number of Employees	Quarterly	Manyoni District Council	N/A
	General Health and Safety hazards	Accident and incident register	Zero incidents and accidents	School compound	Once every six months	Manyoni District Council	2,000,000
Decommissioning phase	Injuries and fatal accident	Accident and incident register	Zero accident	Project area	Monthly	Manyoni District Council	2,000,000
	Unemployment	NSSF remittance	All employees	School Compound	Once every year	Manyoni District Council	N/A

10.2 Environmental Health and Safety Auditing

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

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

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

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

10.3 Awareness and education

The project proponent with collaboration with contractor or local workers shall encourage environmental awareness among his 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 wastes, 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

11 RESOURCE EVALUATION/COST BENEFIT ANALYSIS

11.1 Introduction

Chapter 7 and 8 of this EIS report have documented the cost/impacts of the project to Singida 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 decide on: whether it makes economic sense to continue with the project; whether the chosen option is a cost-effective alternative; and the estimate of the size of a project. For this project, the costs will include: capital expenditures; operating and maintenance costs; staff costs; materials; research and development; and environment, health and other social costs.

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

11.2 Environmental Cost And Benefit Analysis

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

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

11.3 Effect on the Local Community

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

11.4 Infrastructure Development

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

11.5 Advantages for 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

12 DECOMMISSIONING PLAN

12.1 Introduction

The life span of the project is expected to be more than 30 years. This is a preliminary decommissioning plan. It establishes feasible decommissioning schemes that can be accomplished without undue risk to the health and safety of the public, decommissioning personnel, without adverse effects on the environment, and within established guidelines and limits of the appropriate regulatory agencies. This preliminary decommissioning plan will serve the purpose of ensuring that the decommissioning and ultimate disposition of a project is considered during the initial design project.

The preliminary plan will remain a "living document," and revisions will be made throughout the operational life of the plant. It must be reviewed periodically and revised to reflect any changes in facility construction or operation that might affect decommissioning. Prior to the initiation of actual decommissioning activities for the plant, a detailed final plan will be prepared.

12.2 Objectives of the Plan

The preliminary plan serves to establish decommissioning as an important consideration from the inception of the project, during design and throughout the operation of the facility. The plan has the following purposes:

- The primary purpose of the preliminary plan is to ensure that the project designers are aware of decommissioning during the initial design of a project facilities. Thus, where design choices that would enhance decommissioning are available for types of materials and system components, and location of components, these choices should be made.
- Another purpose of the preliminary plan is to identity the ultimate decommissioning options and final facility status. These options would be evaluated and narrowed to the decommissioning method of choice as the end of facility life is approached.
- The final purpose of the preliminary plan is to demonstrate to regulatory agencies that important aspects of decommissioning are considered as early as possible during the initial design of a facility. The plan serves as the starting point to demonstrate that areas such as decommissioning methods, costs, schedules, and operating impact on decommissioning will be reviewed and refined throughout the operating life of a facility.

The plan will provide a general description of decommissioning methods considered feasible for the facility. The description should demonstrate that the methods considered are practical and that they protect the health and safety of the public and decommissioning personnel.

Design personnel should study the proposed decommissioning methods and take steps to ensure that the design incorporates features that will facilitate decommissioning.

Considerations include:

- An estimate of manpower, materials, and costs anticipated to support decommissioning.

- A discussion demonstrating that adequate financing will be programmed for decommissioning.
- Identification of records that should be maintained during construction and operation

12.3 Preliminary Plan

12.3.1 Project Removal Methodology and Schedule

Developer shall fund and implement all aspects of project decommissioning, including but not limited to, all engineering, environmental assessment, permitting, construction, and mitigation activities associated with the removal of the abandoned infrastructure, in accordance with this Plan and mitigation of Project removal impacts on site. Also shall monitor environmental impacts during and after Project removal to respond to defined events during the monitoring phase.

The proponent shall remove the abandoned infrastructures safely and in a manner that:

- Minimizes environmental impacts;
- Restores the site to a condition suitable for multiple use; and
- Pays all dues (workers, government, suppliers etc.).

Project removal will begin six months after closure of the construction phase and continue for 2 years. Within the six months from closure, developer will inventories all components that need to be removed and or disposed of. This inventory will include building structures/tents to be demolished, debtors and creditors to be settled. In addition, mode of disposal will have to be finalized. This information will assist in the preparation of the final decommissioning plan, for approval by NEMC.

Project and associated facilities

- All concrete structures will be demolished and the area rehabilitated in order to restore the value of the land to that which existed prior to commencement of the project;
- All scrap metals will be disposed through recycling through steel manufacturing mills that are licensed to use such materials. Currently, the site disposes scrap metal through auctioning to licensed metal dealers.

12.3.2 Project decommissioning has five phases:

- Pre-removal monitoring;
- Permitting;
- Interim protective measures;
- Project removal and associated protective actions; and
- Post-removal activities, including monitoring of environment and socio economic activities

The description that follows outlines the activities that will occur in each phase:

- Pre-removal monitoring: Pre-removal monitoring includes environmental and socio economic status of the site and the surrounding. This monitoring is essential to identify if there is any environmental or social liability which need to be settled before the permit for closure is given. This period will also be used to inventories all assets and facilities that

need to be disposed of and to prepare a final decommissioning plan for approval by NEMC.

- Permitting: Developer shall obtain all permits required to undertake removal of the Project. This will include NEMC, Ministry of Education, PO-RALG, Local Government Authorities, etc.
- Interim Protective Actions: This will take care of any interim protective measure that needs to be implemented to protect human health and environment, if any.
- Project Removal: As noted above, the removal of the project will be completed within six months.
- Post-Removal Activities: Post-Project removal monitoring will continue for two years.

Summary of closure plans for project infrastructures are indicated in Table 12.1 below. As describe, about 8,000,000/= Tanzania shillings (Tshs) will be used for decommissioning purposes. The proposed costs are only indicative and the developer should work out on actual costs and include them in the overall cost of the project.

Table 12-1**: Summary of Proposed Closure Plan**

S/N	DECOMMISIONING ACTIVITY	IMPACT	MITIGATION MEASURE	RESPONSIBLE PERSON	ESTIMATED EXPENDITURE
01	◆ Levelling	◆ Derelict Land ◆ Air pollution	◆ Before any demolition and during the works, all practicable steps shall be taken to prevent danger to any person and property adherence to part XIII per Occupational Health and Safety Act No. 5 of 2003(building and construction industry) rules, 2015 ➢ Land scaping ➢ Planting trees ➢ Return the land to a stable, non-polluting and self-sustaining state, compatible with the site and surrounds; ➢ Protect visual amenity;	➢ PROPONENT	5,000,000/=
02	Temporary Building demolition	➢ Solid wastes ➢ Noise pollution	➢ Operate during day time ➢ Contractor for waste handler.	➢ PROPONENT	3,000,000/=
TOTAL ESTIMATED DECOMMISSIONING COSTS					**8,000,000/=**

13 CONCLUSION AND RECOMMENDATIONS

13.1 Conclusion

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

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

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

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

- The integration of environmental considerations into the decision-making process has been a resounding success. By prioritizing this approach, we have proactively taken steps to anticipate, prevent, mitigate, or counteract significant adverse impacts on both the biophysical and social aspects associated with our proposed project. This concerted effort has not only demonstrated our commitment to responsible development but has also underscored our dedication to the preservation of natural systems and the vital functions they sustain. Through such conscious decision-making, we affirm our pledge to uphold the delicate balance between progress and the intrinsic resilience of our ecological processes
- The pursuit of promoting sustainable development while optimizing resource utilization and management opportunities has yielded commendable results. By championing this ethos, we have demonstrated our dedication to fostering progress that is both environmentally conscious and socially responsible. The effective utilization of resources and strategic management practices have not only enhanced the efficiency of our endeavors but have also contributed to the overarching goal of long-term sustainability. This approach reinforces our commitment to a future where development and resource preservation coexist harmoniously, showcasing our commitment to leaving a positive and lasting impact on our environment and society.

13.2 Recommendations

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

- Integrating environmental considerations into the decision-making process, we strongly recommend the continued prioritization of this approach in all future projects. By proactively anticipating, preventing, mitigating, or countering adverse impacts on biophysical and social aspects, we can ensure the sustainability and long-term viability of our endeavors. This practice not only showcases our commitment to responsible development but also reinforces our dedication to the protection of natural systems and the fundamental functions they uphold. We advocate for the perpetuation of this conscious decision-making paradigm as it reaffirms our

commitment to maintaining a harmonious equilibrium between progress and the intrinsic resilience of our ecological processes. Through the consistent application of such principles, we can set a positive example for responsible development that respects and safeguards our environment.

- Prioritizing sustainable development and resource optimization, we strongly recommend the consistent implementation of this approach in all future projects. By adhering to this principle, we can ensure a holistic and enduring development trajectory that balances economic growth, social well-being, and environmental stewardship. Embracing resource-efficient practices and management strategies will not only maximize the effectiveness of our projects but also bolster our reputation as responsible contributors to society. We urge the continued commitment to these principles as a means to drive positive change, foster innovation, and secure a resilient and prosperous future for generations to come

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APPENDIX I: Emergency Preparedness and Response Plan

1.0 Introduction

The purpose of this emergence Response and preparedness Plan is to adequately save lives and avoid injuries safeguard property and records and also establish procedures, responsibilities, resources and an organizational chain of response to emergency cases occurring within school compound. This plan will be handling man-made or natural events including fire, hazardous material, chemicals, medical injuries and earthquake, etc.

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

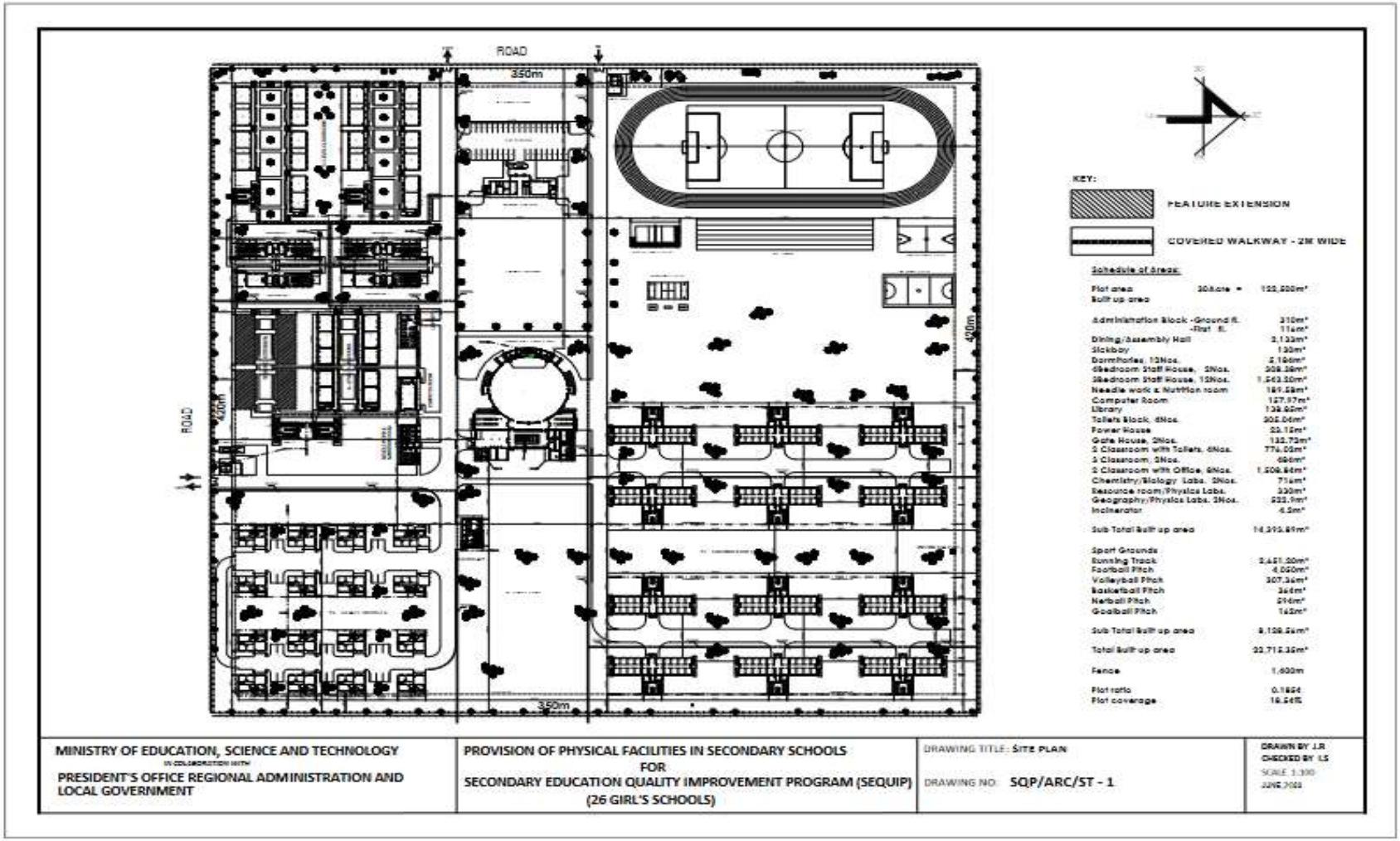
- Workers and Students will be trained depending upon the Training needs of each section
- Occupational Health, Safety and Environmental meeting will be held in month basis to ensure that issues from department are communicated and managed according
- Key personnel will be trained on evacuation procedures, 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.	Manyoni District Executive Director	
2.	Manyoni District Secondary Education Officer	
3.	Manyoni District Environmental Officer	
3	Fire and Rescue Office	
4	TANESCO	
5	Solya Ward Executive Officer	
7	District hospital	

APPENDIX II: Site Layout Plan



APPENDIX III: LIST OF THE STAKEHOLDERS CONSULTED

TANSHEQ

TANZANIA SENSA 23 Agosti 2022 Jiandae Kuhesabiwa

TAMISEMI

SEQUIP – ENVIRONMENTAL AND SOCIAL IMPACT ASESSMENT

Location. MANYONI - DED. Date 26/07/2022.

S/N	Name/ Jina	Title/ Cheo	Contacts/ Mawasiliano	Signature/ Sahihi
1	FADHILI CHIMSAHA	Ag. DED	0784419783	
01	Martin Masele	DEMO	0626 723 452	
02	Pilisa J. Mkyam	SLO	0682 885172	
03	Flora S. Hindi	DCDO	0769-375659	

Location. SINGIDA MANYONI - SOLYA Date 26/07/2022.

S/N	Name/ Jina	Title/ Cheo	Contacts/ Mawasiliano	Signature/ Sahihi
1.	Charles Paul Mpenzu	Afisa Mazingira na Ugani	0765-726004	
2.	Gabriel Gilike Mayaya	Mhandisi Ujenzi II	0762076605	
3.	ASHA M. MMANYWA	WEO	0748-288538	
4	HAMIPHER M. MPONDA	CDO	0715-766461	

Location SORYA - SINGIDA SEZ - LOCAL FUNDI Date 26/07/2022

S/N	Name/ Jina	Title/ Cheo	Contacts/ Mawasiliano	Signature/ Sahihi
1	MARIAM M. MBUA	MKI. MAFUNDI	0756-283981	
2	FALESTINE MUGANYIZI	KATIBU WA MAFUNDI	0763666919	
3	PATRICK CHARLES MANYAMPALA	FUNDI	0769928334	
4	LAMECK JOHN	FUNDI	0786542979	

Location USIHORA VILLAGE - MANYONI-SINGIDA Date 26/07/2022

S/N	Name/ Jina	Title/ Cheo	Contacts/ Mawasiliano	Signature/ Sahihi
1	CHRISTIDA D. DAIKU	UEO - SOLYA	0765351872	
02	JOACHIM KAMULEGESHA	M/KITONGOJI	0657018661	
3.	DAUDI L. SAMO	K/SHULE-SHRADA	0687795746	
4.	SIMON. N. MPEMBA	M/KITONGOJI SOLYA	0653410851	

TANSHEQ

TAMISEMI

SEQUIP – ENVIRONMENTAL AND SOCIAL IMPACT ASESSMENT

SN	Name/Jina	Tittle/Jina	Contacts/Mawasiliano	Date/Tarehe	Signature/Sahihi
1	SALUM MWANDAKU	OHJ (OSHA)	0693566451	28/04/23	

APPENDIX IV: Report on Construction Area Inspection

JAMHURI YA MUUNGANO WA TANZANIA
OFISI YA RAIS
TAWALA ZA MIKOA NA SERIKALI ZA MITAA
HALMASHAURI YA WILAYA YA MANYONI

DISTRICT COUNCIL
MANYONI

Unapojibu tafadhali taja:

01/11/2021

Kumb. Na.HW/C.5/11/14
Katibu Tawala Mkoa,
S.L.P 5
SINGIDA.

YAH: TAARIFA YA UKAGUZI ENEO LA UJENZI WA SHULE YA SEKONDARI MPYA YA WASICHANA KATA YA SOLYA HALMASHAURI YA WILAYA YA MANYONI KUPITIA MRADI WA SEQUIP.

1. Tafadhali husika na mada tajwa hapo juu.
2. Pamoja na barua hii naomba kuwasilisha taarifa ya ukaguzi wa eneo la ujenzi wa Shule ya Sekondari ya Wasichana iliyopo katika kata ya Solya kupitia mradi wa SEQUIP.
3. Taarifa kamili imeambatishwa.

Martin Masele Maganga
KNY: MKURUGENZI MTENDAJI (W)
HALMASHAURI YA WILAYA YA MANYONI

Kny. MKURUGENZI MTENDAJI WILAYA
HALMASHAURI YA WILAYA YA MANYONI

TAARIFA YA ENEO LA UJENZI WA SHULE MPYA YA SEKONDARI YA WASICHANA SOLYA

1.0 TAARIFA YA JUMLA

1.1	Jina la Halmashauri: **MANYONI DC**				
	Anuani:S.L.P 60				
	Mahali Shule inatarajiwa kujengwa:	Mkoa SINGIDA		Wilaya HALMASHAURI YA MANYONI	
				Kata	*SOLYA*
1.2	Eneo la Shule katika mita za mraba	*Eka 85*			
1.3	Umbali toka Halmashauri	*20KM*			
1.4	Uwepo wa Hati Miliki	*HAIPO, MKAKATI WA KUIPATA UNAENDELEA KUTOKA OFISI ZA ARDHI WILAYA YA MANYONI*			

2.0 TAARIFA YA UMEME

NA.	AINA YA HUDUMA	CHANZO*	UMBALI	MAELEZO
2.1	Grid yaTaifa wa 3 phase	√	500 M	UMEME ULISHA FIKA SHULENI

3.0 TAARIFA YA MAJI SAFI NA MAJI TAKA

NA.	AINA YA HUDUMA	CHANZO*	UMBALI	MAELEZO
3.1	**Maji Safi**	√		YAPO
3.2	Mamlaka ya Maji (RUWASA)	√		YAPO
3.3	Kisima kirefu (Borehole)√	X		HAKUNA
3.4	Kisima kifupi (Shallow Well)	X		HAKUNA
3.5	Vyanzo vingine	X	3KM	HAKUNA

4.0 TAARIFA YA UDONGO. MIMEA NA UWANDA

4.1	AINA YA UWANDA WA ENEO (TOPOGRAPHIC)	TAMBARARE	MIINUKO YA WASTANI	MILIMA	ENEO LA MAJI MAJI	BONDE
		√	√	×	×	√
4.2	AINA YA ARDHI	MCHANGA	MFINYANZI	BLACK COTTON SOIL		
		√	X	×		
4.3	Kwa kulingana na taarifa hizi, eneo linalo pendekezwa litakufaa kwa ujenzi wa jengo la ghorofa	NDIO	HAPANA			
		√	X			

5.0 TAARIFA YA HUDUMA ZILIZOPO JIRANI

NA.	AINA YA HUDUMA		UMBALI	MAELEZO
5.1	Barabara kuu	√	M 500	HUDUMA HII IPO JIRANI
5.2	Hospitali / Zahanati	√	KM 4	HUDUMA HII INAPATIKANA PIA
5.3	MkongowaTaifa	√	M 500	HUDUMA HAIJAUNGANISHWA KWENYE SHULE

6.0 TAARIFA YA HALI YA HEWA

6.1	HALI YA HEWA	JOTO/BARIDI	MVUA	MAELEZO
		BARIDI YA WASTANI	WASTANI	MVUA ZA WASTANI WA MILIMITA (MM) 350-500 KWA MWAKA

7.0 TAARIFA ZA UPATIKANAJI WA VIFAA VYA UJENZI (LOCAL MATERIALS)

7.1	VIFAA VYA UJENZI	MATOFALI YA KUCHOMWA	MBAO NGUMU	MBAO LAINI
		√	×	√

TANBIHI:

*Weka alama ✓ kuonesha kuwepo au alama ✗ kuonesha kutokuwepo kwa aina ya huduma husika

8.0 Ainisha changamoto ambazo watekelezaji wanahisi watakumbana nazo wakati wa utekelezaji wa mradi huu

a. upatikanaji wa vifaa vya ujenzi ✓
b. Upatikanaji wa maji ✓

9.0 Bainisha mikakati watayotumia kutatua hizo changamoto

a. kununua vifaa vingi ili visafirishwe kwa pamoja ✓
b. kuhamasisha jamii ishiriki kuchota maji ✗
c. Kuelimisha jamii kuhifadhi vyanzo vya maji vilivyopo. ✓

MAONI:

Uongozi katika ngazi zote utashiriki kufanikisha kazi/zoezi hili.

APPENDIX V: Non – Technical Executive Summary

NON-TECHNICAL EXECUTIVE SUMMARY
FOR
THE PROPOSED ESTABLISHMENT OF GIRLS SECONDARY SCHOOL AT SOLYA VILLAGE, SOLYA WARD, MANYONI DISTRICT IN SINGIDA REGION

PROPONENT	
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28-Mar-24

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 registration No. **NEMC/EIA/0034** 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 project area is located at Solya Village, Solya Ward, and Manyoni District in Singida Region. Proposed site can be easily accessed by using Dodoma- Singida highway. which is about 108.9 kilometers from Dodoma City. It can also be accessed from Singida by using the Singida-Dodoma Highway, which is about 136.9 kilometers.

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 80 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:

- The National Energy Policy,2015
- Education and training policy,2014
- The National Environmental Policy, 2021
- The Occupational Health And Safety Policy 2009
- The National Employment Policy, 2008
- The National Research And Development Policy, 2010
- The National Biotechnology Policy,2010

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

- The Education Act, Cap.353.
- The Law Of The Child Act, Cap. 13 R.E 2019
- The Engineers Registration Act, Cap 63
- The Architects And Quantity Surveyors Act, Cap 267

- The Workers Compensation Act, Cap 263
- The Persons With Disabilities Act, Cap 183
- The Occupier Liability Act, Cap 64
- The standard Act, Cap. 130
- The Environmental Management Act, Cap 191
- The Water Resources Management Act, Cap 331
- The Forest Act, Cap 323 R.E 2022
- The Electricity Act, Cap 131
- The Local Government (District Authorities) Act, Cap,287
- The Local Government (Urban Authorities) Act, Cap,288
- The Fire And Rescue Force (Safety Inspection And Certificates) Regulations, 2008 As Amended In 2017
- The Fire And Rescue Force (Fire Precautions In Buildings) Regulations, 2015
- 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),
- District Executive Director (DED) in Manyoni District and District Environmental Officer (DEMO), DSEO, As DE
- Ward officials including VEO at Solya village and WEO of Solya ward
- Meeting with villagers around in the proposed project area.

Stakeholders Opinions and Concerns

The stakeholder consultations identified both positive opinions and negative concerns. Stakeholders had positive opinions of the project in terms of:

- Education opportunities to the specific project area and surrounding communities
- Rising of Solya Ward's economy as a result of population increase

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

k) No-Go alternative,
l) Design and technological considerations
m) Location alternative
n) Energy alternative
o) Water alternative

Environmental and Social Management Plan

The Environmental Impact Assessment for the proposed construction of Regional Girls Secondary School, has identified a number of impacts that are likely to arise during construction and operation stage of the proposed project.

The EIA has examined bio-physical, socio-economic and cultural effects of the proposed activity from site clearance, school construction and the school operation.

The real benefits of the proposed project can result only if the risks of the identified adverse impacts are minimized. This can be accomplished through implementation of adequate preventive and mitigation measures by formulating policies to cover them accordingly.

Environmental Management Policy

This will ensure that Project management and staffs are carrying out their activities with the highest regard to the natural environment and sustainable utilization of environmental resources therein. The policy should therefore cover the following, among other issues:

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

Occupational Health and Safety Policy

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

- Medical examination of workers;
- Sanitation in the Project area;
- Proper liquid and solid waste management and disposal;
- Emergency preparedness;
- Fire safety;
- Necessity and availability of personal protective equipment
- Risk minimization of accidental damage to the community and environment

Community Relations Policy

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

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

With regard to environmental management during the pre-construction, construction, operation and decommissioning phase of the project, the principal responsibilities of each party as described below. For certain aspects of the programme, assistance will be needed from the Local Government Authorities and the NEMC (mainly in the form of guidance and advice and in project monitoring).

Environmental Monitoring Plan

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

Cost Benefit Analysis and Resources Evaluation

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

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

Social Cost Benefit Analysis

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

Furthermore, the upgrading, development and maintenance of local infrastructure are benefits that will extend far beyond the project's scope and lifetime.

Decommissioning

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

Conclusion

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

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

Overall, the project shall act as a catalyst for positive change in the surrounding communities by improving education, infrastructure and social well-being, and by involving and engaging the local residents, the project can have a lasting impact and contribute to the overall development of the region.

MUHTASARI

UTANGULIZI

Serikali ya Jamhuri ya Muungano wa Tanzania (JMT) kwa kushirikiana na Benki ya Dunia wameandaa Mradi wa Kuboresha Ubora wa Elimu ya Sekondari. Lengo la mradi huu ni kuongeza upatikanaji wa elimu ya sekondari, kutoa mazingira bora ya kujifunzia kwa wasichana na kuboresha uhitimu wa elimu ya sekondari kwa wasichana na wavulana. Kwa ufupi, Mradi huu umejumuishwa katika sehemu kuu nne:

Sehemu ya 1: Kuwawezesha Wasichana kupitia Elimu ya Sekondari na Ujuzi wa Maisha

1.1 Kuunda Shule Salama: Kutekeleza Programu ya Shule Salama ikiwa ni pamoja na:

i. Walimu wa ushauri;

ii. Mafunzo ya stadi za maisha kwa wanafunzi kupitia klabu za wasichana na wavulana zitakazoendeshwa 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 wa kufuatilia wasichana wanaoacha shule kwa kiwango cha kitaifa na wilaya ili kutoa taarifa muhimu kwa ajili ya kupanga na utekelezaji wa Programu ya Elimu Mbadala.

ii. Vituo vya Elimu Mbadala na Halmashauri za Wilaya kufanya shughuli za kuwafikia wasichana ambao hawako shuleni katika jamii, ambazo zitajumuisha shughuli kama vile mikutano ya jamii iliyoandaliwa na vituo vya Programu ya Elimu Mbadala, taarifa kupitia redio za ndani, vipeperushi na brosha.

iii. Kuongeza upatikanaji wa Programu za Elimu Mbadala kupitia (i) upanuzi wa mtandao wa vituo vya Programu ya Elimu Mbadala; na (ii) ruzuku ya ada ya masomo kwa wasichana walio katika mazingira hatarishi.

iv. Pia kuwepo kwa mfuko wa ubora wa kuimarisha ufunzaji kwa wanafunzi katika Programu za Elimu Mbadala

v. Mfumo wa Usimamizi wa Mazingira na Jamii - Tanzania - Mradi wa Kuboresha Ubora wa Elimu ya Sekondari

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

iv. Kuimarisha mazoezi ya ufundishaji darasani kwa walimu wa Kiingereza, Hisabati na Sayansi katika shule za sekondari.

v. Kuchunguza ujifunzaji wa wanafunzi katika elimu ya sekondari ya chini ili kutoa fursa za matumizi ya marekebisho: ili kutoa fursa ya kuingilia kati kwa lengo la kuzuia wasichana kuacha shule kutokana na ugumu wa kujifunza.

2.2 Ufundishaji kwa Kutumia Teknolojia ya Mawasiliano na Habari katika Hisabati, Sayansi na Kiingereza:

i. Kuandaa Mkakati na mpango wa Teknolojia ya Habari na Mawasiliano katika Elimu ya Sekondari.

ii. Kifurushi cha maudhui ya kidijitali na huduma za mawasiliano kufanikisha ufundishaji wa Kiingereza, Hisabati na Sayansi kwa awamu.

Sehemu ya 3: Kupunguza Vizuizi vya Elimu ya Wasichana kwa Kurahisisha Upatikanaji wa Shule za Sekondari Upanuzi wa mtandao wa shule za sekondari ili kupunguza umbali kwa kiasi kikubwa kwa shule za sekondari kwa njia ya kupanua mtandao wa shule za sekondari, hasa katika maeneo ya vijijini.

Mradi huu utatoa ufadhili wa mradi kulingana na idadi ya shule katika kila Halmashauri inayokidhi viwango vya miundombinu ya chini kusaidia kuboresha shule za sekondari zilizopo na mpango wa miundombinu ya chini (idadi ya madarasa/wanafunzi, miundombinu ya kutosha; maabara za sayansi za shughuli mbalimbali, umeme, nk.) kwa lengo la kuhakikisha kuwa angalau asilimia 50 ya shule zote zilizopo katika Halmashauri zote zinakidhi viwango vya chini vilivyowekwa.

Sehemu ya 4: Msaada wa Kiteknolojia, Tathmini ya Athari, na Ushirikiano wa Mradi Mfumo wa Usimamizi wa Mazingira na Jamii – Tanzania - Mradi wa Kuboresha Ubora wa Elimu ya Sekondari. Mradi huu utatekelezwa kwa pamoja na Wizara ya Elimu, Sayansi na Teknolojia na Ofisi ya Rais, Tawala za Mikoa na Serikali za Mitaa (TAMISEMI).

Tansheq Limited, kampuni ya inayojishughulisha na ushauri elekezi wa mazingira iliyosajiliwa na Baraza la Taifa la Uhifadhi na Usimamizi wa Mazingira, yenye Namba za Usajili **NEMC/EIA/0034** ofisi zake katika mkoa wa Dar es Salaam , S.L.P 31517, Dar es

Salaam, imeingia mkataba na TAMISEMI kwa ajili ya utekelezaji wa kufanya tathmini ya Athari ya Mazingira.

Eneo la Mradi na ufikiaji:

Eneo la mradi liko katika Kijiji cha Solya, Kata ya Solya, Wilaya ya Manyoni katika Mkoa wa Singida. Eneo lililopendekezwa litafikiwa kwa kutumia barabara ya Dodoma – Singida.

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 mradi na kwa uwezo wa kuhifadhi wanafunzi 80. 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..

Uhamasishaji wa Mradi

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:

- Kusafisha eneo la Mradi
- Kupata
- Kupata vifaa vya ujenzi. Hii itajumuisha:

    i) Kusafirisha vifaa vya ujenzi kutoka chanzo hadi eneo la ujenzi kama vile bati, chuma, mbao, misumari, kamba, nk.

Hatua ya Uendeshaji

Shughuli za matengenezo za mradi huu zitasaidia kuongeza idadi ya wanafunzi wanaojiandikisha katika shule za sekondari kwa wanafunzi milioni 1.8 na kuongeza idadi ya wasichana wanaohitimu katika shule za sekondari na njia mbadala za elimu ya sekondari.

Hatua ya ukamilishaji wa mradi

Baada ya kukamilika kwa ujenzi, vifaa vyote vilivyotumiwa vitarejeshwa kwa Mkurugenzi wa Manispaa ambaye atachukua uamuzi juu ya matumizi yao ya baadaye. Shughuli kuu wakati wa hatua ya kufuta ni pamoja na yafuatayo:

- Kukusanya na kuharibu vituo vya kuhifadhi kama paleti, makasha ya ufungaji.
- Kukusanya na kuharibu vifaa vya ujenzi na taka kama mafuta yaliyotumika, maji taka, taka ngumu (plastiki, mbao, metali, karatasi, nk) katika karakana, ofisi ya eneo, nk. hadi dampo lililoidhinishwa.

- Kurudisha maeneo ya kukopa vifaa katika hali salama.

Gharama za Mradi

Gharama Jumla ya Mradi ni shilingi bilioni nne za Tanzania

Mfumo wa Kisheria

Sera za sekta husika na za mseto ambazo zinatoa maelekezo juu ya jinsi miradi inavyopaswa kuendeshwa katika/au kuhusiana na rasilimali za asili na mazingira yanayohitaji tahadhari ni:

- Sera ya Taifa ya Nishati, 2015
- Sera ya Elimu na Mafunzo, 2014
- Sera ya Taifa ya Mazingira, 2021
- Sera ya Afya na Usalama Kazini, 2009
- Sera ya Taifa ya Ajira, 2008
- Sera ya Taifa ya Utafiti na Maendeleo, 2010
- Sera ya Taifa ya Bioteknolojia, 2010

Sheria muhimu ambazo TAMISEMI lazima zichukue kuzingatia wakati wa utekelezaji wa mradi huu ni pamoja na:

- Sheria ya Elimu, Sura 353.
- Sheria ya Mtoto, Sura 13 R.E 2019
- Sheria ya Usajili wa Wahandisi, Sura 63
- Sheria ya Wakandarasi na Wasanifu Majengo, Sura 267
- Sheria ya Fidia kwa Wafanyakazi, Sura 263
- Sheria ya Watu Wenye Ulemavu, Sura 183
- Sheria ya Dhima ya Wenyeji, Sura 64
- Sheria ya Viwango, Sura 130
- Sheria ya Usimamizi wa Mazingira, Sura 191
- Sheria ya Usimamizi wa Maliasili za Maji, Sura 331
- Sheria ya Misitu, Sura 323 R.E 2022
- Sheria ya Umeme, Sura 131
- Sheria ya Serikali za Mitaa (Mamlaka za Wilaya) Sura, 287
- Sheria ya Serikali za Mitaa (Mamlaka za Miji) Sura, 288
- Kanuni za Jeshi la Zimamoto na Uokoaji (Uangalizi na Vyeti vya Usalama) za 2008 Kama Zilivyorekebishwa Mwaka 2017
- Kanuni za Jeshi la Zimamoto na Uokoaji (Kinga dhidi ya Moto katika Majengo) za 2015
- Kanuni za Usimamizi wa Mazingira (Kudhibiti na Kusimamia Taka za Vifaa vya Umeme na Umeme) za 2021

Wadau Mbalimbali wa Mradi

Mshauri Eleke waligundua mashirika, vikundi, na watu binafsi wanaofikiriwa kuwa wadau muhimu ambao wanaweza kuathiri vipengele vya mradi au kuwa na ushawishi kwenye mradi.

- Afisa Elimu wa Mkoa,

- Mkurugenzi Mtendaji wa Wilaya ya Manyoni na Afisa wa Mazingira wa Wilaya, na Afisa Elimu wa Wiilaya.
- Maafisa wa Kata ikiwa ni pamoja na Afisa Mtendaji wa Kijiji cha Solya na Afisa wa Elimu wa Kata ya Solya
- Mkutano na wanakijiji katika eneo lililopendekezwa la mradi.

Maoni na mapendekezo ya wadau yamegawanyika katika vipengele vifuatavyo

- Fursa za elimu kwa eneo maalum la mradi na jamii zinazozunguka
- Kuongezeka kwa uchumi wa Kata ya Solya kutokana na ongezeko la idadi ya watu Wadau walikuwa na wasiwasi kuhusu:

Athari za Mazingira na Kijamii

Athari zifuatazo ziligunduliwa katika hatua mbalimbali za maendeleo ya mradi kama vile hatua ya kukusanya nguvu na ujenzi, hatua ya uendeshaji, na hatua ya kufuta. Athari hizi ni kama ifuatavyo:

Hatua ya Uhamasishaji/Ujenzi:

- Kupotea/kuvurugwa kwa viumbe hai na spishi zilizo hatarini
- Uzalishaji wa gesi angahewa kutoka kwenye injini za magari
- Uchafuzi wa vumbi na kelele kutokana na magari yanayokusanya nguvu
- Hatari za afya ya umma na usalama kutokana na ujenzi wa miundombinu inayosaidia mradi
- Kuvuruga ardhi
- Ajali za barabarani za magari yanayohamia

Hatua ya Uendeshaji:

- Kuvuruga ubora wa hewa kutokana na uzalishaji wa gesi chafu na gesi hatarishi
- Kuvuruga jamii zinazozunguka kutokana na ongezeko la viwango vya kelele
- Uharibifu wa mandhari, uchafuzi wa mazingira na kuzuka kwa magonjwa na majeraha kutokana na usimamizi mbaya wa taka ngumu na taka zisizo na hatari zinazozunguka
- Athari za kiafya na usalama kwa ujumla
- Ongezeko la wingi wa watu

Masuala ya Kiuchumi na Kijamii:

- Nguvu kazi iliyosoma zaidi nchini
- Kupungua kwa viwango vya ukosefu wa ajira
- Kuongezeka kwa viwango vya mapato ambavyo vitawanufaisha serikali kupitia kodi zinazolipwa
- Kuwawezesha wanawake
- Mandhari bora na tofauti zaidi ya demografia na uwakilishi bora wa jinsia na fursa kwa wanawake katika mikoa na nchi husika

Hatua za kukamilika kwa Mradi

- Miundo mbinu ambayo haijatumika tena.
- Ukosefu wa ajira.

- Kupoteza mapato kwa serikali

Kuimarisha Athari Chanya za Kiuchumi na Kijamii:

- Ajira na mafunzo hasa wakati wa ujenzi
- Kuongezeka kwa mapato/ukuaji wa mapato/maendeleo ya kusababisha.
- Kuongezeka kwa mapato kupitia matumizi ya rasilimali za ndani.
- Kusaidia huduma za kijamii na maisha ya watu katika eneo la asili.

Uchambuzi wa Njia Mbadala

Chaguzi tofauti zilizingatiwa kwa ajili ya mradi. Uchambuzi wa chaguzi unalinganisha chaguzi zinazowezekana na eneo la mradi lililopendekezwa, teknolojia, muundo, na uendeshaji kwa mtazamo wa athari zake za mazingira na kijamii; uwezekano wa kupunguza athari hizo; gharama zake za mtaji na za kawaida; ufaa wake chini ya hali za ndani; na mahitaji yake ya taasisi, mafunzo, na ufuatiliaji.

Pia inaelezea msingi wa kuchagua muundo maalum wa mradi uliopendekezwa na kuthibitisha viwango vya uzalishaji vilivyopendekezwa na njia za kuzuia na kupunguza uchafuzi.

Njia Mbadala zilizozingatiwa kwenye Mradi huu ni kama Zifuatazo

a) Hakuna Mbadala

b) Teknologia Mbadala

c) Eneo Mbadala

d) Nishati Mbadala

e) Maji Mbadala

Mpango wa Usimamizi wa Mazingira Na Jamii

Tathmini ya Athari za Mazingira kwa ujenzi uliopendekezwa wa Shule ya Upili ya Wasichana ya Kikanda, imetambua idadi ya athari zinazoweza kutokea wakati wa ujenzi na hatua za uendeshaji za mradi uliopendekezwa.

Tathimini ya Athari za Mazingira imechunguza athari za kibiolojia, za kiuchumi na kitamaduni za shughuli zilizopendekezwa kuanzia kuondoa eneo, ujenzi wa shule, na uendeshaji wa shule hiyo.

Faida halisi za mradi uliopendekezwa zinaweza kutokea tu ikiwa hatari za athari hasi zilizotambuliwa zitapunguzwa. Hii inaweza kufanikiwa kupitia utekelezaji wa hatua za kuzuia na kupunguza kwa kutosha kwa kutunga sera za kuzifunika ipasavyo.

Sera ya Usimamizi wa Mazingira

Hii itahakikisha kuwa uongozi wa mradi na wafanyakazi wanatekeleza shughuli zao kwa kuzingatia mazingira ya asili na matumizi endelevu ya rasilimali za mazingira katika eneo husika. Sera hii inapaswa kufunika mambo yafuatayo, pamoja na masuala mengineyo:

- Kuhakikisha kuwa shughuli zote za Mradi zinaendeshwa kwa kuzingatia mahitaji ya kisheria ya sheria za kitaifa zinazohusiana na mazingira.
- Kuhakikisha kuboresha na kufuatilia kwa muda mrefu utendaji na matokeo ya mazingira kupitia ufuatiliaji wa shughuli za Mradi.
- Kuhakikisha matumizi bora ya rasilimali za asili na kuweka hatua za kuhakikisha upatikanaji wa rasilimali kwa vizazi vijavyo.
- Kuhamasisha jamii ya jirani kuhusu matumizi endelevu ya rasilimali za asili, ulinzi wa mazingira hatarishi na uhifadhi wa bioanuwai kwa maisha ya pamoja ya jamii.
- Kupata usawa kati ya matumizi ya rasilimali za asili, uhifadhi wa mazingira na maendeleo ya kiuchumi.

Sera ya Afya na Usalama Kazini:

Imeandaliwa kwa mradi huu ili kuwezesha kuanzishwa kwa hatua sahihi ambazo zinahakikisha afya, usalama na ustawi wa watumiaji wote unazingatiwa pamoja na mahitaji ya afya ya jamii ya eneo ambapo mradi unapatikana. Sera inapaswa kuzingatia mambo yafuatayo, miongoni mwa mambo mengine:

- Uchunguzi wa matibabu kwa wafanyakazi;
- Usafi katika eneo la Mradi;
- Usimamizi na utupaji sahihi wa maji taka na taka ngumu;
- Tayari kwa dharura;
- Usalama wa moto;
- Umuhimu 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 Mahusiano na Jamii za Jamii zinaandaliwa na uongozi wa Mradi ili kuhakikisha kuwa uongozi wa mradi unajenga na kuendeleza mahusiano ya kuaminiana na wadau wote kwa msingi wa kuheshimiana na ushirikiano wa pande zote. Sera inapaswa kuelezea njia ambazo uongozi unapaswa:

- Kufanya kazi na jamii ya eneo na idara na mashirika husika ya serikali kufikia endelevu ya mradi;
- Kuja na njia za kuboresha mtiririko wa habari kutoka kwa uongozi kwenda kwa jamii na wadau wa Mradi, na kinyume chake;
- Uwezo wa jamii; na
- Kuhusisha jamii ya eneo katika shughuli zote za Mradi ambazo zinaathiri jamii ya eneo.

Kuhusu usimamizi wa mazingira wakati wa hatua za kabla ya ujenzi, ujenzi, uendeshaji, na kufuta mradi, majukumu makuu ya kila upande kama yalivyoelezwa hapo chini. Kwa baadhi ya vipengele vya mpango huo, msaada utahitajika kutoka kwa Mamlaka za Serikali za Mitaa na Baraza la Taifa la Uhifadhi na Usimamizi wa Mazingira (kwa kutoa mwongozo na ushauri na kufuatilia mradi).

Mpango wa Ufuatiliaji wa Mazingira

Ripoti hii ina mpango uliokamilika wa kufuatilia utekelezaji wa hatua za kupunguza na athari za mradi wakati wa utekelezaji wake. Mpango huu unajumuisha makisio ya gharama za kutekeleza mpango wa ufuatiliaji uliopendekezwa.

Uchambuzi wa Gharama na Faida

Uchambuzi wa gharama na faida za mazingira unahusisha kutathmini athari hasi na chanya.Zaidi ya hayo, uchambuzi unazingatia ikiwa athari hizo zinaweza kuzuiwa na gharama za kuzuiwa kwa athari hizo ni za kufaa. Kama ilivyotajwa katika Sura 7 na 8, faida za uwezekano wa mradi, kwa maendeleo ya kiuchumi na faida za kijamii ni kubwa.

Athari za mazingira zinaweza kuzuiwa kwa kiasi kikubwa. Kwa hivyo, kuzuiwa kwa athari hasi, ikilinganishwa na data inayohitajika, ni ndogo.

Uchambuzi wa Faida za Jamii

Faida za maendeleo ya mradi zinaweza kuhukumiwa kwa kutazama ajira, ustawi wa kijamii, maendeleo ya elimu, maendeleo ya miundombinu, na uchumi wa ndani (mshahara, bidhaa na huduma). Kwa hivyo, kutakuwa na mgawanyiko mkubwa wa faida katika jamii kupitia utoaji wa chakula, malazi na huduma nyingine za kawaida kwa wafanyakazi na wanafunzi.

Zaidi ya hayo, kuboresha, kuendeleza na kudumisha miundombinu ya ndani ni faida ambazo zitaendelea zaidi ya wigo na muda wa mradi.

Kumalizika/Kufungwa kwa mradi

Kufuta ni hatua ya mwisho ya maisha ya mradi. Inahusisha kusitisha shughuli na uendeshaji wa mradi na kurejesha eneo hadi hali yake ya awali au karibu na hali yake ya awali. Inatarajiwa kuwa mradi utaendelea muda mrefu kama kuna mahitaji ya mradi, hata hivyo, sehemu za kipekee za mradi zitafutwa kama inavyohitajika.

Mwisho

Mradi huu utakuwa na athari chanya na hasi kwa mazingira na jamii za eneo linalopitiwa. Hatua zimependekezwa ili kuongeza athari chanya kwa mazingira na watu wa eneo hilo.

Kwa athari zinazoweza kuwa hasi, hatua za kupunguza madhara zimependekezwa ili kuepuka au kupunguza kwa kiwango kikubwa iwezekanavyo madhara ya kuingilia kati kwa jamii.

Kwa ujumla, mradi huu utakuwa kama kichocheo cha mabadiliko chanya katika jamii za karibu kwa kuboresha elimu, miundombinu, na ustawi wa kijamii, na kwa kushirikisha wakazi wa eneo hilo, mradi huu unaweza kuwa na athari endelevu na kuchangia katika maendeleo ya jumla ya eneo hilo.

APPENDIX VI: Schedule of Materials and Architectural