UNITED REPUBLIC OF TANZANIA

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY

HIGHER EDUCATION FOR ECONOMIC TRANSFORMATION PROJECT (HEET)

Environmental and Social Management Framework (ESMF)

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LIST OF ACRONYMS AND ABBREVIATIONS

EHS	Environmental, Health, and Safety
EIA	Environmental Impact Assessment
EIS	Environmental and Social Impact Statement
ELO	Environmental Liaison Officer
ERP	Emergency Response Plan
ESMS	Environmental and Social Management System
EO	Environmental Officer
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
GHGs	Green House Gases
HEET	Higher Education for Economic Transformation
HIV	Human Immunodeficiency Viruses
HSSE	Health, Safety, Security and Environment
JNIA	Julius Nyerere International Airport
MDAAs	Ministries, Departments, Agencies and Authorities
MoEST	Ministry of Education, Science and Technology
MoFP	Ministry of Finance and Planning
NEMC	National Environment Management Council
NER	Net Enrolment Rate
NGO	Non-Government Organization
PAPs	Project Affected Persons
PDO	Project Development Objective
PMT	Project Management Team
PPE	Personal Protective Equipment
RAP	Resettlement Action Plan
RPF	Resettlement Policy Framework
TBS	Tanzania Bureau of Standards
UNFCCC	United Nations Framework Convention on Climate Change
URT	United Republic of Tanzania
WRB	World Reference Base
WHO	World Health Organization

EXECUTIVE SUMMARY

The Government of the United Republic of Tanzania through the Ministry of Education, Science and Technology (MoEST) is preparing Higher Education for Economic Transformation (HEET) project. HEET is a five-year project through the World Bank support, to promote higher education as a catalytic force in the new Tanzanian economy. The project is designed to revitalize and expand the capacity of 18 institutions to contribute to key areas for innovation, economic development, and labour market relevance. The project will invest in requisite infrastructure for modern and effective teaching and research, and by training to the highest standard the teachers, researchers and administrators needed by universities to achieve to their full potential.

The Higher Education for Economic Transformation (HEET) Project is geared towards meeting the following strategic objectives (i) increase enrolment capacity in degree programs in priority disciplines, (ii) improve the quality and labour market relevance of programs; and (iii) promote research and innovation capacity in select higher education institutions that will contribute into creation of skills that suits the requirement of labor market, generation of entrepreneurs, investors and employers. The project will have three major components; i) Transforming universities with a focus on priority disciplines for economic growth; ii) Strengthening management of the higher education system and iii) Support for Project Coordination and Management.

The investments in component 1 will be on the following strategic areas: (a) building institutions' capacity, (b) promoting societal and economic relevance of the academia in economic development, (c) enhancing Higher Learning institutions' managerial efficiency and effectiveness, and (d) financing the development of University Strategic Investment Plan (USIP).

Preparations of HEET project apply the World Bank's Environmental and Social Framework (ESF), which sets out ten Environmental and Social Standards (ESSs) as requirements for Borrowers to identify assess and manage potential environmental and social risks and impacts. Application of the standards are associated with projects supported through Investment Project (IPF). Based on the nature, location and sensitivity of the proposed activities and capacity of the Borrower HEET project has been assigned **Substantial** Risk category. Potential environmental and social impacts are predicted to be less adverse and limited and site specific. The project investments for which most of the designs are not completed, are likely to fall under different categories like B1 or B2 as stipulated in Tanzania's Environmental Impact Assessment (EIA) and Audit (Amendment) Regulations, 2018. This Environmental and Social Management Framework (ESMF) is envisaged as a road map to ensure the investments to be financed under this project are designed and implemented in an environmentally sound and socially acceptable manner and meets both requirements of ESF and the Government of

Tanzania (GoT) legislative. This ESMF sets out the principles, rules, guidelines and procedures to identify and assess the environmental and social risks and impacts. The objective is to have in place a practical ESMF to enable early screening for potential impacts and select appropriate instruments to prevent, minimize, mitigate or compensate adverse environmental and social impacts and to enhance beneficial impacts. The ESMF identifies the general potential impacts and mitigation measures of yet-to-be identified investments/finalized designs. The ESMF includes practical, operational set of guidelines and procedures that will be used by all the implementing entities to guide investment specific Environmental and Social Impact Assessments (ESIAs) and Environmental and Social Management Plans (ESMPs) preparation.

Furthermore, the ESMF sets procedures and methodologies for the environmental and social planning, review, approval and implementation of interventions to be financed under the HEET, identifying roles and responsibilities and determining capacity needs for effective implementation.

Methodology for Development of the ESMF

The preparation of ESMF involved Desk Reviews and Stakeholders Consultation relevant to the project. Documents reviewed included environmental and social framework (ESF) instruments for other education projects; Tanzania Service Provision Assessment Survey Key (TSPA) 2014 -1; policies, laws and regulations related to education, environment, HIV/AIDS, Occupational Health and Safety (OHS), employment and labour relations, construction, land and water. Consultations were also done with both staff, students, and members of the surrounding communities of the institutions which will implement the projects. Institutions which were visited included Mwalimu Julius Nyerere University of Agriculture and Technology (MJNUAT), Muhimbili University of Health and Aligned Sciences (MUHAS), Commission for Science and Technology (COSTECH), Tanzania Commission for Universities (TCU) and National Council for Technical Education (NACTE

Project Activities and Environmental and Social Standards Requirements

The HEET project will support subprojects and activities that are likely to generate unfavourable and site-specific environmental and social impacts. The activities will include site clearance, excavation, construction as well as institutions strengthening and infrastructure upgrading. The exact nature of the project activities, their location, and core areas of impacts, extent, magnitude, and duration of impacts caused by the various types of investments are yet to be specified. Thus, ESIAs and / or ESMPs could not be conducted prior to project appraisal. In this regard, this ESMF establishes a mechanism to conduct environmental and social screening for potential risks and impacts. In addition, the ESMF provides guidance to preparation of tools in the form of ESIAs and ESMPs to ensure that the ESSs and national obligations and will be complied with.

The WB ten Environmental and Social Standards include: 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. HEET project is anticipated to comply with requirements of all standards except ESS 9 on Financial Intermediaries, which is not considered relevant. On the Borrower's side, key national regulatory requirements that will be applicable will include; Environmental Management Act No. 20 of (2004), The Water Supply and Sanitation Act No. 12 of 2009, The Land Act, 1999, The Urban Planning Act (2007), Occupation Health and Safety (2003), Employment and Labour Relations Act No. 6 0f 2004, Engineers Registration Act and its Amendments 1997 and 2007, The Contractors Registration Act (1997), The Architects and Quantity Surveyors Act (1997), The Local Government Laws (Urban Authorities) Act (1999), Public Health Act 2009, The Tanzania Development Vision 2025 and Environmental Impact Assessment and Auditing Regulations (2005).

General Environmental and Social Impacts

The implementation of the HEET will potentially result into positive and negative social and environmental impacts as outline below:

Impacts associated with mobilization and construction phase include; benefits to communities resulting from employment; income to local suppliers and service providers and impacts on knowledge. Negative social impacts may include limited land acquisition or economic displacement (associated with informal land use), spread of communicable diseases such as HIV/AIDS (and in the short-term COVID-19) due to interaction between workers and students, SEA/SH risks, unwanted pregnancies, road traffic accidents and social conflict and mistreatment of workers associated with lack of contracts (which is known to occur in Tanzania especially for informal employment) and poor working conditions – such as long hours or irregular payments. The potential environmental risks include damages to the environment and ecosystems: land degradation, gully formation and siltation of water bodies from material extraction from quarries; waterborne suspended materials, pollution of water bodies and land from wastes such as oil and paint spillages and emissions from trucks and machines, inappropriate disposal of solid waste from construction sites and campsite an electronic waste from the proposed ICT lab equipment and infrastructure; dust and gas emissions due to construction machinery and vehicle movements; vibrations due to site activities; increase in external road traffic due

to construction site transport; noise pollution from machinery; exposure of workers and the neighbouring community to health and safety risks from construction equipment, chemical materials and transportation; risks of accidents associated with sharp and the falling objects due to poor site barricading.

Impacts associated with Operation Phase include; benefits due to increased availability of adequate academic facilities; increase of admission of students to universities and colleges; increase of revenue to academic institutions; and increased commercial and social activities around project locations. Social negative impacts during operation will include increased pressure on social services and utilities such as over-use of electricity and water that may lead to shortages and inclusion risks associated with vulnerable people and groups. Negative environmental impacts during operation will include health and safety risks due to occupational hazards; and increased waste leading to pollution during operation.

Environmental and Social Management Tools

In order to ensure adequate mitigation of potential environmental and social risks and impacts for the proposed HEET's sub-projects, the respective primary implementing agency will deploy the following tools: Environmental and Social Screening: the proposed sub-projects and associated activities are subjected to a screening process as outlined in the ESMF; Environmental and Social Impact Assessments (ESIAs); Environmental and Social Management Plans (ESMPs); and Monitoring and Evaluation and Audit.

The implementing agencies will deploy these tools accordingly during all phases of the project/sub-project cycle, i.e. from project design to decommissioning phase. Both existing and those impacts that may be generated during implementation phase will be mitigated and monitored to ensure compliance with national environmental permitting requirements as well as the WB ESF. Moreover, these tools will be deployed in order to ensure that the environmental and social concerns are integrated into decision making process and foster desirable project outcomes in all spheres. These tools are more explained in detail as follows:

a. Screening of sub-project activities

The Project Implementing Unit will undertake an initial screening of the proposed sub-projects to decide on the level of environmental and social impact to be carried out with reference to the national legislative requirements (Environmental Management Act, 2004; EIA and Audit (Amendment) Regulations, 2018 as well as WB’s ESF. Once the sub-project activity is defined and the location selected, the client will compile project conceptual and/or preliminary design details and fill the Screening Form. The screening form will allow for identification of potential environmental and social impacts associated

with the proposed activity. The ESMF and a separate Resettlement Policy Framework (RPF) will be both utilized the later will be used to address the identified potential land acquisition and involuntary resettlement issues as per the screening form.

b. Environmental and Social Impact Assessments (ESIAs) Procedures as per the Tanzania Regulations

According to EIA and Audit Regulations of 2005 and its Amendments of 2018, project categorization will be A-for mandatory projects requiring EIA, B1 for borderline projects also requiring EIA and B2 for non-mandatory projects which may or may not require EIA. Special projects will also require EIA. However, environmental and social risks and impact assessment and management will be carried out in line with the ESF requirements, the project activities will be assigned risk assessment categorization will be done according to the ESF, where High (H), Substantial (S), Medium (M) or Low (L) rating will be used.

For Category A, B1 and Special sub-projects requiring an EIA:

The Client will hire consultant to conduct and submit a copy of an Environmental Impact Statement (EIS) to National Environmental Management Council (NEMC) and the World Bank (WB) for review. The EIS will include all relevant information as per Tanzania's EIA and Audit regulations as well as the World Bank ESF for compliance. For sub-projects that may result into involuntary resettlement or displacement, the proponent is also required to submit a Resettlement Action Plan (RAP) to the relevant authority for approval. This is explained in detail in RPF prepared alongside this ESMF.

c. Environmental and Social Management Plans (ESMPs)

For Category B2 sub-projects that require an ESMP:

A copy of the ESMP prepared (under scoping report) will be submitted to the relevant environmental authorities and to the executing agencies and World Bank. The objective of the ESMP is to cater for the environmental and social needs of the projects which might not have adverse impacts to the environment in a simple, responsive, and cost-effective manner that will not unnecessarily overload or impede the project cycle. The ESMP/EMP is supposed to outline the measures needed to address the issues identified during the EIA study. Moreover, a good ESMP will demonstrate that the proposed monitoring activities will encompass all major impacts and identify how they will be integrated in the project supervision.

The ESMP/EMP will include the following typical contents:

- Potential environmental and social impacts related to siting, construction, and operation of the sub-project.

- Mitigation and monitoring measures to address potential impacts.
- Responsibilities for monitoring EMP requirements.
- Training and capacity-building requirements for project officers and communities; and
- Estimated budget.

d. Monitoring and Evaluation and Audit

Monitoring and Evaluation (M&E) of the ESMF is an integral part of the overall project monitoring and evaluation developed for HEET. The overall project (M&E) developed for the HEET project will include indicators for monitoring impacts and evaluating outcomes against the identified objectives. In addition, M&E of subprojects will be carried out by NPIU staff. The direct implementing institutions all have a responsibility mandated to monitor and evaluate their operations as set out in the HEET Project documents. Therefore, each implementing institution will monitor and evaluate its sub-project activities as well as ensure that impact monitoring and management set out in ESMP and ESIA as developed in their areas are complied with. Nevertheless, M&E of the sub-projects and related activities will be performed periodically, at least twice a year, with an annual report submitted to the MoEST and the WB. Depending on the nature of the project activities and availability of funds, and or need for close follow ups, more frequent monitoring visits can be made to projects that show any signs of risks or negative impacts. In order to achieve a smooth implementation plan, the NPIU at the MoEST in collaboration with the direct implementing institutions will develop terms of reference and cost and include M&E for any additional surveys or assessments required prior to conduct of an ESIA and or ESMP.

Capacity Needs to Implement the ESMF

The Client will ensure that adequate capacity is put in place to implement and monitor the application of the ESMF (and RPF) for HEET. In view of this, the following will be in place:

One Environmental and one Social Specialist will be engaged by the MoEST as part of Project Implementing Unit. The Specialist will report to the Project Coordinator at MoEST level. In order to contribute to the realization of the project's objectives, the Specialist will have the following roles:

- Preparing, together with the implementing entities, annual work programs and budgets inclusive of environmental and social management activities;
- Monitoring project progress as it relates to compliance with the ESF instruments, resolving implementation bottlenecks, and ensuring that overall project implementation proceeds smoothly;
- Collecting and managing information relevant to the project and accounts (i.e. environmental monitoring and audit reports); and

- Ensuring that the implementing universities are supported adequately and that they adhere and comply in accordance with this ESMF.
- Ensure that stakeholder engagement plan is implemented throughout the project cycle.

i. The MoEST will conduct a ESF Training Needs Assessment (TNA) and develop a training plan to ensure the effectiveness of the HEET implementation in various implementing institutions. The TNA will be used to train staff at an early stage of the project preparation and implementation as well as all Environmental and Social Specialists /Focal Persons who will be involved in and/ or have responsibilities in the implementation of the HEET.

ii. The Environmental and Social Specialists/Focal Persons in the implementing agencies will be trained on application of the ESMF, ESF and implementation and monitoring of the ESMPs. Training will be provided by amongst others, specialists from academic institutions, the World Bank and other third parties. Initial training is expected to take place 2 months post effectiveness. This training will ensure that the specialists are able to manage and monitor the environmental and social aspects of the HEET sub-project activities.

Budget for ESMF Implementation

The proposed budget for implementation of the measures and recommendations outlined in this ESMF for HEET is currently estimated at US$140,000 as ball park figure per project implementing institutions. Implementation of the ESMF will be funded from the project budget.

CHAPTER ONE

INTRODUCTION

1.1 Project Background

The Government of the United Republic of Tanzania through the Ministry of Education, Science and Technology (MoEST) is preparing Higher Education for Economic Transformation (HEET) project. HEET is a five-year project through the World Bank support, to promote higher education as a catalytic force in the new Tanzanian economy. The project is designed to revitalize and expand the capacity of universities to contribute to key areas for innovation, economic development, and labour market relevance, by investing in requisite infrastructure for modern and effective teaching and research, and by training to the highest standard the teachers, researchers and administrators needed by universities to achieve to their full potential.

The Higher Education for Economic Transformation (HEET) Project is geared towards meeting the following strategic objectives (i) to increase enrolment in priority disciplines, (ii) to improve the relevance and quality of programs at universities to meet the conditions and standards of the current and future labour market, (iii) to strengthen system-level coordination, management, and regulations to ensure quantity, quality and relevance of higher education in Tanzania, and (iv) to increase the rate and extent of graduate employability through improving the relevance of curricula and create new and demand-driven programs.

As part of the preparations for HEET, and in compliance with the World Bank's Environmental and Social Standards (ESS) as described in the Environmental and Social Framework (ESF) for Investment Project Financing, it is required that the Borrower identifies assesses and manages potential environmental and social risks and impacts according to the World Bank's ESF. This ESMF provides guidelines for the management, assessment and mitigation of environmental and social concerns that meet national and World Bank requirements. The prepared RPF is aiming to ensure that where land acquisition for the project activities is inevitable, resettlement and compensation activities for lost land, livelihoods, and other properties will be conceived and executed in a sustainable manner as stipulated in this ESMF.

1.2 Project Rationale

Tanzania has made commendable gains in Basic education in recent year. For example, enrolment at the primary level has shown an increase of 24.5% from 8,116,488 pupils in 2015 to 10,111,671 pupils in 2018 (10,601,616 – 2019). Similarly, the enrolment trend in secondary education in the year 13/14 showed a positive increase in the number of

students transitioning to post-primary education. While the country has recorded expansion in basic education, there is widespread acknowledgement among policy makers that the overall outcome of the successful performance in basic education is the demand for subsequent levels of education and especially higher education. In this regard, the main challenge is inability of the system to absorb the expanding number of graduates in basic education inspiring and capable of joining the higher education subsector. Of immediate need is the expansion of investment in infrastructure, facilities and quality assurance system in Engineering (Railway, Hydropower, Aeronautic etc.), Medical Science and Technology, Agriculture and Allied Sciences, Energy and Minerals, Forestry and Natural Resource Management. The Higher Education for Economic Transformation (HEET) project will finance the development of infrastructure, faculties, and quality assurance systems in higher education to facilitate rapid economic transformation in the country. Through HEET project, the Government of the United Republic of Tanzania seeks to build requisite operational capacities of public universities in order to empower them to be dependable drivers for economic transformation by building on their respective institutional visions, missions, objectives and core values.

1.3 Purpose and Objectives of the Environmental and Social Management Framework (ESMF)

The Higher Education for Economic Transformation project will apply nine out of ten World Bank Environmental and Social Standards (ESS) as described in the Environmental and Social Framework (ESF). The project investments has been assigned **Substantial** risk category as per the WB ESF. This ESMF was prepared as a guiding tool to ensure the investments/sub-projects to be financed under HEET project will be designed and implemented in an environmentally sound and socially acceptable manner in compliance with the World Bank ESF, as earlier described as well as the United Republic of Tanzania (URT) environmental and social legislative requirements. This ESMF sets out the principles, rules, guidelines and procedures to assess the environmental and social risks and impacts. The objective is to have in place a practical ESMF to enable early screening for potential impacts and select appropriate instruments to prevent, minimize, mitigate or compensate adverse environmental and social impacts and to enhance beneficial impacts. Specific ESMF objectives are to:

- Establish clear procedures and methodologies for screening all proposed sub-projects for their potential adverse environmental and social impacts;
- Specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to project;
- Provide guideline on consultation of stakeholders for a meaningful result of project objective;

- Determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMF;
- Establish the project funding required to implement the ESMF requirements; and
- Provide practical information resources and guidelines for managing and monitoring environmental and social concerns related to subprojects once their nature and locations are known.

1.4 Scope of the ESMF

This ESMF identifies the potential impacts and mitigation measures of the proposed activities under the project including increasing enrolment in priority disciplines; improving relevance and quality of programs at universities; ensuring quantity, quality and relevance of higher education; and increasing the rate and extent of graduate employability. The ESMF outlines the approach to screening subprojects; guidance for the preparation of ESIAs for subprojects once they are identified. The ESMF includes a practical set of operational guidelines and procedures that will be used by the PIUs to guide future ESIA and ESMP preparation.

This ESMF is specifically designed to guide the preparation and implementation phase of the proposed project activities and investments. This document draws from the WB Environmental and Social Framework (ESF) and the National Standards and Guidelines on Environmental, Social and Resettlement Management. Specifically, the ESMF contains subproject screening guidelines, guidelines for impacts identification, evaluation and mitigation. It also stipulates guidelines and best practices for mitigation implementation, supervision, monitoring and consultation processes. Furthermore, it describes the grievance redress mechanism of the project. As the ESMF acts as the overarching instrument for the Project it may be updated if additional information becomes available, notably the development of supporting documents including the labour management procedures, GBV Action Plan and findings of the Social Impact Assessment.

1.5 Users of the ESMF

This ESMF will aid the objectives of HEET project by facilitating project team and other project participants to be aware of and integrated environmental and social requirements for assessing project activities. Thus, enhancing their capacity to effectively manage environmental and social issues during the preparation (designing and planning) and implementation of the individual subprojects. The tools and guidelines are tailor-made and suited to the needs of project team and service providers, specifically:

- Project Implementing Units in the institutions responsible for developing support strategies / activities of implementation and supervision;
- Project Teams at MoEST and staff in target institutions who are responsible for application/planning, review, approval, and supervision of the sub- projects;
- Consulting engineers, Contractors and service providers involved in subproject planning / design, construction and installation works;
- Environmental and social assessment consultants and development services providers who provide services to the project.
- Any other stakeholder who will in one way or another be engaged on the preparation, implementation and use stage of the project.

1.6 Approach and Methodology for Development of the ESMF

1.6.1 Overall Approach

The approach used to develop the framework document involved the following: (1) analysis of project activities which determines the likely potential environmental and social impacts caused by the project: (2) identification of impacts, mitigation measures and monitoring procedures; (3) provision of guidance to implementers (of sub-projects to be identified in the future) on how to overcome the specific and cumulative impacts arising from implementation of individual or clusters of the investments; and (4) identification of relevant stakeholder for the preparation of ESMF.

The ESMF has been prepared in accordance with World Bank Environmental and Social Standards (ESS) and Tanzania Environmental and Sector policies. Preparation of the ESMF involved the following activities:

- Literature Review;
- Stakeholder consultations - including discussions with relevant sector institutions;
- Data collation and analysis, Determination of potential impacts;
- Identification of impact mitigation measures; and
- Preparation and disclosure of the ESMF.

1.6.1.1 Identification of impacts and mitigation measures and monitoring procedures

This ESMF was prepared through documents review for the project. The documents include project appraisal document and proposed activities under HEET to determine prevalent conditions /trends and to establish the extent of achievement of the set targets against key result elements and performance indicators. The preparation of ESMF involved consultation with Ministries and beneficiary institutions. Other consultations will proceed throughout project cycle as stipulated in SEP. Among others, project

implementing institutions, people affected by land acquisition, utility service providers, Districts/municipalities, wards, vulnerable groups and other interested parties will be consulted. In addition, observations at representative sites and meeting with various participants and key informants to assemble evidence/lessons on impacts encountered, measures undertaken and their roles and responsibilities etc. The results of the situation analysis were augmented by experts' knowledge of activities likely to cause impacts and mitigation measures and best alternative approaches conventionally associated with similar programs.

1.6.1.2 Provision of guidance to implementers on managing environmental and social issues emanating from sub-projects

Framework of analysis for determining guidelines required by subproject planners/implementers is based on identification of the nature of ESF assessment and management process applicable to the project followed by determination of the nature of management tool needed by various actors at each stage of subproject implementation. The tools include:

1. Subproject specific ESIAs and ESMPs
2. Sub-project screening guidelines
3. Guidelines for impact identification and evaluation; and
4. Guidelines for impact mitigation.

1.6.2 Methodology

Desk Review

Desk Review of relevant literature was undertaken to help gain a further and deeper understanding of the proposed project during preparation of the framework document. This entailed a secondary review of Tanzania's legal framework and World Bank ESS applicable to the proposed project. Information sources include documents from relevant Ministries, Departments, Agencies and Authorities (MDAAs) of the URT; Participating Institutions; and Word Bank. Other sources include national and local data and information centers and web-search.

The documents that were reviewed included but not limited to:

- Project Concept Note,
- Tanzania Environmental Management Act, 2004,
- Environmental Management Act (EMA) 2004
- Land Act (1999),
- Occupational Health and Safety Act (2003),
- Relevant Tanzania Acts and Regulations,

- Relevant Tanzania Policies
- The World Bank Environmental and Social Framework (ESF).

Stakeholder Engagement

Relevant stakeholders were consulted during preparation of this ESMF for HEET Project. The stakeholder consultation is significant in the preparation of ESMF since it formed the basis for determination of potential project impacts and viable mitigation measures. ESMF preparation involved consultations with relevant government Ministries, Departments, Agencies and Authorities (MDAAs) and project implementing institutions. Due to the COVID-19 pandemic, stakeholders' consultations and site visitations were interrupted, whereby most of consultations were made through emails. More stakeholder engagement and consultations will be conducted to seek views of stakeholders such as Government Ministries, project implementing institutions, Department and Agencies, Civil societies and other public and private sector players as elaborated in SEP. As part of the engagement representatives of vulnerable groups and vulnerable individuals were invited to participate in the meetings being held. In addition, stakeholders were also given the opportunity to provide feedback to MoEST if they were unable to attend. It is however considered that the public involvement initiated by the ESMF will be built upon at the various project levels. Activities involved during consultation include gathering available documents (i.e. environmental/economic/social data); conducting interviews/discussions with Focal Persons and staff directly responsible or involved in HEET project implementation and implementers, persons in-charge and beneficiaries, community leaders and representatives at subproject level.

Different project activities have been subject to consultation at different times because of different development timelines. MoEST has been engaging with various project stakeholders as the initial phase of the project preparation with its documentations. Two phases of stakeholder engagement activities have taken place to date as described below.

(i) **Consultations During the Preparation of the Environmental and Social Risk Management Documents**

During the preparation of ESF documents, MoEST consulted project PIUs between August and October 2021. Consultations were undertaken through emails and interviews. The total of 14 PIUs PIU were consulted during this time.

(ii) Consultations Prior Disclosure of the Safeguards Documents.

The project stakeholders' consultations have been undertaken in order to identify the views, issues and concerns of stakeholders regarding specific project components. These consultations involved public meetings with identifies PAPs

and OIPs. In the process the project design, potential impacts and mitigation measures were discussed. Stakeholders also provided useful primary baseline information, guidance and recommendations on best practices acceptable and suitable to local environment. Two consultative meetings were undertaken in January 2021 to which a range of stakeholders were invited including representatives of vulnerable groups, persons with disabilities and other vulnerable individuals. Stakeholders were given the option to attend virtually (to avoid travel) and those who were unable to attend the meetings were also invited to submit feedback to MoEST;

The first meeting took place on 13 January 2021 with institutions implementing the HEET Project; Government Institutions and Agencies; Associations of Academic Staff; Student Organisations, and Associations of Students with Special Needs. The objective of the meeting was to disclose the safeguard documents and receive views, concerns, comments and suggestions from the stakeholders regarding the project and the drafted guidelines by the MoEST relevant to the HEET project. A total number of 102 participants attended the meeting and 27 attended through virtual methods. See below list of stakeholders consulted (more details Annex 3);

- Ministry of education, Science and Technology (MoEST), Mzumbe University, Sokoine University (SUA), University of Dar es Salaam (UDSM), Digital Opportunity Trust (DOT) Tanzania, Mkwawa University College of Education (MUCE), MUST, Occupational Safety and Health Authority (OSHA), Ardhi University (ARU), Open University of Tanzania (OUT), Moshi Co-operative University (MoCU), Dar es Salaam University College of Education (DUCE), Mwalimu Julius K. Nyerere University of Agriculture and Technology (MJNUAT), Nelson Mandela African Institute of Science and Technology (NM-AIST), State University of Zanzibar (SUZA), Muhimbili University of Health and Allied Sciences (MUHAS), University of Dodoma (UDOM), Commission for Science and Technology (COSTECH), ENTAF, TAN College Arusha, Tanzania Higher Learning Institutions Students' Organization (TAHLISO), Dar es Salaam University Students Organization (DARUSO), UDSA-DARUSO, College of Business Education (CBE), Commission for Universities (TCU), MAT, Tanzania Cooperative Rural and Development Bank (CRDB), Ministry of Lands, Housing and Human Settlements Development (MLHHSD).

The second meeting took place on 14 January 2021 with Non-Governmental Organizations, Organizations, Companies, Individuals and Development Partners. A total number of 37 participants attended face to face meeting and 21 participated virtually. The following NGOs attended the meeting, Karibu Tanzania Organization (KTO), Oblige for Vulnerable Children Tanzania [OVCT], Legal and Human Rights Center (LHRC), Survival International, Tanzania Education Network- Mtandao wa Elimu Tanzania (TEN-MET), Tz Worlded, Tanzania Natural Resources Forum (TNRF), Haki Elimu, Tanzania Gender Network Program (TGNP), Enviro Care and The Foundation for Civil Society (FCS). The list of all the participants is attached as Annex VII and detailed minutes are presented in the SEP.

Key Issues from the Discussions

After each presentation, stakeholders were given opportunity to air their views, concerns, comments and provide their suggestions. During discussions, a total of 31 questions were asked (Annex 4) and 8 suggestions were provided from all the five presentations (Annex 5). The main issues raised included the acquisition of learning infrastructures and participation of vulnerable groups in the project. Moreover, gender issues and the need for mitigation measures for sextortion during project implementation were insisted. Likewise, the involvement of all stakeholders at various stages of the project implementation was highly discussed. Furthermore, cooperation among universities, NGOs and private sectors were encouraged. Additionally, the approaches on skills and employment generation for graduates were the main concerns. See below detailed information:

i. During the HEET project implementation, there will be shared strategies on handling vulnerable groups. Guidelines will be formulated to identify, support and enable people with special needs. This information will be displayed on the universities' websites. Each university will have a functional helping desk for people with special needs. Every project beneficiary including universities and institutions will construct and rehabilitate the existing buildings to support people with special needs.

ii. On gender issues and sextortion, the project will implement the existing national gender based violence policies and ensure reports on gender issues are provided annually. The project will conduct a separate forum for gender issues and sextortion due to their sensitivity. This will be done by involving the Ministry of Health, Community Development, Gender, Elderly and Children, which is a custodian ministry on gender issues. The MoEST will improve capacity on gender issues to higher learning institutions including building capacity on gender desks, strengthening institutions and training of deans and students on gender issues and sextortion. There will be a special component on helping female students who fail to obtain minimum requirements for joining Universities through pre-entry program

at the OUT. Each year, about 200 female students will be trained by OUT using its branches available on the country sides (rural areas). Moreover, there will be special training on life skills for these groups at universities during implementation of the project.

iii. The project will ensure involvement of all stakeholders at each stage of implementation. There will be clear channels of communications on complaints raised by stakeholders during planning and implementation of the HEET project.

iv. The project will strengthen linkages among universities, agencies for MoEST, NGOs, and private sectors during the implementation. There will be policy review on the functions of COSTECH, TCU and Higher Education Student's Loans.

v. Special consideration will be dedicated towards jobs creation during the HEET project implementation. The project will transform the economy by enabling universities to produce employable graduates capable of employing themselves.

vi. The MoEST will find some mechanisms to tape the experience from PO-RALG on implementing big projects such as the HEET.

Activities involved during consultations include gathering available documents (i.e. environmental/economic/social data); conducting interviews/discussions with Focal Persons and staff directly responsible or involved in HEET project implementation and implementers, persons in-charge and beneficiaries, community leaders and representatives at subproject level.

CHAPTER TWO

PROJECT DESCRIPTION

2.1 Project Objectives

The development objective of the project is to strengthen the learning environment and labor market alignment of priority programs at beneficiary universities and improve the management of the higher education system.

2.2 Project Areas

The project will be implemented in nine (9) regions; Eight (8) from Tanzania mainland and one (1) region in Zanzibar **(Table 2-1).** Furthermore, 50% of the selected institutions are found in Dar es Salaam region.

Table 0-1 Regions, Institutions and Agencies where HEET project will be implemented

S/N	Region	Institution	
1.	Dodoma	1.1	University of Dodoma (UDOM)
		1.2	Ministry of Education, Science and Technology (MoEST)
2.	Morogoro	2.1	Sokoine University of Agriculture (SUA)
		2.2	Mzumbe University (MU)
3.	Dar es Salaam	3.1	University of Dar es Salaam (UDSM)
		3.2	DSM University College of Education (DUCE)
		3.3	Ardhi University (ARU)
		3.4	Open university of Tanzania (OUT)
		3.5	Muhimbili University of Health and Allied Sciences (MUHAS)
		3.6	Tanzania Commission for Universities (TCU)
		3.7	Higher Education Students' Loan Board (HESLB)
		3.8	Commission for Science and Technology (COSTECH)
4.	Mara	4.1	Mwalimu Julius K. Nyerere University of Agriculture and Technology (MJNUAT)
5.	Iringa	5.1	Mkwawa University College of Education (MUCE)
6.	Mbeya	6.1	Mbeya University of Science and Technology (MUST)
7.	Arusha	7.1	Nelson Mandela Institute of Science and Technology (NMIST)
8.	Kilimanjaro	8.1	Moshi Cooperative University (MoCU)
9.	Urban West - Zanzibar	9.1	State University of Zanzibar (SUZA)

2.2 Project Components

Component 1: Strengthening the learning environments and labor market alignment of programs in priority areas

This component strategic focus areas are (i) increase enrolment capacity in degree programs in priority disciplines, (ii) improve the quality and labour market relevance of programs; and (iii) promote research and innovation capacity in select higher education institutions that will contribute into creation of skills that suits the requirement of labor market, generation of entrepreneurs, investors and employers. The investments in this component will be on the following strategic areas: (a) building institutions' capacity, (b) promoting societal and economic relevance of the academia in economic development, (c) enhancing Higher Learning institutions' managerial efficiency and effectiveness, and (d) financing the development of University Strategic Investment Plan (USIP).

This component will increase infrastructure/space and improve the quality of programs in priority disciplines and sub-disciplines and support their aspirations to play 'center of excellence' role in the agriculture and health areas respectively. The component will finance infrastructure and equipment, as well as faculty training, support scholarships for specialized post-graduate training for medical doctors at Mloganzila Medical University Campus. The component will likewise finance infrastructure, equipment, curricular revisions and development, and academic staff training; support scholarships for specialized training and research at Mwalimu Nyerere University of Agriculture and Technology, to establish this university as an anchor for regional development in Butiama.

Component 2: Strengthening management of the higher education system

Component 2 will focus on enhancing the management of the higher education system and creating an enabling environment for excellence among higher education institutions by strengthening the capacity of MoEST and its departments and agencies. The component will target the two departments that constitute MoEST and are responsible for delivering its core mandate, the Department of Higher Education and the Department of Science, Technology and Innovation, as well as their associated agencies, i.e. the Tanzania Commission for Universities (TCU), Higher Education Student Loans Board (HESLB) and Tanzania Commission for Science and Technology (COSTECH). In addition, the component will help to strengthen public-private partnerships in higher education in order to enhance the entire landscape of the higher education system.

Component 3: Support for Project Coordination and Management

This component will serve to build capacity within the MoEST and its subsidiary agencies to manage the day-to-day implementation of the HEET Project, as well as monitor and evaluate its impact. It will support the establishment of a minimal National Project Implementation Unit (NPIU), including a project manager, relevant component area managers, support staff, environmental and social staff and monitoring and evaluation (M&E) staff. It would, therefore, finance the salaries, where applicable, and capacity building of NPIU staff, as well as the operational costs of project implementation. This

component would also finance the operational and staffing costs of national-level financial management (FM) and procurement support staff. Lastly, this component would provide funds for M&E studies/surveys, and audits of both project financial statements and grants implementation.

To offset the anticipated social and environmental impacts HEET Project will use the new Environmental and Social Framework (ESF) by applying 9 relevant standards out of 10 Environmental and Social Standards (ESSs). The Environmental and Social Standards (ESS's) that apply to Project include:

- ESS1- Assessment and Management of Environmental and Social Risks and Impacts;
- ESS2 - Labor and Working Conditions;
- ESS3 - Resource Efficiency and Pollution Prevention and Management;
- ESS4 - Community Health and Safety;
- ESS5 - Land Acquisition, Restrictions on Land Use and Involuntary Resettlement;
- Biodiversity Conservation and Sustainable Management of Living Natural
- Resources;
- ESS7 - Indigenous Peoples/Sub Saharan African Historically Underserved Traditional Local Communities;
- ESS8 - Cultural Heritage, and
- ESS10 - Stakeholder Engagement and Information Disclosure (ESS10).
- ESS9 The Standard on Financial Intermediaries (ESS9) is not relevant for this Project.

2.3 Project Implementation arrangements

The implementation of HEET will continue to use existing staff structures and government systems. The key implementers will be MoEST through Project Implementing Unit (NPIU) and selection institutions (**Figure 2-1**).

Ministry of Education, Science and Technology: will be responsible for the overall management of project activities, providing overall coordination and technical support to institutions implementing the project. The Ministry of Education, Science and Technology has established a dedicated Project Implementing Unit considered to be at the national level (NPIU) consisting of its own personnel for the implementation of all supported

subprojects under HEET. NPIU specific roles and responsibilities in implementing the HEET project include:

- Overall responsibility;
- Project planning and budgeting: including overseeing development of sub-project concept, subproject design, sub-projects ESIA, RAP preparation.
- Review of plans and budgets
- Approval of plans and budgets
- Procurement of services of Contractors/ Consultants
- Project implementation
- Supervision of implementation, monitoring and reporting
- Review of project implementation reports
- Reporting to MoEST

Participating and Beneficiary Institutions: TCU, HELSB, COSTECH, NACTE, MUHAS and MJNUAST will take the primary responsibility of implementing own sub-projects including fiduciary, environmental and social standards, and reporting requirements and are termed as Agency Project Implementing Unit (APIU) and University Project Implementing Unit (UPIU) for universities. The MoEST will continue to take responsibility of planning and overseeing implementation of prioritized and approved urban upgrading infrastructure.

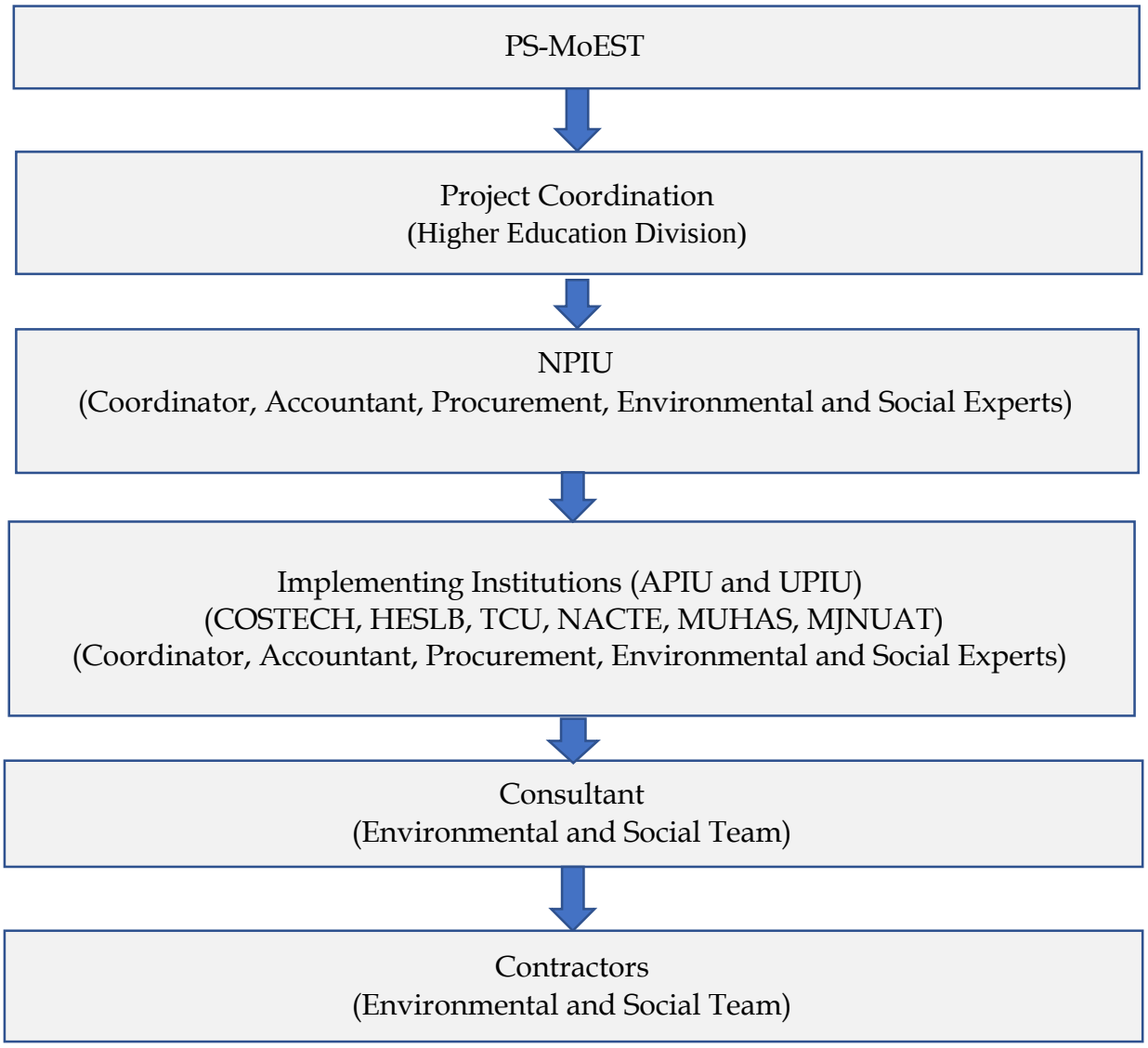


Figure 0-1: Project Institutional Arrangement for HEET Implementation

Roles and responsibilities of Contractors and consultants and other stakeholders are described in implementation arrangements for environmental and social issues in **Chapter 7 Section 7.1**.

CHAPTER THREE

ENVIRONMENTAL AND SOCIO-ECONOMIC BASELINE

3.1 Introduction

This chapter provides the baseline data on the relevant environmental and socio-economic condition of the project region/area that will make a reference frame to mark out the potential environmental and social impacts that might arise after implementing the proposed project. The affected environment includes the biophysical, social and economic environment that could be affected by or could affect the development. The baseline information in some cases refers to data and information on project regions as well as broad description of the country. However, biophysically, some of the project areas are located within areas, which are disturbed and are devoid of species of ecologically significant.

3.2 Physical Environment

3.2.1 Climate

Tanzania is a country overlooking the Indian Ocean, and lying just south of the Equator at latitude 6.3690° S and Longitude 34.8888° E. The country has a tropical climate varying from one place to another because of differences in altitude and topography. According to differences in climate (temperature, rainfall etc) in project regions, project areas are found in areas with wet, dry and moderate climate (**Figure 3-1**).

Rainfall

Planned project regions like Dodoma, Arusha and Kilimanjaro have single rainy season. Regions like Dar es Salaam, Mara, Mbeya, Morogoro, Iringa have two rainy seasons: one less intense, known as short rain season which occurs between October and December, and the other more intense, known as long rains season which occurs from March to May, with the peak in April. Careful planning of construction works will be required to avoid exposure of both works and workmen to the inclement weathers within the respective regions, however, this weather is not deemed a major risk or environmental impact to the planned project activities.

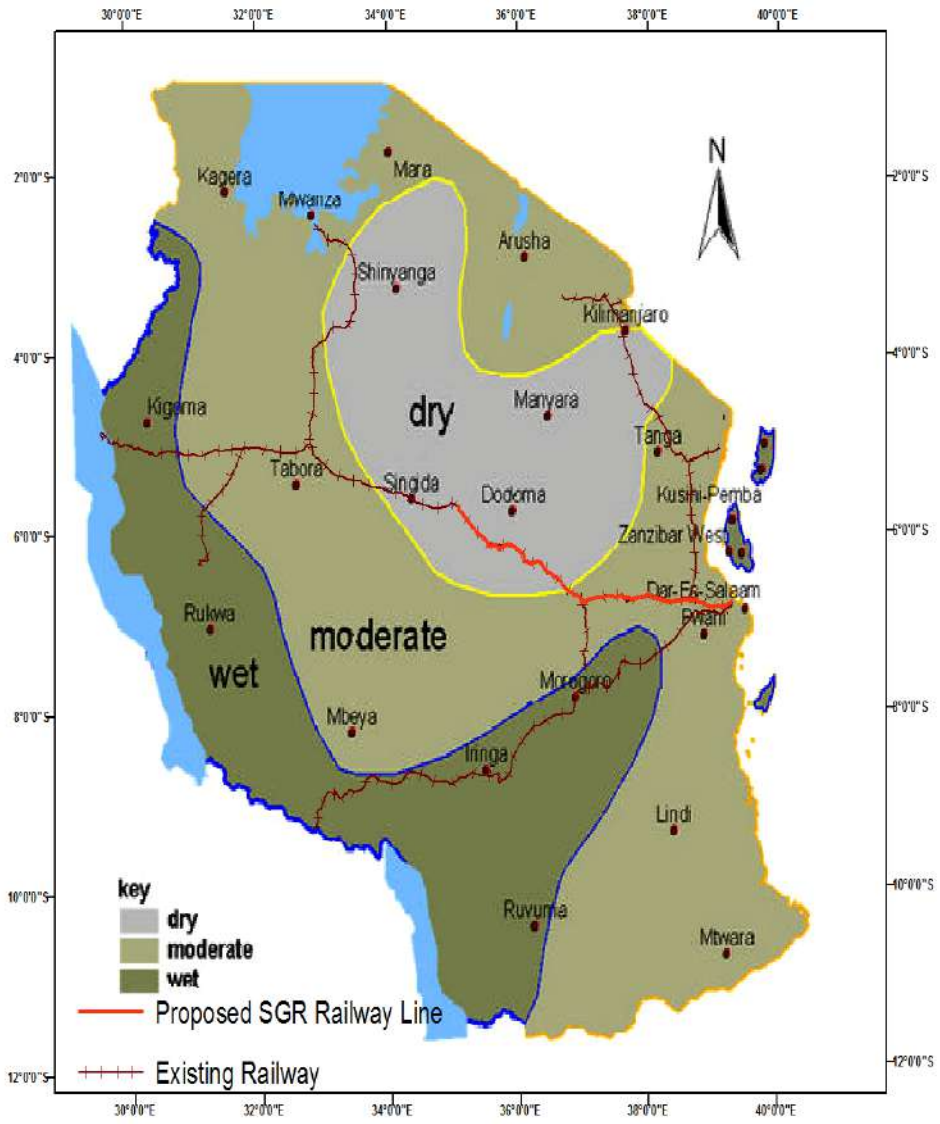


Figure 0-1: Climatic zones across the proposed project regions

Rainfall

Planned project regions like Dodoma, Arusha and Kilimanjaro have single rainy season. Regions like Dar es Salaam, Mara, Mbeya, Morogoro, Iringa have two rainy seasons: one less intense, known as short rain season which occurs between October and December, and the other more intense, known as long rains season which occurs from March to May, with the peak in April. Careful planning of construction works will be required to avoid exposure of both works and workmen to the inclement weathers within the respective regions, however, this weather is not deemed a major risk or environmental impact to the planned project activities.

Temperature

The weather is usually hot and sultry from January to February in all the project regions. On the contrary, Dar es Salaam is hot and humid throughout the year, especially from November to April when daytime temperatures are around 31/32 °C (88/90 °F) but with peaks of 35/36 °C (95/97 °F), and relative humidity is high, especially in March and April. Also, Mara has warm climate all year round with temperature slightly lower than that of Dar es Salaam region. The variation of temperature across project regions have implication on the type and durability of construction materials.

3.2.2 Geology and Soils

Geology and soils are among the important factors in building construction as each site might have different geotechnical report according to the World Reference Base (WRB), Tanzania has 19 dominant soil types. The soils in project regions are very varied, reflecting the complex interaction of climate, topography and geology (**Figure 3-2**). Volcanic activity associated with the East African Rift System typically gives rise to Andosols, while erosion of weathered basic volcanic rocks typically produces Vertisols. Widespread Cambisols reflect continuous uplift of the area surrounding the East African Rift System. For instance, project areas like Kilimanjaro and Arusha have volcanic sand type of soil. Dar es Salaam is under sedimentary, Mesozoic and Paleozoic type of soil and sometimes with unconsolidated cover. Mara is dominated by granitoids, migmatites and meta-sediments. Granitoid or granitic rocks are various types of coarse grained rocks formed by solidification of magma deep within the earth. The minerals granitoids are composed of predominantly feldspar and quartz. Granitoid rocks include granite, quartz monzonite, quartz diorite, syenite and granodiorite. In general, the soil in the project regions supports livestock keeping and cultivation of a number of food and commercial crops, give a high value to the geology and soils in the project area.

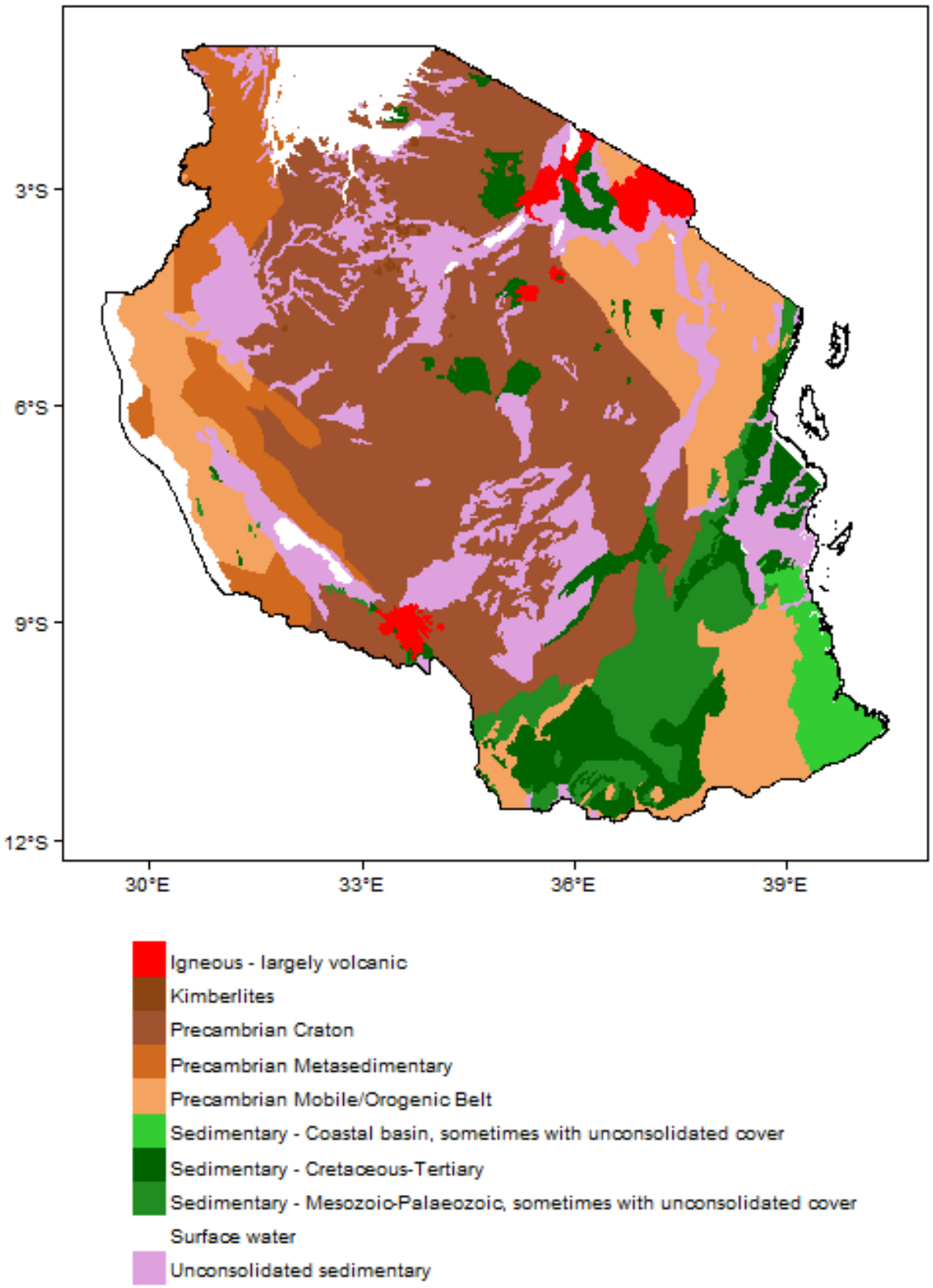


Figure 0-2 Tanzania major soil groups

3.2.3 Erosion Potential

The proposed project areas/regions are susceptible to soil erosion by the agent of wind and rainwater especially regions that experience a long draught and short rainfall seasons. Due to unreliable rainfall, project regions may have scanty vegetation such as herbs, grasses as well as conspicuous baobab and acacias trees such that soil becomes prone to erosion due to wind. Construction and operation of the proposed projects will increase potential of soil erosion due to various activities that will increase exposure of soil to erosion by both wind and rainwater runoff. These include site excavation, clearance and quarrying to mention few.

3.2.4 Seismic Activity

Information on seismic activities might affect project implementation as it helps to determine choices of the construction materials and other precautionary measures. Most of project regions where the proposed projects will be implemented have no any volcanic eruption event that has been reported before. There is no even any volcano signals to erupt in the project area especially along the area of direct influence. The project regions like Dodoma, Arusha and Kilimanjaro are vulnerable to earthquake as they lie in the Rift valley (**Figure 3-3**). The recent earthquake occurred with the Magnitude of 5.1 in 2016 in Dodoma region. The biggest magnitude of the earthquake recorded in the regions was 5.5 Magnitude which occurred in 2002 in Dodoma region (USGS Page). Other earth quake related movements was reported to occur in Dar es Salaam in August of 2020. This implies that design will consider the seismic issues by choosing appropriate construction materials and other precautionary measures.

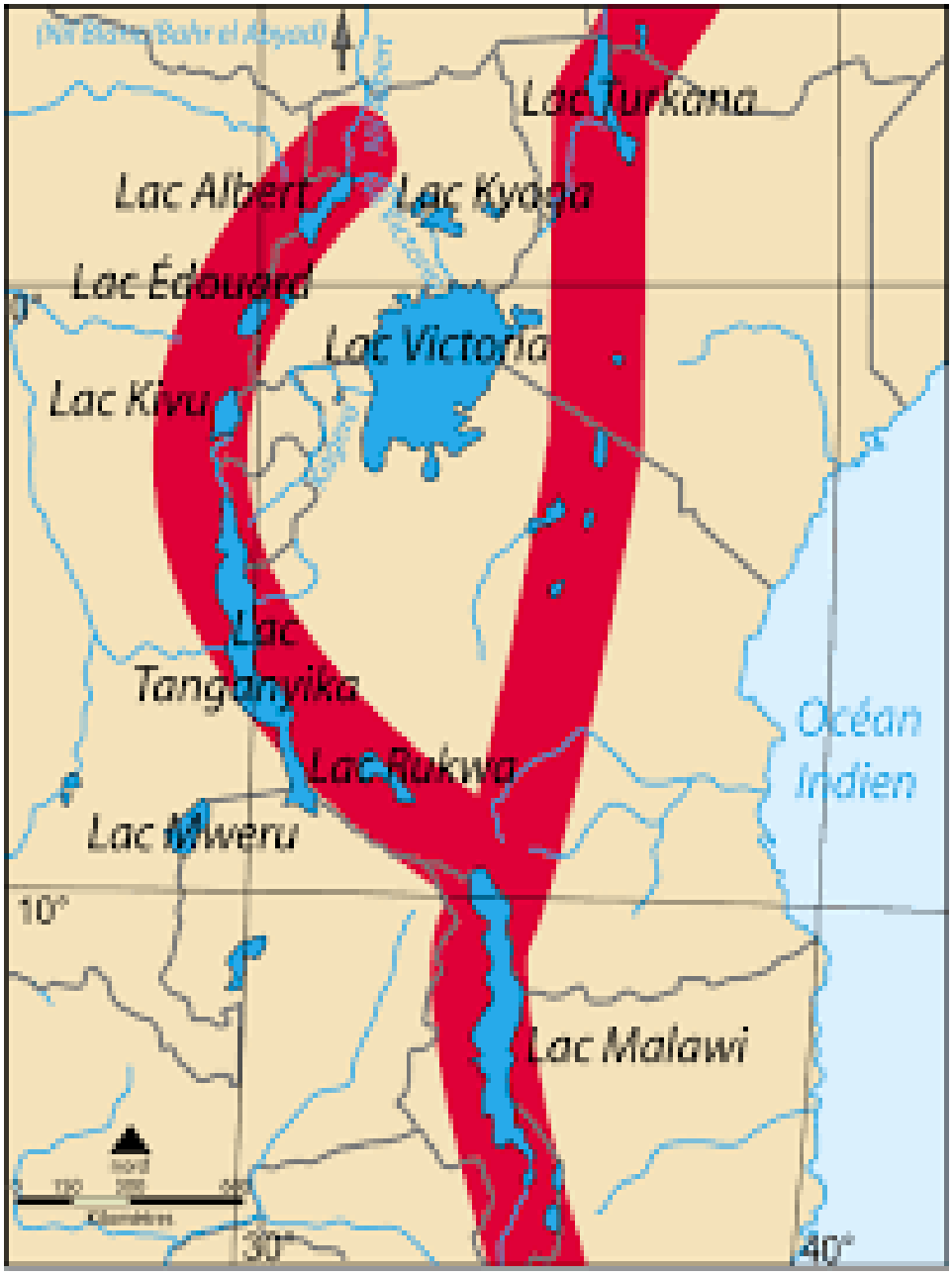


Figure 0-3 Rift valley map

3.2.5 Vegetation

Woodland is the dominated vegetation types in Tanzania. Morogoro and Mbeya region have forest and woody vegetation resources. Based on project regions, the least forested region is Dar es Salaam (150,809ha) followed by Kilimanjaro (1,250,496ha). In Dar es Salaam the dominant tree species is neem trees followed by mangrove. **Figure 3-4** shows types of vegetation found in project regions. Construction activities will result into vegetation clearance. The HEET project shall be conducted in a manner which is safe to natural environment.

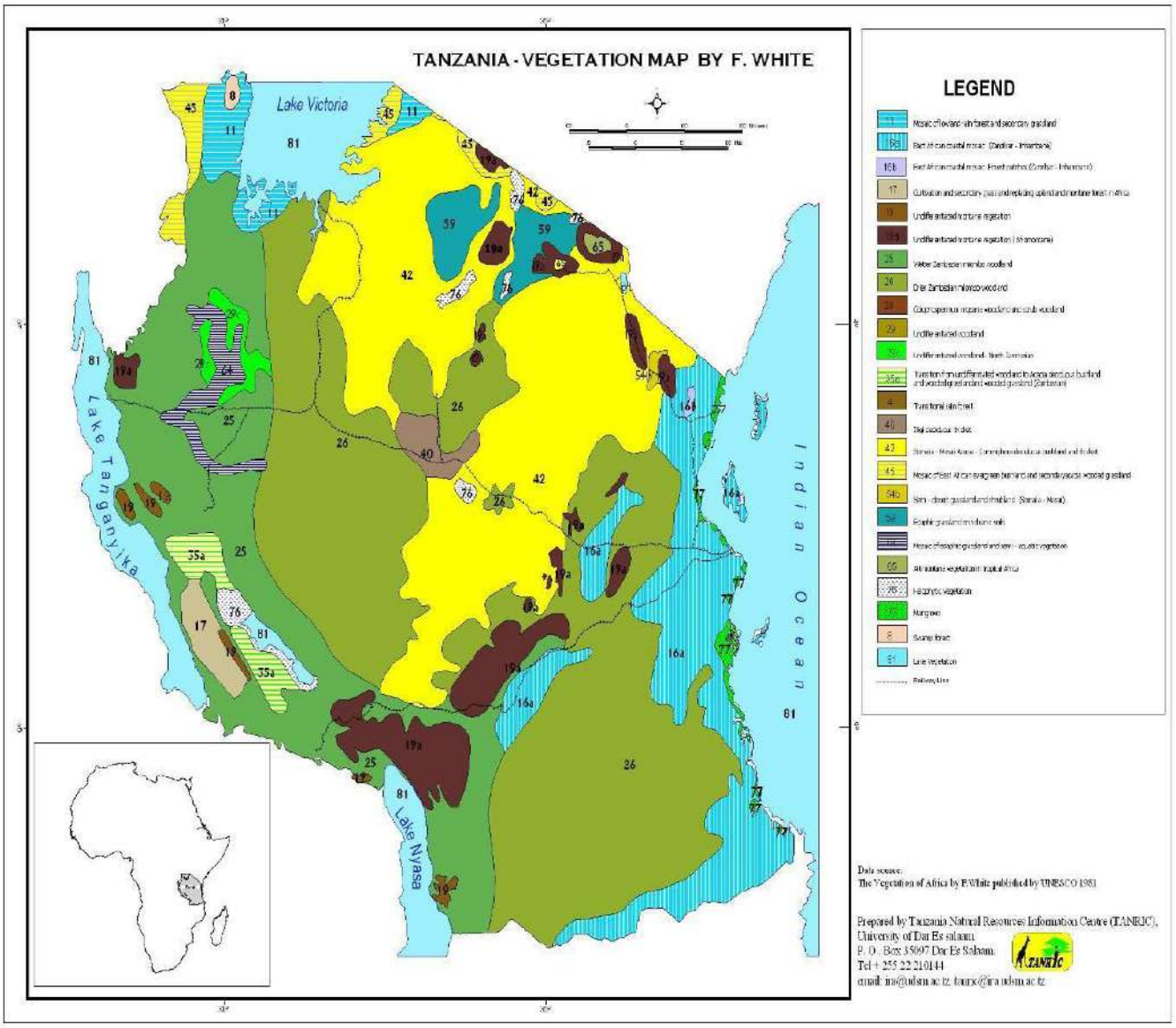


Figure 0-4 Tanzania vegetation map (White, 1983)

3.3 Social Characteristic

3.3.1 Demography

3.3.1.1 Population size, density and growth rate

Tanzania is sparsely populated with population density of 51 persons per square kilometer with variation across regions. In all project regions, female population is higher than male population. Persons are concentrated in Dar es Salaam in terms of size and density. Project regions with lowest population densities are Iringa (31 persons per square kilometer) followed by Arusha and Mbeya which have 45 persons per square kilometer. The population size is determined by birth rate, mortality rate and internal movement of people from one part of the country to another. The most notable regions with high percentages of internal migrants include Manyara (50 percent) and Pwani (30.6 percent). The ethnic composition in Tanzania comprises of more than 120 tribes who are distinguished by dialects, traditions and customs. Groups that meet the criteria of ESS7, referred to as Vulnerable Groups, include, but are not limited to, hunter-gatherers such as Akie and Hadzabe; pastoral groups like Maasai and Barbaig in northern Tanzania and agro-hunter-gatherer groups like the Sandawe in central Tanzania. The project is not expected to have land-related impacts that affect Vulnerable Groups but it will have activities focused on program and curriculum development around sectors such as natural resources management, climate change, tourism, agriculture, that need to be sensitive to culture, traditions and needs of the Vulnerable Groups referred to in the application of ESS7.

The statistics of population size, density and growth rate in project regions as of 2012 census are shown in **Table 3-1**.

Table 0-1 Population size, density, growth rate and internal migration in project regions

Region	Total Population	Male population	Female population	Population density	Population growth
Dar es Salaam	4,364,541	2,125,786	2,238,755	3,133	5.6
Morogoro	2,218,492	1,093,302	1,125,190	31	2.1
Iringa	941,238	452,052	489,186	27	1.1
K'njaro	1,640,087	793,140	846,947	124	1.8
Arusha	1,694,310	821,282	873,028	45	2.7
Mbeya	2,707,410	1,297,738	1,409,672	45	2.7
Dodoma	2,083,588	1,014,974	1,068,614	50	2.1
Mara	1,743,830	840,020	903,810	80	2.5

Urban West-Zanzibar	593,678	283,590	310,088	2581	4.2

3.3.1.2 Gender Based Violence in Regions of Tanzania

Gender refers to the social, behavioural, cultural attribute expectations and norms associated with being a woman or a man. Gender based violence results from unequal power relationships between women and men and it cuts across all divisions of classes, race, religion, age group and ethnicity.
Gender Based Violence (GBV) and HIV/AIDS are major social and problems health affecting women and men in African countries Tanzania included.

In Tanzania, Gender based violence takes place in different forms including physical and psychological violence, child marriage, sexual violence, economic violence such as lack of women to own resources and deprived acquisition of basic needs. There are also cultural violence such as female genital mutilation and psychological violence, such as depression and trafficking of women and girls. The HEET project will conduct SEA/SH risks assessments to obtain data and information on the role of GBV/SEA/SH in higher education and its impact on access to education and equity as well as prepare GBV Action Plan after project effectiveness.

3.3.1.3 Net and Gross School Enrolment

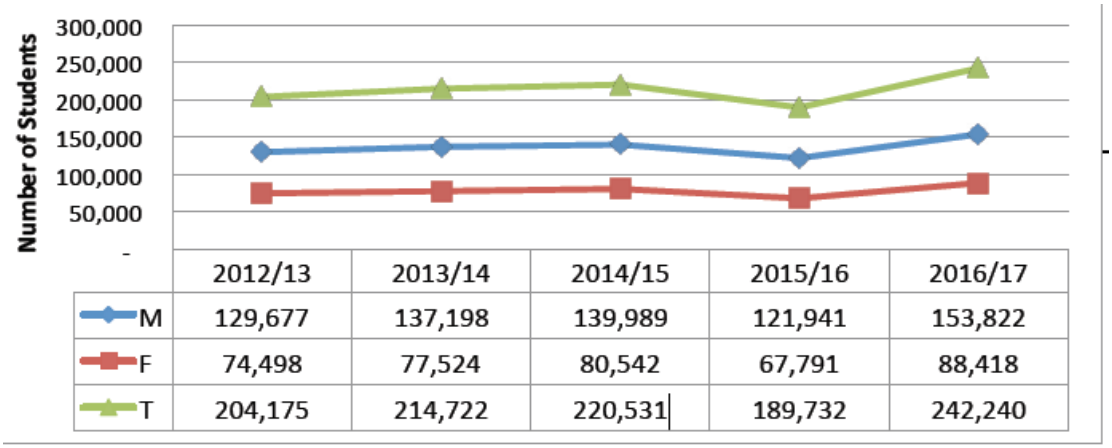
Enrolment ratios depict the proportions of children currently attending school which is important in assessing access to education among the population. In primary education, Net Enrolment Rate (NER) is defined as the number of children aged 7-13 years who are attending school divided by the total number of children in that age group. The 7-13 years age group is the official primary school age in Tanzania. On the other hand, Gross Enrolment Rate (GER) is defined as the number of children attending primary school regardless of age divided by the total number of children of age 7-13 years. In the project regions, Kilimanjaro is the region with highest male NER (93.7%) and the lowest is Dodoma (64.7%). Furthermore, data shows that region with highest female NER is Kilimanjaro (94.5%) and the one with the lowest NER is Dodoma (70.8%) (**Table 3-2**). The higher the NER the more the access to education among the population and vice versa. The project region with the largest number of universities is Dar es Salaam region which has 4 public universities, 6 private universities, 2 private university college and 1 public university college followed by Arusha. Also, there is presence of secondary schools of both levels (A level and O level) in all the project regions.

Table 0-2 Net and Gross School Enrolment

Region	**NER (%)**	
	Male	**Female**

Dar es salaam	91.8	91.4
Arusha	79.3	81
Dodoma	64.7	70.8
Kilimanjaro	93.7	94.5
Iringa	89.2	92.2
Mara	82.7	84.1
Mbeya	83.6	85.7
Urban West, Zanzibar	91.1	92.6
Morogoro	73.6	84.1

The higher education in the country aims at enabling Tanzanian citizens or youth become well educated, knowledgeable and well versed with perspectives, skills and developments in social, economic, cultural, scientific and technological fields. Higher education enables youth and all people in any cadre face the challenges of development that require immediate and long resolutions, especially, in the eradication of poverty individually and at national level. Increase access to education among the population, is proportional with the enrolment to higher education level. **Figure 3-5** shows the enrolment in Higher learning institutions has increased from 189,732 in 2015/16 to 242,240 in 2016/17. The increase in enrolment in 2016/17 has been attributed by increase degree programs and additional provision of loans to students. The enrolment at University /college level will further increase upon successful implementation of the HEET project. The increased enrolment at university/college level will create pulling effect at schools' enrolment as well due to assured availability of universities/colleges.



	2012/13	2013/14	2014/15	2015/16	2016/17
M	129,677	137,198	139,989	121,941	153,822
F	74,498	77,524	80,542	67,791	88,418
T	204,175	214,722	220,531	189,732	242,240

Figure 0-5 Higher Education Enrolment trend 2012/13 – 2016/17

Mainland Tanzania disability prevalence stands at 13.3% while that of Zanzibar is 9.3%: With regard to special and inclusive education, the Education and Training Policy 2014 recognizes the importance of having proper identification of students with special

educational needs and children with disabilities. The policy statements address the needs of learners with disabilities and with special educational needs, and hence cater for the inclusion demands. In the implementation of Country's efforts to provide inclusive education, Higher Learning Institutions (HLIs) application forms requires applicants to indicate disability status in order to facilitate the provision of specialised educational support services and assistive devises upon enrolment or admission.

Despite the fact that the qualification for joining the HLI are the same for everyone, students with disabilities and other special needs, are given priority in loans applications where they are given 100%. In addition, these students are given various support services to facilitate teaching and learning such as: specialised experts, accommodation, equipment and devices, access to buildings and sign interpretation. In spite of existing Government initiatives, there is a need to improve teaching and learning environment for students with disabilities and other special needs. Therefore, HLI institutions need to be supported to provide appropriate services including: sign language interpretation, transcription of materials in accessible format, specialised education equipment, assistive devices and accessible infrastructure. Moreover, HLIs need to upgrade their policies and curricula to be inclusive to accept diversity in learning.

3.3.1.4 Literacy rate

Project regions recorded to have highest percentages of male literates is Dar es Salaam (97.6 percent) followed by Urban West in Zanzibar (95.6percent). Project regions with lowest male population who are literate are Dodoma (73.5 percent) followed by Morogoro (82.2 percent). However, the distribution of the male and female population with 15 years and above by literacy is such that Dar es Salaam has the highest proportion of females who are literate (94.8 percent) followed by Urban West in Zanzibar (90.9 percent Project regions whilst those with the lowest females literacy rate are Dodoma (62 percent) followed by Morogoro (72 percent). **Table 3-3** shows statistics of household size and literacy rate as of 2012 census. The HEET project is anticipated to increase the literacy rate in the country. The HEET project will boost enrolment in primary and secondary schools due to anticipated increase in enrolment capacity in universities/colleges.

Table 0-3 Literacy rate across HEET project regions

Region	Literacy rate by language	
	Male	Female
Dar es Salaam	97.6	94.8
Kilimanjaro	94.4	90.3
Arusha	84.5	76.7
Morogoro	82.2	72
Dodoma	73.5	62
Mbeya	86.6	75.7
Iringa	88.4	76.1

Mara	87.2	75.2
Urban West-Zanzibar	95.6	90.9

3.3.1.5 HIV Status in Project regions

The Tanzania HIV Impact Survey (THIS), a household based national survey, was conducted between October 2016 and August 2017 to measure the status of Tanzania's national HIV response. The study reports that annual incidence of HIV among adults ages 15 to 64 years in Tanzania is 0.29 percent (0.40 percent among females and 0.17 percent among males). This corresponds to approximately 81,000 new cases of HIV annually among adults ages 15 to 64 years in Tanzania. Also, prevalence of HIV among adults ages 15 to 64 years in Tanzania is 5.0 percent (6.5 percent among females and 3.5 percent among males). This corresponds to approximately 1.4 million people living with HIV (PLHIV) ages 15 to 64 years in Tanzania. **Table 3.4** shows AIDS prevalence rate in project regions. The region with the highest prevalence rate was Iringa followed by Mbeya and Iringa. The HEET project might lead to an increase in the incidence of diseases including STI, and HIV/AIDS taking into consideration that construction activities will be within university campuses.

Table 0-4 HIV AIDS Prevalence rate in project Regions in 2017

Region	Prevalence rate (%)
Dar es Salaam	4.7
Morogoro	4.2
Iringa	11.3
Kilimanjaro	2.6
Arusha	1.9
Mbeya	9.3
Dodoma	5.0
Mara	3.9
Urban West-Zanzibar	0.6

Source: NBS 2017

3.3.16 Discrimination Against Persons With HIV/AIDS

Tanzania HIV/AIDS indicator survey (THMIS, 1012) show that HIV prevalence among individuals in the age group 15- 49 years was 5.3% and varied between men (3.8%) and women (6.2%). Furthermore, HIV prevalence is higher in urban areas (7.2%) than in rural areas (4.3%). In Tanzania discrimination is recognized as one of the major challenges in the prevention and control of the HIV/ AIDS epidemic. This recognition is manifested in the National Policy on HIV/AIDS, which acknowledges that in order to fight against the epidemic; discrimination must be prevented consistently by all sectors and at all levels.

The most risk to HIV (key affected populations) continue to face discrimination based on their actual or perceived health status, race, socioeconomic status, age, sexual orientation or gender identity or other grounds. Discrimination of people with HIV/AIDS occur in different ways whereby in health care setting it may occur through baring people from accessing health services or enjoying quality health care.

3.3.2 Economic Baseline

3.3.2.1 Industrial activities

Considering the number of industrial establishments by project regions for large industrial establishment, Dar es Salaam has the largest number (389) followed by Arusha (167). In terms of employment number in industrial establishments, Dar es Salaam absorbs 7,373 followed by Mara (3,503). **Table 3-5** shows the number of industrial establishments in proposed project regions and the number of employees as of 2012 National census. The HEET project will increase industrial production due to increase of manpower to be trained in universities. The manpower will either get employed in industries or self-employed. On other hand, production will increase due to assured market in respective regions due to presence of universities who are the main consumers.

Table 0-5 Number of establishments by project regions

Region	Number of Industrial establishments	Employment in establishments
Dar es Salaam	389	7,373
Dodoma	30	1,809
Mbeya	73	2,820
Kilimanjaro	66	1,719
Arusha	89	2,138
Iringa	32	2,479
Morogoro	48	3,037
Urban West, Zanzibar	No data	No data
Mara	28	3,503

3.4 Socio-Economic Infrastructure

3.4.1 Energy sources

Among the proposed project regions, Dar es Salaam relies heavily on charcoal as the energy source for cooking (73.5) followed by Urban West Region (52.1 percent). Regions with the least percent of private households using charcoal as the main source of energy for cooking Kilimanjaro (10.9 percent). The regions with the highest proportion of households using firewood as the main source of energy for cooking is Iringa (82.3

percent). On the other side, there is a notable variation among electricity as the main source of energy for lighting across the proposed project regions. Regions with high proportions are Dar es Salaam (64.4 percent) for Tanzania Mainland and Urban West for Zanzibar. Regions with the lowest proportion of households using electricity as the main source of energy for lighting is Dodoma (12.3 percent). These data imply that the remaining percent of the private households use other sources of energy for lighting such as kerosene lantern, candles, firewood and torch. **Table 3-6** shows statistics on energy use as of 2013. The increase of students may increase exploitation of natural resources due to increasing demand for charcoal and firewood for cooking. However, the increase of students will increase pressure in electricity use in respective regions.

Table 0-6 Energy sources across project regions

Region	Energy sources		
	Charcoal	Firewood	Electricity
Dar es Salaam	73.5	6.6	64.4
Morogoro	27.7	68.7	15.8
Dodoma	16.1	81.4	12.3
Kilimanjaro	10.9	79.8	30.5
Arusha	16.1	62.2	29
Iringa	15.4	82.3	17.7
Mbeya	22.7	74.2	14.7
Urban West-Zanzibar	52.1	35	71.6
Mara	18.1	78.9	12.8

3.4.2 Air services

Air transport is the most preferred method of access to Tanzania for international and local visitors and, therefore, the sector has proven to be both important and heavily relied upon. The total number of air passengers in Tanzania increased by 62% in the past 5 years, from 2.1m in 2010 to 3.5m in 2015. There are 58 airports and more than 300 private airstrips in Tanzania owned by mining companies and tour operators. Almost all project regions have airport and or airstrips. There are currently three international airports in Tanzania: the Julius Nyerere International Airport (JNIA) in Dar Es Salaam, the commercial capital, the Kilimanjaro International Airport (JRO) near Arusha, and the Abeid Amani Karume International Airport (ZNZ) in Zanzibar. Currently (2016), there are 21 airlines operating at the Julius Nyerere International Airport (JNIA), Tanzania's largest and busiest airport. The increased number of airlines imply that universities/colleges to be constructed will be easily accessible locally (from all parts of Tanzania) and internationally.

3.4.3 Road networks

All project investments will be located in regions, which have both regional and collector roads as stipulated in Section 12 (2) (a) and (b); 12 (3) (a) (b) and (c) of the Road Act, 2007 (No. 13 of 2007) which states that a regional road is a secondary national road that connects regional headquarters and district headquarters while collector road is a road linking a district headquarters and division center. The availability of regional and district roads implies that universities/colleges to be constructed will be easily accessible from all parts of Tanzania. Hence, universities are likely to get students from any part of the count.

3.5 Universities' Baseline Information

Universities and other participating organizations will conduct the construction works of various facilities within their campuses and land. There are existing facilities in most of the existing university land except for Tanzania Commission for University whose land is still vacant. Universities land uses are dominated by office buildings, hostels laboratories, restaurants and other essential facilities. Most university campuses are surrounded by trees and shrubs and are bordering settlements, institutions and farmlands. Baseline information for individual institutions are attached as **Appendix I.**

CHAPTER FOUR

POLICY, LEGAL AND INSTITUTIONAL REQUIREMENTS

4.1 Introduction

All sub-projects implemented under HEET project shall comply with relevant national environmental and social management requirements as well as the World Bank ESS applicable to the project. The legislations and institutions relevant to environmental, social and resettlement management are presented in order for the users of the ESMF to know the minimal legislative requirements and key actors involved in approving, enforcing, implementing or coordinating the requirements.

4.2 Policies Relevant to the Project

4.2.1 The National Environment Policy for mainland (NEP) of 1997

The National Environment Policy for mainland (NEP 1997) is the main policy document addressing environmental management issues in Tanzania main land. The policy covers sectors that include land and human settlements; forestry; water and sanitation; health; transport; energy; industry; wetlands; agriculture; livestock; fisheries; wildlife; tourism; and mining. The National Environmental Policy, 1997 has relative policy statements to other sectoral and cross-sectoral policies upon which the Tanzanian environmental laws are premised. Thus, all economic and development activities are implemented in accordance with the policy.

The policy requires EIA to be mandatory for all development projects likely to have significant environmental impacts. The intention is to ensure that the development projects are implemented in an economically sustainable manner whilst protecting environmental and social issues for the benefit of the present and future generations.

4.2.2 National Land Policy (1995)

The National Land Policy states that, “the overall aim of a National Land Policy is to promote and ensure a secure land tenure system, to encourage the optimal use of land resources, and to facilitate broad - based social and economic development without upsetting or endangering the ecological balance of the environment”.

The project will be required to ensure protection of existing cultural heritage and conservation of ecological and socially sensitive areas. Also, the management will be required to ensure proper disposal of solid wastes, especially within the sub project implementation sites (institutions and universities).

4.2.3 Construction Industry Policy (2003)

Among the major objectives of the policy, which supports a sustainable block development sector, include the promotion and application of cost effective and innovative technologies and practices to support socio-economic development activities such as blocks, road-works, water supply, sanitation, shelter delivery and income generating activities and to ensure application of practices, technologies and products which are not harmful to either the environment or human health. This project is in-line with this policy as ultra-modern technology shall be used during construction and its operation.

4.2.4 National Gender Policy (2002)

The key objective of this policy is to provide guidelines that will ensure that gender sensitive plans and strategies are developed in all sectors and institutions. While the policy aims at establishing strategies to eradicate poverty, it is relevant to the project as it puts emphasis on gender quality and equal opportunity of both men and women to participate in development undertakings and to value the role-played by each member of society. It also requires that women and men are given equal employment opportunities in the project, whenever possible.

4.2.5 Energy Policy (1992)

The policy advocates the adoption of renewable energy options. This project intends to integrate renewable energy (solar power) as part of the energy source.

4.2.6 The National Water Policy (URT, 2002)

The overall objective of this policy is to develop a comprehensive framework for the sustainable management of the water resources in the country. This framework promotes the optimal, sustainable and equitable development and use of water resources for the benefit of all Tanzanians, based on a clear set of guiding principles. The policy provides for beneficiaries' participation in water supply schemes and addresses cross-sectoral interests in water, watershed management and integrated and participatory approaches for water resources planning, development and management. The policy provides a shift of Government roles from service provider to that of coordination, policy and guidelines formulation, and regulation. Public consultations conducted for the cause of the ESIA for this project brought stakeholder participation in line with the policy objectives. Institutions under HEET project shall observe judicious use of water by putting in place water conservation measures. As well as to ensure that pollution of water sources is avoided or minimized during construction and operations.

4.2.7 The National Health Policy (URT, 2003)

This Policy is a revision of the 1990 Health Policy, which emphasized on the need for increasing community involvement in health development and improved access and equity in health and health services. One of the main objectives of this policy is to ensure that health services are available and accessible to all people wherever they are in the country, whether in urban and rural areas. The policy encourages safe basic hygienic practices in workplaces, promote sound use of water, promotes construction of latrines and their use, encourage maintenance of clean environment; working environment which are conducive to satisfactory work performance.

The policy is relevant to the project responsible to provide safe environment during project implementation as well as to implement safety measures, regulations and precautions.

4.2.8 Urban Planning and Space Standards Policy 2012

The policy provides guidance for continuing delivery of a high-quality pedestrian and other people friendly public realm within the city centers in order to support the economic, social, cultural and environmental attractiveness of the city centers to businesses, residents and visitors. The policy explains more as the management of space is a key foundation of the asset management strategy. Also, the provision of appropriate space is becoming even more important as institutions increasingly competing in urban areas. Therefore, the project will plan for proper utilization of urban space during its implementation.

4.2.9 Education Training Policy (2014)

Tanzania aims at improving the quality of education. This is through the collaboration with all education stakeholders to modernize the curricular at all levels and make sure that it meets requirements. The education training policy, 2014 stressed that for improvement of the quality of education in Tanzania there will be a shift from using many text books into using single text book for each subject. The policy also emphasizes all private schools need to have affordable school fees on the basis of “Unit per course” and analyse its operation as well. The school fees will relate with the service offered by the school. This project is in-line with this policy as will modernize education training and put in place the state of the art equipment for training. Also, the school fees will be affordable to all people.

4.3 Legal Framework

4.3.1 Environmental Management Act (EMA), 2004

The Environmental Management Act No. 20 of 2004 is the principle legislation governing environmental management in the country. The Act was established to address the environmental management priorities set in the NEP (1997). The Act provides a legal framework for managing environment in the country. Furthermore, the act made possible provision of environmental management tools namely: Environmental Management (Environmental Impact Assessment and Audit) Regulations 2005 (Amendment), 2018; Environmental Management (Hazardous Waste Control and Management) Regulations (2009); and Environmental Management (Soil Quality Standards) Regulations (2007).

The EMA requires an Environmental and Social Impact Assessment (ESIA) to be carried out for the development of any project which is likely to have a significant impact on the environment. The ESIA provides the institution responsible for environment sufficient information to justify, on environmental, social and community development grounds, the acceptance, modification or rejection of the project and its implementation. Moreover, the ESIA is targeted to provide the basis for guiding subsequent actions of the project life cycle which -through management and monitoring plan - will ensure that the proposed project is carried out considering the environmental, socio-economic issues, and resettlement initiatives identified along with requirements for compliance throughout the project's life cycle.

The Act makes it mandatory for any person to comply with the environmental and social impact assessment requirement of the Project which includes environmental screening, scoping, preparation of the Environmental Impact Statement and its review before the decision on environmental clearance is made. As per the Act, there is ESIA screening, scoping and the review process, while the preparation of the EIS is carried out by the registered expert forwarded by the project proponent and only after having been approved by the National Environmental Management Council (NEMC). The HEET project has to conform to all requirements of environmental and social clearance which include EIA, Auditing, Monitoring, and implementation of the environmental and social management plans for the project.

The Act is relevant to the project because it is expected to have some negative impacts to the environment during its implementation. The act requires the EIA report to be submitted to NEMC for review and subsequently issuance of Environmental Impact Assessment Certificate.

4.3.2 Employment and Labour Relation Act, 2004

The Act prohibits forced labour and discrimination of any kind in the workplace. It provides employment standards such as contracts with employees, hours of work, remuneration, leave, unfair termination of employment and other incidents of termination. The Act makes provision for core labour rights, to establish basic employment standards, framework for collective bargaining, prevention and settlement of disputes and other related matters. The Act strictly prohibit child labour, it provides that no person shall employ a child under the age of fourteen years, it further provides that a child under eighteen years of age shall not be employed in any worksite including construction where, that being a case. The Act prohibits discrimination, being direct or indirect in any employment policy or practice on any of the following grounds; colour, nationality, tribe or place of origin, race, national extraction, social origin, political opinion nor religion, sex, gender, pregnancy, marital status, or family responsibility, disability, HIV/AIDS, age or situation of life. It is an offence for this provision to be contravened by any employer. HEET project will follow this Act requirement in matters related to labour and employment, during its implementation.

4.3.3 The Land Act, 1999

These laws declare all land in Tanzania to be “Public land” to be held by the state for public purposes. The Acts empower the President of the United Republic of Tanzania, to revoke the “Right of Occupancy” of any landholder for the “public/national interest” should the need arise. The laws also declare the value attached to land. The land Act among other things, will determine the ownership of the land where the project will be implemented.

The law as amended in 2004 recognizes the role of land in economic and urban development. The law provides for technical procedures for preparing land use plans, detailed schemes and urban development conditions in conformity with land use plan and schemes. The Local Government Authority has the power to impose conditions on the development of any area according to the land-use planning approved by the Minister.

4.3.4 The Urban Planning Act (2007)

The law provides for the orderly and sustainable development of land in urban areas, to preserve and improve amenities; to provide for the grant of consent to develop land and powers of control over the use of land and to provide for other related matters. Section 29-(1) of the law states that "*Notwithstanding the provisions of any other written law to the contrary, no person shall develop any land within a planning area without planning*

consent granted by the planning authority or otherwise than in accordance with planning consent and any conditions specified therein".

4.3.5 Occupational Health and Safety Act (2003)

The law requires employers to provide a good working environment to workers in order to protect their health. The employers need to perform medical examinations to determine fitness before engaging employees. Employers must also ensure that the equipment used by employees is safe and shall also provide proper working gear as appropriate. This shall be adhered to during construction and operational phase of HEET project.

The Act has relevant to the project because it will involve construction of buildings. Therefore, project is responsible to provide to workers /constructor/ students with a safe environment during project implementation. In addition, the project construction sites are required to implement safety measures, regulations and precautions and ensure health and welfare of workers and proper handling of hazardous materials and chemicals.

4.3.6 Engineers Registration Act and its Amendments 1997 and 2007

The Acts regulate the engineering practice in Tanzania by registering engineers and monitoring their conduct. It establishes the Engineering Registration Board (ERB). Laws require any foreigner engineer to register with ERB before practicing in the country. Foreign engineers working with this HEET project shall abide to the law requirement.

4.3.7 The Contractors Registration Act (1997)

The Contractors Registration Act requires contractors to be registered by the Contractors Board (CRB) before engaging in practice. It requires foreign contractors to be registered by the Board before gaining contracts in Tanzania. Institutions shall comply with the law requirement during the recruitment of contractors for HEET project implementation.

4.3.8 The Architects and Quantity Surveyors Act (1997)

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

4.3.9 Public Health Act 2009

An Act provide for the promotion, preservation and maintenance of public health with the view to ensuring the provision of comprehensive, functional and sustainable public health services to the general public and to provide for other related matters.

This Act is relevant to the project especial through Section 66 of the Act state that: *(1) A block or premises shall not be erected without first submitting the plans, sections and specifications of the block site for scrutiny on compliance with public health requirements and approval from the Authority.*

4.3.10 Fire and Rescue Act (2007)

According to the Act, among others, the functions of the force are to: '(a) Extinguish fire (b) grade cities, municipalities, townships and villages into various fire and rescues services levels (c) conduct fire inspection and investigations for purposes of obtaining information relating to the causes of fire and loss inflicted by fire (d) Conduct studies on investigation of arson and accidental fire (e) Conduct training for fire department personnel, other officers and voluntary fire fighters (f) Prepare fire statistics and fire service information (g) Conduct fire tests on protection facilities, equipment and materials. In section 3(1) (g) it covers premises of facility used as a place for storage flammable liquids, gas or chemicals. The Act also obliges the owners and managers of the structures to set aside places with free means of escape, and install fire alarm and detection systems, or such other escape and rescue modalities in the event of fire.

4.3.11 Employment and Labour Relations Act (No.6), 2004

In the Employment and Labour Relations Act, Section 7(1) provides details on conditions of a good and reliable employment environment. Furthermore, sections 11-91 makes provision for wage determination that stipulates a minimum term and condition of employment as shall be the employment standard. Section 11(2) and 14(1) provide detail on employment contractual conditions, while sections 19(1), (2), (3) and (5) state the working duration and overtime conditions. Moreover, section 31 provides information on employment leave and sections 32(1), (2) and (3) provide information on sick and maternity leave.

HEET project will ensure that it operates within the requirements of this legislation and will comply with stipulated conditions of the Employment and Labour Relations Act, 2004 so as to fulfil the requirements of their employees.

4.3.12 The Workers Compensation Act (No.20), 2008

The Act focuses mainly on:

- Provision for adequate and equitable compensation for employees who suffer occupational injuries or contract occupational diseases arising out of, and in the course of their employment, and in the case of death to their dependents.

- Provision for the rehabilitation of employee who have suffered occupational injuries or contacted occupational diseases in order to assist in restoring their health in dependence and participate in society.
- Provision for a framework for the effective, prompt and empathetic consideration, settlement and payment of compensation benefits to employees and their dependants.
- Provide for the establishment, control and administration of workers to compensation fund, and the legal framework for the contribution to, and payment from, the fund.
- Give effectiveness to international obligations with respect to compensation.
- Promote prevention of accidents and occupational diseases.

This Act provides the right for compensation to workers for occupational injury in section 19(1) - (5) or accident in sections 20 and 21. Also in sections 22(1) - (5), an employee has the right to compensation for occupational diseases. HEET project will operate within the requirements of this legislation and abide by all relevant sections provided by this Act.

4.3.13 The Prevention and Control of HIV/AIDS Act (No. 28), 2008

This Act focuses on the prevention, treatment, care, support and control of HIV and AIDS, and to provide for appropriate treatment, care and support using available resources to people who are living with or at risk of HIV and AIDS. Further Section 4(1) provides details to promote public awareness on the cause, mode of transmission, consequences, prevention and controls of HIV and AIDS. Further it describes the mode of curbing the spreading, prevalence of STIs in the population and adverse impacts resulting from HIV and AIDS, as well as protection rights for orphans. The increase of care, support and access to persons living with HIV and AIDS is also stipulated in Section 4(1) (f). Further, Sections 6(1) and (2) describe the necessity for private sectors, in collaboration with government, to implement programs and plans geared towards prevention, care of patients and control of HIV and AIDS in their respective area. Section 6(4) stipulates that TACAIDS is the main coordinator and adviser of such matters.

Section 8(1) describes the necessity to operate within the requirements of this legislation and be conscious of the public awareness of HIV and AIDS. In addition, Section 9 illustrates how to operate within the requirements of this legislation, to coordinate and establish workplace programs on HIV and AIDS for employees under his control, and such programs should involve the provision of gender responsive HIV and AIDS education, distribution of condoms and support to people living with HIV and AIDS (awareness creation). Finally, Section 19(2) describes the provision of community based HIV and AIDS prevention, support and care services. The project may involve

construction of a workers' camp site, this may lead to the possible interaction between the workers and the local community members, which may lead to the increased transmission of HIV / AIDS to both the workforce and the local communities. In this case HEET project will have to operate within the requirements of this legislation in adherence to the requirements of its respective regulations in addition to HIV/AIDS Policy.

4.3.14 The Standard Act of 2009

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.

- TZS 931:2006 Protection against ionising radiation - Limits for occupational exposure: This standard aims at protecting workers, whose practices expose them to ionising radiation, namely; gamma- and X-rays, alpha, beta and other particles that can induce ionisation. The Standard does not apply to non-ionising radiation such as microwave, ultraviolet, visible light and infrared radiation. It applies to all workplaces in which employees are occupationally exposed or in which there is a potential for occupational exposure to ionising radiation, unless exempted by the Regulatory Authority.

HEET project will be adhered to this Act requirement, during the implementation.

4.3.15 The Education (Amendment) Act, 1995

This Act amended the Education Act, 1978 that establish the Higher Education Accreditation Council, to provide the procedure for accreditation and other related matters. Among other functions, the council accredits higher education institutions; approve admissions into state institutions of higher education, to examine and approve proposals for courses of study and course regulations submitted to it by institutions of higher education; make regulations in respect of admission of persons seeking to enrol in state institutions of higher education and to provide a central admission service to higher education institutions; and make visitations and inspection of higher institutions. All institutions under HEET project will be monitored by Accreditation Council.

4.4 Relevant Regulations and Guidelines

4.4.1 The Tanzania Development Vision 2025

The Tanzania Vision 2025 aims at achieving a high-quality livelihood for its people attain good governance through the rule of law and develop a strong and competitive economy. Specific targets include:

1. A high-quality livelihood characterized by sustainable and shared growth (equity), and freedom from abject poverty in a democratic environment. Specifically, the Vision aims at: food self-sufficiency and security, universal primary education and extension of tertiary education, gender equality, universal access to primary health care, 75% reduction in infant and maternal mortality rates, universal access to safe water, increased life expectancy, absence of abject poverty, a well-educated and learning society.

2. Good governance and the rule of law moral and cultural uprightness, adherence to the rule of law, elimination of corruption.

3. A strong and competitive economy capable of producing sustainable growth and shared benefits a diversified and semi-industrialized economy, macro-economic stability, a growth rate of 8% per annum, adequate level of physical infrastructure, an active and competitive player in regional and global markets.

HEET is one of the most important projects to enable Tanzania to achieve its Development Vision objectives (both social and economic), such as eradicating poverty. HEET project will contribute to the attainment of the 2025 Vision through provision of educational facility.

4.4.2 Environmental Impact Assessment and Audit (Amendment) Regulations (2018)

The Environmental Management (Environmental Impact Assessment and Audit) Amendment Regulations, 2018 are read as one with the EIA and Audit regulations, 2005 are made under Environmental Management Act No. 20 of 2004. The regulations provide the basis for undertaking Environmental Impact Assessment (EIA) and Environmental Audits for various development projects with significant environmental impacts in the country. These regulations set procedures for conducting EIA and environmental audit in the country. The regulations also require registration of EIA experts.

In accordance with the Tanzania Environment Impact Assessment and Audit Regulation of 2005 and revised in 2018, project activities to be funded will be categorized according to the extent of environmental and social impacts of the sub-projects. That is whether impacts are low impact, site specific and that can be prevented and mitigated if all responsible parties apply the prevention and mitigation measures.

The First Schedule gives list of projects requiring and not requiring EIA and it categorizes projects into four categories:

- Type A – Category for mandatory project
- Type B1 – Category for borderline project
- Type B2 – Category for Non-Mandatory and
- Special Category – project where potential risks are uncertain and requires detailed specialized study prior to EIA

According to the schedule, Type B2 Projects are small scale activities and not enterprises and shall require registration but shall not require EIA. Further the project shall not require

screening and scoping, rather the project brief shall be examined and issued with the Environmental Impacts Assessment Certificate.

Regulation 6(1), 8(1) and 10(1) provide procedures for application for EIA certificate for B2, B1 and A categories respectively. The Regulations also, specifies issues to be covered by the proponent in the project brief and scoping reports. Section 6 (2) requires a project brief to be prepared by an environmental expert registered as such under the environmental (Registration of Environmental Experts) Registrations.

Part IV Regulation 13(1) requires the Project Proponent to conduct EIA in accordance with the general environmental impact assessment guidelines and in accordance with the steps outlined in the Fourth Schedule of the regulations. Regulations 16 specifies EIA study should cover environmental, social, cultural, economic and legal issues.

Part X Regulation 49 and 50 outlines the objectives of carrying out annual self-auditing and control audit to check and verify the adequacy the environmental management plan in mitigating the negative impacts of the project.

Part XII Regulation 60(1) stipulated that “notwithstanding any license, permit or approval granted under any written law, any person who commences, proceeds with, executes or conducts any project or undertaking without approval granted under these Regulations commits an offense and on conviction shall be liable to the punishment prescribed under the Act.

The regulation is relevance to the HEET project as sub- projects may falls under Type A, B1 or B2 categories and therefore project registration or EIA study is mandatory and should be carried out in accordance with the guidelines stipulated in the Fourth Schedule to the Regulations.

4.4.3 Environmental Management (Air Quality Standards) Regulations, 2007

The objective of this standard is to set baseline parameters for air quality and emissions within acceptable standards. It enforces minimum air quality standards prescribed by NEMC to industrialists for the purpose of adopting environmentally friendly technologies to ensure protection of human health and environment pollution sources.

The standards prohibit emissions above the prescribed standards unless the emitter obtains permission to be exempted or obtain air pollutant emission permit. Fugitive dust emissions represent the most likely issue requiring avoidance or mitigation during the mobilisation and construction phase. The limit for dust emissions in terms of the Second Schedule to the Regulations is 250mg/Nm^3 (mean over a 24hour period). The HEET project will have to abide to Environmental Management (Air Quality Standards)

Regulations 2007, and the current assessment is within the required standards. During project implementation the regulations will be complied with to ensure dust emissions from the project are within the acceptable limits.

4.4.4 Environmental Management (Soil Quality Standards) Regulations, 2007

The objective of this standard was to set limits for soil contaminants in agriculture and habitat. It enforces minimum soil quality standards prescribed by NEMC to maintain, restore and enhance the sustainable productivity of the soil.

The standards prohibit discharge onto soil any material which will interfere with its natural quality or be polluted unless the person obtains permission to be exempted or obtain soil pollutant discharge permit. Contaminants of heavy metals in habitat and agricultural soils shall comply with parameters and upper limits specified in the standards.

Elevated levels of heavy metals may occur naturally within the soils surrounding. However, any proposed expansion projects will be designed to avoid the release of contaminants, with elevated levels of heavy metals, to the environment. HEET project will have to abide to this regulation by discouraging haphazard disposal of wastes on environment.

4.4.5 Environmental Management (Water Quality Standards) Regulations, 2007

The objective of this standard is to enforce minimum water quality standards prescribed by the NEMC. It ensures all discharges of pollutants take account the ability of the receiving waters to accommodate contaminants without detriment to the uses specified for the waters concerned, so as to protect human health and conservation of the environment.

The standards prohibit discharges above the prescribed standards unless the emitter obtains permission to be exempted or obtain water pollutant emission permit. The regulation recognizes the requirement to obtain a water user permit as detailed Water Resources Management Act, 2009 and attaches additional conditions to securing the permit which requires an EIA statement of the permit application to be submitted to NEMC.

These regulations also include effluent standards (First Schedule – Permissible Limits for Municipal and Industrial Effluents), drinking water standards, specific effluent standards for particular industries and distances from pollution sources to water sources of which

HEET project must adhere to specifically when managing discharges from the project area.

4.4.6 The Environmental Management (Standards for Control of Noise and Vibration Pollution) Regulations, 2015

The power of formulation of standards for the control of noise and vibration pollution is delegated to the national environmental management standard committee. Among the responsibilities of the committee is to set minimum standards for emissions of noise and vibrations pollution into the environment. The regulation prohibits a person to made any loud, unreasonable, unnecessary on unusual noise that annoys, disturbs, injures or endangers the comfort, repose, health or safety of others and of the environment describes the permissible noise levels from different facilities. According to Regulation 8 Part V, the owner of the machinery or the occupier of the facility or premises has a duty to control noise. Second schedule of the regulation stipulate the tolerance limits for environmental vibration.

4.5 Relevant International Agreements, Conventions and Treaties

International agreements, convention and treaties which are relevant to this project include:

- United Nations Framework Convention on Climate Change (1992)
- Regional Agreements

4.5.1 United Nations Framework Convention on Climate Change (1992)

The objective of the United Nations Framework Convention on Climatic Change (UNFCCC) is to stabilise the concentration of greenhouse gas (GHG) in the atmosphere, at a level that allows ecosystems to adapt naturally and protects food production and economic development. Article 4 commits parties to develop, periodically update, publish and make available national inventories of anthropogenic emissions of all GHGs not controlled by the Montreal Protocol (by source) and inventories of their removal by sinks, using agreed methodologies. It commits parties to mitigate GHG as far as practicable.

Since Tanzania is a Party to the Convention, she will have to account for all sources of GHG in her future National Communications. Undertaking of this ESIA study will enable the country to identify some of the GHG that will be emitted by the project activities. HEET project will abide with the requirements on control and prevention of greenhouse gases by emphasizing use of electronic materials copies during teaching and learning.

4.5.2 Regional Agreements

International Labour Organisation (ILO) Conventions ratified by Tanzania include: C138 Minimum Age Convention of 1973, which prohibits child labour, and C182 Worst Forms of Child Labour Convention of 1999. As the conventions have been adopted by the Tanzania Government, HEET project will abide by them and ensure that no child labour is practised throughout the project. Other relevant agreements include ILO Convention C148 Working Environment (Air Pollution, Noise and Vibration) Convention of 1977, which protects workers against occupational hazards in the working environment due to air pollution, noise and vibration. HEET project will ensure workers have safe environment.

4.6 Institutional Framework for the Management of Environment

Tanzania is among countries in East Africa with an Act for environmental management legislation. The legislation, Environmental Management Act (EMA) (2004), provides a legal and institution framework that guides the implementation of the environmental management activities. The framework provides a pre-requisite for effective implementation of Environment Policy at all levels (National, Region, Council, and Village/Mtaa/Hamlet). According to the Environmental Management Act (EMA) (2004), there is the Environmental Management Committee established at the Hamlet/Village/Mtaa, Ward, Council and at National level with the responsibility for the proper management of the environment in respect of the area in which they are established. The functions and responsibility of these committees are well explained in the Act. Moreover, section 36 (1), (2) of EMA stipulates that each City, Municipal, District and Town councils shall designate or appoint an Environmental Management Officer (EMO) who shall perform among the following functions:

i) Advice the environmental management committee to which he/she belongs on all matters related to the environment.

ii) Promote environmental awareness in the area he/she belongs on the protection of the environment and the conservation of natural resources.

iii) Monitor the preparation, review and approval of Environmental Impact Assessment for local investments.

The Institutional set up as presented in the **Figure 4-1** explains the layers of decision making from national to Village/Mtaa/Hamlet levels

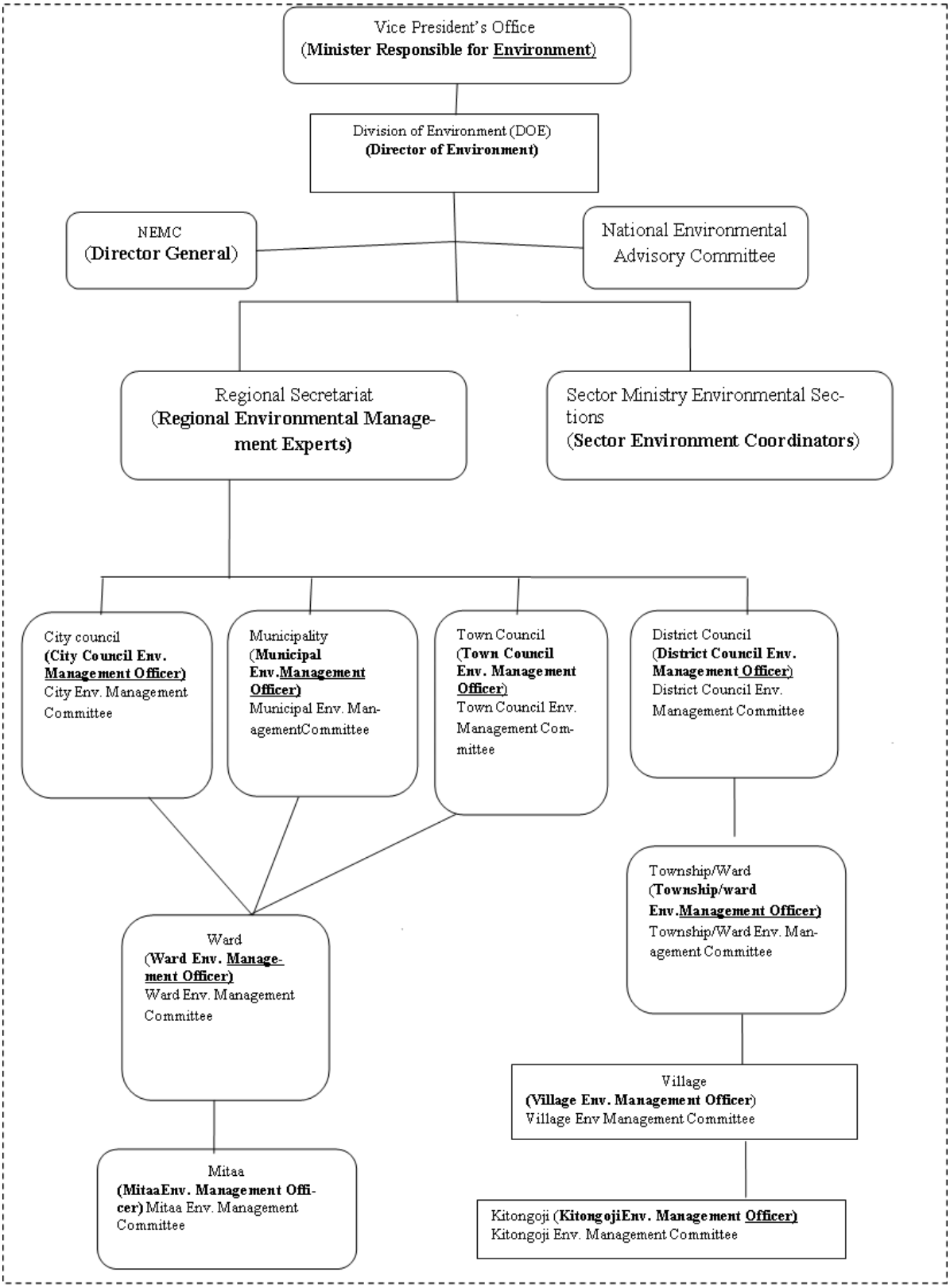


Figure 0-1 Institutional Set Up for Environmental Management in Tanzania Mainland

4.7 World Bank Environmental and Social Framework

4.7.1 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.

Environmental and Social Standard ESS1 applies to all projects for which Bank Investment Project financing is sought. ESS1 establishes the importance of: (a) the Borrower's existing environmental and social framework in addressing the risks and impacts of the project; (b) an integrated environmental and social assessment to identify the risks and impacts of a project; (c) effective community engagement through disclosure of project-related information, consultation and effective feedback; and (d) management of environmental and social risks and impacts by the Borrower throughout the project life cycle. The Bank requires that all environmental and social risks and impacts of the project be addressed as part of the environmental and social assessment conducted in accordance with ESS1. ESS2–10 set out the obligations of the Borrower in identifying

and addressing environmental and social risks and impacts that may require particular attention based on the proposed project activities. The World Bank Access to Information Policy, which reflects the Bank's commitment to transparency, accountability and good governance, applies to the entire Framework and includes the disclosure obligations that relate to the Bank's Investment Project Financing. Borrowers and projects are also required to apply the relevant requirements of the World Bank Group Environmental, Health and Safety Guidelines (EHSGs). These are technical reference documents, with general and industry specific examples of Good International Industry Practice (GIIP). A detailed outline of all the ESSs in relation to the activities of this project are presented in **Chapter 5**.

The implementation of each of the ESSs will be enabled through five instruments which are all part of the Operational Manual of the HEET and therefore mandatory and which have been developed based on the respective ESSs:

i) Environmental and Social Management Framework (ESMF) (and subsequent ESIAs/ESMPs) for the application of the ESS1, ESS2, ESS3, ESS4, ESS6 and ESS8.

ii) Stakeholders Engagement Plan (SEP) for the application of ESS10;

iii) Resettlement Policy Framework (RPF) and any subsequent RAPs for the application of ESS5;

iv) Labour Management Procedures for the application of ESS2

v) Environmental and Social Commitment Plan (ESCP) which will describe the obligations of the borrower to apply the above instruments and other actions.

4.7.2 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.

According to the WB ESF the HEET project is given the risk assessment of **Substantial** due to the likelihood of environmental and social impacts generated by the project. Details of the risk classification as well as ESS as per the HEET project activities are elaborated in Chapter Five.

4.7.3 World Bank Group ESHS Guidelines

The World Bank Groups Environmental, Health, and Safety (EHS) Guidelines are technical reference documents with general and industry specific examples of Good International Industry Practice (GIIP). EHS Guidelines are applied as required by their respective policies and standards. These industry sector EHS guidelines are designed to be used together with the General EHS Guidelines document, which provides guidance to users on common EHS issues potentially applicable to all industry sectors. Specific guidelines which will be used is Environmental, Health, and Safety (EHS) Guidelines: Environmental Waste Management. As stipulated earlier the guidelines will be used together with the Environmental, Health, and Safety General Guidelines. The EHS Guidelines contain the performance levels and measures that are generally considered to be achievable in new facilities by existing technology at reasonable costs. Application of the EHS Guidelines to existing facilities may involve the establishment of site-specific targets, with an appropriate timetable for achieving them. The applicability of the EHS Guidelines will be tailored to the hazards and risks established for the project in accordance to the proposed project activities. The circumstances that skilled and experienced professionals may find when evaluating the range of pollution prevention and control techniques available to a project may include, but are not limited to, varying levels of environmental degradation and environmental assimilative capacity as well as varying levels of technical feasibility. The applicability of specific technical recommendations will be based on the professional opinion of qualified and experienced persons.

4.7.4 Other World Bank Instruments Applicable for HEET Project

- Environmental and Social Framework - Guidance Notes for Borrowers[1];

[1] http://www.worldbank.org/en/projects-operations/environmental-and-social-framework/brief/environmental-and-social-framework-resources#guidancenotes

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 website[2].
Among the applicable guidance notes for HEET are:

- Community Health and Safety: http://documents.worldbank.org/curated/en/290471530216994899/ESF-Guidance-Note-4-Community-Health-and-Safety-English.pdf

- Gender based violence: http://documents.worldbank.org/curated/en/399881538336159607/Environment-and-Social-Framework-ESF-Good-Practice-Note-on-Gender-based-Violence-English.pdf

Table 4-2 summarizes the Environmental and Social Standards (ESSs) that project entities responsible for the HEET implementation will apply during entire project cycle.

[2] https://www.worldbank.org/en/projects-operations/environmental-and-social-framework/brief/environmental-and-social-framework-resources#guidancenotes

Table 4-2: The World Bank Environmental and Social Standards (ESS) Applicable to HEET Project and Associated Instruments

#	Instrument for HEET project implementation	The Environmental and Social Standards (ESS)	Purpose/Objectives	Reason for its Application in the Project
1.	Environmental and Social Management Framework (ESMF)	**ESS1**: Assessment and Management of Environmental and Social Risks and Impacts	Identification of adverse impacts and respective mitigation measures Enable screen and follow-up of remedies achieved through application of prevention, mitigation and compensation measures Enable allocation of responsibilities and resources to implement required mitigation measures	The project will generate environmental and social risks and hence they will be screened, identified and prevention and mitigation measures implemented to prevent, reduce, mitigate and address these impacts. Additional work will be needed to look at whether sub-groups of women may be subject to barriers to information and benefits for socio-cultural reasons. These may include disabled women, women living with albinism, and women from Vulnerable Groups. Mainland Tanzania disability prevalence stands at 13.3% while that of Zanzibar is 9.3%: these groups form part of the workforce. There is a risk of exclusion/discrimination of persons with disability in project job opportunities. The project will include the employment of persons with disability and address communication and other barriers related to disability in the construction workplace.
		ESS2: Labour and Working Conditions	Ensure the healthy and safe working environment during projects implementation. Ensure the provision of fair working conditions.	The project will engage community and contracted workers. The standard will promote the health and safety of these workers and ensure fair working conditions. Further a project GRM that is attentive to GBV/SEA will be in place to manage project related grievances from project affected people and other

#	Instrument for HEET project implementation	The Environmental and Social Standards (ESS)	Purpose/Objectives	Reason for its Application in the Project
				stakeholders in order to address them appropriately. In line with ESS2, the project will establish and operate a worker grievance mechanism to enable project workers to raise workplace concerns, including work-related sexual harassment.
		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.	Construction materials such as wood, sand, gravel and water are expected to be supplied by authorized vendors. Mitigation measures will be put in place to ensure that methods of extraction of the materials and transportation do not lead to soil erosion, pollution of water bodies, air. Site specific environmental and social assessments will determine the significance of the likely impacts and risks and mitigation measures will be included in the ESMPs. It is anticipated that e-waste will be collected separately and later on taken to the designated registered vendor by the National Environmental Management Council (NEMC) for recycling and proper disposal.
		ESS4: Community Health and Safety	To manage potential risks to the community during construction and operation of school infrastructures.	The project will prevent potential risks, impact and promote security of the community during construction. Social risks to be addressed include potential impacts on communities from workers (including labor influx) including sexual harassment and GBV, and the possible spread of communicable diseases such as COVID-19 and Sexually Transmitted Diseases (STDs). These risks will be mitigated through tools such as Codes of Ethical Conduct that will be signed by

#	Instrument for HEET project implementation	The Environmental and Social Standards (ESS)	Purpose/Objectives	Reason for its Application in the Project
				contractor's workers and through trainings on gender, GBV HIV/AIDS and COVID-19 awareness.
		ESS6: Biodiversity Conservation and Sustainable Management of Living Resources	The HEET 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.	The project's physical investments are not expected to be implemented in ecosystem sensitive areas or natural habitats. The applicability of this ESS will be ascertained during implementation as part of the site or activity specific environmental and social screening and impact assessment in line with the requirements under ESS1 and screening provisions to be included in the ESMF. The ESIA process shall screen for potential direct and indirect impacts on natural habitats both in site selection, and, particularly the possibility of purchase of natural resource commodities (such as timber from natural forests, or sand form riverbeds), which might originate from ecosystem sensitive areas.
		ESS 7: Sub-Saharan Historically Underserved Traditional Local Communities	To enable VGs to participate in project activities while taking care of their socio-cultural interests and hindrances	Project activities will include curriculum and pedagogy development in a number of areas where the cultural practices, beliefs and livelihoods of Vulnerable Groups (VGs) may not be impacted negatively but are relevant. This includes natural resources management, climate change, tourism, wildlife management, agriculture, among others. There is a need to design these curricula to avoid undermining language use, cultural practices, institutional arrangements, religious or spiritual beliefs of Vulnerable Groups. There is also an opportunity to

#	Instrument for HEET project implementation	The Environmental and Social Standards (ESS)	Purpose/Objectives	Reason for its Application in the Project
				incorporate traditional local knowledge from these communities in the curricula development and to design courses of study that address their needs. Deliberate efforts will be required to ensure VGs are incorporated in project-wide consultations (see references under ESS10). Their input on broad project design, including the approach to program development and efforts to increase equitable access to higher education will be documented and reflected in project design, where relevant.
		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.	The project activities will not be implemented in areas of known physical cultural resources within the premises of existing universities. However, proposed construction activities under Component 1 will involve excavations, which may have impacts on physical cultural resources, mainly through chance finds. Procedure for addressing potential chance finds from construction sites, borrow pits and quarries will be outlined.
2.	Resettlement Policy Framework (RPF)	**ESS5:** Land Acquisition, Restriction on Land Use	To avoid or minimize involuntary resettlement and to avoid forced eviction	The project may require the acquisition of land for the construction of new facilities which is likely to lead to resettlement. The specific sites for acquisition of extra land outside implementing institutions, restrictions on

#	Instrument for HEET project implementation	The Environmental and Social Standards (ESS)	Purpose/Objectives	Reason for its Application in the Project
		and Involuntary Resettlement	To mitigate unavoidable adverse impacts from land acquisition and restrictions on land use.	land use and involuntary resettlement are currently unknown as they will be dependent on the Universities Strategic Investments Plan (USIPs). Therefore, the project will require a Resettlement Policy Framework (RPF) to be developed during project preparation.
3.	Stakeholder Engagement Plan	**ESS10:** Stakeholder Engagement and Information Disclosure	To develop a systematic approach to stakeholder engagement to develop good relationships and gather their views on issues that could affect them. To provide stakeholders with a mechanisms through which to raise grievances.	The project will require a Stakeholder Engagement Plan (SEP) that will identify the relevant project stakeholders including project-affected parties and other interested parties, as noted above. The SEP will cover preparation and implementation of the project, including overall Project Engagement at a national / regional level; the need for engagement associated with construction activities; engagement requirements associated with other components as needed. The SEP will also articulate a Grievance Redress Mechanism (GRM). During project preparation, the project will need to review existing GRMs and consider their use in project design, with augmentation where necessary. Consultation with organizations representing Vulnerable Groups will be important, in light of the program development activities in which VGs may have an interest (see references in ESS1 and ESS7). There is a risk that their input may not be solicited and therefore, mechanisms to ensure input from these groups in the SEP and in project design will be needed. The SEP will have a clear strategy on

#	Instrument for HEET project implementation	The Environmental and Social Standards (ESS)	Purpose/Objectives	Reason for its Application in the Project
				consultations with representatives of vulnerable groups during project preparation as well as implementation.
4.	Environmental and Social Commitment Plan	Defines the measures and actions required for the project to meet the ESSs over a specified timeframe. This is a legal agreement between the WB and the Government under the ESF where the government commits itself to preparing and eventually implementing all the required ESF documents under the HEET project.		

CHAPTER FIVE

POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS AND MITIGATION MEASURES

5.1 Introduction

Identifying the consequences of a project on its environment and society is the key step in any environmental and social management. These consequences are usually known as impacts. These are deduced from the overlaying project activities during preparatory phase, construction phase and during operation phase, and the components of the affected domains or environments; biophysical and socio-economic environment.

5.2 Environmental and Social Risk Classification of the project as per the World Bank ESF

Environmental and social risks are rated as **Substantial** due to environmental and social impacts likely to be caused by project activities. The main impacts of the project will emanate from the physical construction activities taking place in the participating institutions. No major land use change is expected because these activities will be implemented within the University areas whose uses were planned. Most of the participating institutions have established master plans for their areas and therefore this project will finance implementation of activities which are already pre-determined within their areas. The cumulative impact of the works and presence of contractors and machinery at each targeted institution is unknown at the moment, but careful supervision will be needed to avoid accidents, loss of cultural assets and potential conflicts with local communities. Other potential impacts at the participating institutions are related to (i) waste generated at construction sites which can pollute land and water bodies (cement mixing areas, metal, wood and paint residues, diesel, used electronics equipment and other residues); open pits in the soil can cause accidents; (ii) food residues can attract disease causing organisms; (iii) cutting of trees to use as building material (although this will not be allowed and construction materials will be supplied with the authorized vendor); (iv) road accidents; amongst others.

Review of architectural drawings will include E&S aspects in order to increase safety and reduce negative environmental effects and increase sustainability of the works, which will require strong willingness by the participating institutions and the MoEST to implement the changes in case the proposed mitigation measures need significant changes. Safety aspects specially to deal with the impacts of earth quakes are important to be considered and quality assurance guaranteed. Other potential environmental and social risks and their mitigation measures are elaborated in the relevant section of the appraisal summary.

This ESMF provides for initial risk assessment and classification based on the available documentation and data. Implementation of the project activities will be positive and urgently needed. As this project will finance procurement of drugs, supplies and medical equipment – which has limited, if any, impacts – the environmental risks result from the operation of the labs, the quarantine and isolation centres, and screening posts at land crossings, as well as with the appropriateness of the medical waste management system to be put in place by the client.

ESS 1: Assessment and Management of Environmental and Social Risks and Impacts

Assessment and management of environmental and social risks and impacts are required for the whole HEET project, but at this stage, the activities of Component 1 are identified as the most likely to potentially generate environmental and social risks and impacts.

Component 1: Strengthening the Learning Environments and Labor Market Orientation of Programs in Priority Areas. This component will focus on strengthening and building the capacity of 15 public higher education institutions to become high quality centers of learning focusing on priority areas. Component 1 will include civil works to build new or rehabilitate existing facilities within the participating institutions (lecture halls, classrooms, staff offices, laboratories, and student hostels; installation of teaching and learning equipment including lab equipment and ICT infrastructure). Therefore, the assessment of the capacities of the participating institutions to manage the environmental and social risks during preparation, implementation and use phase will be conducted. Strengthening of capacities and definition of roles and responsibilities on environmental and social management will need to be defined in E&S documents and other operational manuals. It is understandable that since the ESF is new and there are several actors involved in the project, with limited knowledge of the ESF as well in environmental and social issues, there will be need for additional resources for training and capacity building at all project levels.

Institutions will support in the preparation of the environmental and social assessment and of the monitoring tools according to the mitigation hierarchy. The Project will prepare an Environmental and Social Management Framework (ESMF) that will incorporate national and the Bank's ESF requirements. The project ESMF will include: (i) supervision and reporting procedures, (ii) mitigation measures etc; and (iii) guidance on engagement as per the Stakeholder Engagement Plan (SEP). The MoEST through implementing agents, will supervise and monitor the environmental risks and impacts of the subprojects through the project life cycle. All subprojects will be required to develop a Environmental and Social Management Plan (ESMP) taking into consideration the Environmental, Health and Safety Guidelines (EHSGs) of the Bank to define specific mitigation and prevention measures to prevent and reduce risks and impacts. Site specific RAPs may also need to be prepared. Site specific ESMPs (and RAPs where applicable) will need to

be approved and implemented in line with the respective schedules before the construction activities can start.

ESS 2: Labor and Working Conditions

Working Conditions and Management of Worker Relationships

Based on past practice in projects in Tanzania, potential ESS2 risks include child labor; increased incidence of GBV/SEA/SH and increased transmission of HIV/AIDs, COVID-19 and other communicable diseases among project workers and between project workers and local communities; non-compliance by contractors and other employers with national labor laws and regulations, including in relation working hours, rest period, pay and legally mandated benefits; discrimination in recruitment and employment in relation to disability, including Albinism, gender and other personal characteristics unrelated to inherent job requirements; occupational, health and safety problems.

The Labor Management Procedures (LMP), and a Health, Safety and Environmental (HSE) Plan in line with Good International Industry Practice (GIIP) will be prepared to ensure management of project workers in line with the requirements of national law and ESS2 and ESS4, including in relation to the health and safety of workers and of local communities during the construction, operational and maintenance phases of the project. Measures will also be included which will require workers to have contracts, receive regular payments and be subject to terms of employment that are aligned with national law and ESS2. The LMP will also prohibit the use of forced labour and child labor and will require age verification processes to be in place as needed. Occupational health and safety monitoring programs will form part of the HSE plan where records of occupational accidents and diseases and dangerous occurrences and accidents are maintained through the project lifecycle. The LMP will also have detailed information on the work terms and conditions including explicit prohibition and monitoring of child labor and forced labor. The LMP will further ensure that the health and safety of all workers, especially women are given adequate attention with respect to GBV and Sexual Harassment.

The LMP will also include requirements for contractors to prepare various tools such as a Code of Ethical Conduct, Labor Influx Management Plan, COVID-19 Prevention and Risk Management plan and HIV/AIDS Awareness and COVID 19 prevention training programs that will be reviewed by the Project E&S teams and cleared by the Bank before being implemented. All Contractors' employees and laborers will be required to sign the Code of Ethical conduct and go through trainings on GBV, SEA/SH and HIV/AIDS awareness. The project will also strengthen the existing sexual harassment policies at the implementing universities to ensure that it will address the issues of GBV and sexual harassment at institutional level. Further a project GRM that is attentive to GBV/SEA will be in place to manage project related grievances from project affected people and other stakeholders in order to address them appropriately.

Occupational Health and Safety (OHS): The project will involve construction works under Component I which will need issues of OHS to be properly managed. During construction contractors and consultants who will be working on behalf of the client as

well as the OHS staff of the client will be treated in accordance with the national legislation, the ESS2 and Good International Industry Practice (GIIP) with respect to OHS. Accidents in the type of construction that the project will support might include: road accidents within the project areas especially caused by the construction vehicles, construction related fractures and other injuries. In all circumstances and at all times during project implementation the project must ensure that Personal Protective Equipment (PPE) are distributed and used. Other measures such as: (i) potential hazards for workers (materials, activities, substances); (ii) protective and prevention measures, (iii) provision of OHS training to workers and other relevant staff; (iv) first aid and (v) hygiene facilities will have to be provided by consultants and contractors as per the OHS Plans which will be prepared prior to commencement of the construction activities. The arrangements to respond to the requirements of ESS2 will be described in the labor management component of the ESMF and will consider the national requirements, the Environmental Health and Safety Guidelines on Occupational Health and Safety and GIIP.

ESS 3: Resource Efficiency and Pollution Prevention and Management

The project will use materials supplied by the authorized vendors to avoid any impact or over-use of resources such as water and energy. It is expected that during construction materials such as wood, gravel, sand, and water will be needed. These will be sources from the authorized borrow pits and vendors. Water is expected to be sources from authorized dams or the water authorities which are operating within the respective regions where the project area is located. During construction the energy used will be electricity supplied by the Tanzania Electric Supply Company Limited (TANESCO). Management of waste which will be generated from the construction activities will be as described in the ESIA and the site specific ESMP. This will be important to avoid pollution from solid and liquid waste. Measures to address health and safety and hazardous substances such as asbestos and lead-containing paint, as necessary will be an integral part of ESMPs.

ESS 4: Community Health and Safety

Construction activities from component 1 may lead to safety concerns for the people within the universities or institutions where the construction will be carried out or for the village/community in the vicinity of the sites. These risks that include road accidents due to potential increase in vehicle movements or local sourcing of materials will need to be assessed and mitigated through a site-specific Environmental and Social Impact Assessment (ESIA) that will need to include an Environmental and Social Management Plan (ESMP) or only an ESMP, depending on the screening of the activities. Some activities might require environmental licenses and construction permits as well as municipal permits for the construction and water discharge areas. Social risks to be addressed in the ESIA and/or ESMP include potential impacts on communities from workers (including labor influx) including sexual harassment and GBV, and the possible spread of communicable diseases such as COVID-19 and Sexually Transmitted Diseases (STDs). These risks will be mitigated through tools such as Codes of Ethical Conduct that will be signed by contractor's workers and through trainings on gender, GBV

HIV/AIDS and COVID-19 awareness. The project will also strengthen the existing sexual harassment policies at the implementing universities to address the issues of GBV and sexual harassment at an institutional level and strengthen prevention and response in the university context through both project design and complementary actions included in the Project GBV Action Plan that will be ready prior to Board approval. Further a project GRM that is attentive to GBV/SEA will be in place to manage project-related grievances from project affected people and other stakeholders in order to address them appropriately. The project design will consider existing GRMs to explore their adoption into project design. It is expected that contractors will hire staff to provide security for their camps and other properties. The PIU will ensure that contractor (i) make reasonable inquiries to verify that the direct or contracted workers retained to provide security are not implicated in past abuses; (ii) train them adequately (or determine that they are properly trained) in the use of force, and appropriate conduct toward workers and affected communities; and (iii) require them to act within the applicable laws of Tanzania.

ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement

The construction of new facilities and potentially the extension/renovation of existing lecture halls, dormitories, offices, laboratories and other facilities will not require land acquisition as they will be done within the existing Universities or institutions land. there may be loss of crops for informal land users or encroachers due to land use changes within the universities' boundaries. The Universities might need extra land outside their boundaries with potential impact of loss of crops, business or assets that will be acquired under the principles of ESS5 including any loss of income and associated livelihood restoration measures. The specific sites for acquisition of extra land outside implementing institutions, restrictions on land use and involuntary resettlement are currently unknown as they will be dependent on the Universities Strategic Investments Plan (USIPs). The extra land acquisition will may result in the physical and or economic resettlement of households with associated impacts including loss of shelter and loss of income or livelihoods. Therefore, the project has prepared a Resettlement Policy Framework (RPF) to provide guidance to resettlement including the process to develop, approve and implement site specific Resettlement Action Plans (RAPs) in compliance with ESS5 and Tanzanian's laws and regulation governing land acquisition and resettlement.

ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

Tanzania holds unique ecosystems (40% forest cover), but also there are areas under different levels of land degradation. Implementation of the project is not envisaged to engage in unsustainable resource utilization but will ensure that trees and the other construction materials will be sources from authorized vendors. The project will ensure that technical designs take into consideration materials that are easily available and do not increase pressure on natural resources, water provision and proper solid waste management in all the facilities which will be constructed within the participating institutions. Selection process of construction sites though already owned by the participating institutions (universities) will consider appropriate environmental and social

parameters. These parameters will include soil stability not to be located in a valley or any flood prone areas, underground water reservoir areas and other factors which will be determined during environmental and social assessment. Tanzanian laws require that environmental and social impact assessment (ESIA) which culminates into environmental and social management plan (ESMP) is conducted before implementation of any construction project to ensure that mitigation measures are in place in case of any identified environment and social impacts during and after project execution. In that regard various other environmental, geographical and social factors will be uncovered during preparation of ESIA and ESMP and their mitigation measures proposed. The ESIAs or ESMPs will be prepared for each participating institution and will specify necessary prevention, mitigation and monitoring activities to be followed during project implementation (construction and operational phases) along with the implementing arrangements.

ESS 7: Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities

In Tanzania there are a number of pastoralists and hunter-gatherers who are living traditional lifestyles. These groups include the Maasai, Hadzabe, Akie, Sandawe and Barbaig who generally live in the North of the country. It is not expected that civil works and land acquisition envisioned under the project will impact communities that meet ESS7 as all the universities are in urban areas, such as Dar Es Salaam, Dodoma, Mwanza, Morogoro, Arusha and Mbeya. Even in the newly established Mwalimu J.K Nyerere university in Butiama District in Mara region most construction activities are expected to be conducted within university compound/boundaries thus do not require application of FPIC. Project activities will include curriculum and pedagogy development in a few areas where the cultural practices, beliefs and livelihoods of Vulnerable Groups (VGs) may not be impacted negatively but are relevant. Vulnerable Groups will be incorporated in project-wide consultations as per ESS10. Their input on broad project design, including the approach to program development and efforts to increase equitable access to higher education will be documented and reflected in project design, where relevant.

ESS 8: Cultural Heritage

Inappropriate siting of university facilities which are to be constructed under te project as well as construction (excavation) activities could result in damage to cultural heritage. While internationally and nationally protected sites are well documented and can be avoided this may not be the case with locally important sites which are within and outside university compounds. Tis is because some of the universities might have sites located in areas which were previously used for cultural related functions. In such cases of the possibilities of presence of any objects of cultural importance, poor site selection could result in loss of locally important cultural sites, loss of access or a change in the ‘sense of place’ of a site. Such sites may not be known to all members of a university of

surrounding community which necessitates for careful consideration and application of ESS 8 during project implementation.

ESS 10: Stakeholder Engagement and Information Disclosure

To guide participation of stakeholders during project implementation, a draft SEP has been prepared and will be disclosed prior to appraisal of the project. The SEP will guide consultations with various stakeholders who will be identified as being directly and indirectly affected by the proposed intervention. These include government ministries, Universities and other institutions benefiting from the project and professionals working in them, media houses and communities neighbouring project target facilities. The SEP outlines the proposed Grievance Redress Mechanism (GRM) for the project and refer to mechanisms already in place for members of the public to register complaints related to the project. The SEP contains information on how the project GRM will operate including details of designated offices and contact numbers that the public can use to register complaints. The GRM will integrate GBV-sensitive measures, including multiple channels to initiate a complaint and specific procedures for SEA, such as confidential and/or anonymous reporting with safe and ethical documenting of GBV and SEA cases. Through the SEP the project will ensure that information is meaningful, timely, and accessible to all affected stakeholders and particularly populations that are most at risk project sites including the neighbouring community, and the project workers. The SEP also outlines the approach to meaningful engagement with vulnerable groups and individuals to ensure meaningful engagement is achieved this includes measures such as use of local languages, ensuring the use of accessible locations, providing information in accessible formats etc.

5.3 Potential Social Impacts during the Preparatory Phase (Site Selection and Design)

Positive social impacts

5.3.1 Job Creation and Increased Income to Local Communities

During this phase people shall be employed by the contractor to do mobilization works such as construction of camp sites, quarrying and material extraction and transportation activities etc. This shall increase the income to all those who have the opportunity to be employed by the contractor.

Negative Social Impacts

5.3.2 Land Acquisition and Population Displacement

Land acquisition for project components is expected to be limited by may have impacts on owners or users of the land. Land may already be used by the community or households for a range of uses (housing, economic activities, grazing land, businesses

etc). Furthermore, the tenure status of such households may be variable. Where land is acquired this may result in the physical and or economic resettlement of households with associated impacts including loss of shelter and livelihoods. Within the land required for the proposed construction activities there might be natural features of ecological value that will be disturbed/cleared.

Mitigation measures

- The institutions shall determine Project Affected People (PAP) with land rights or properties or crops;
- Compensation calculation and payment shall be guided by the Resettlement Action Plan (RAP) that will be developed in line with the Project RPF; and
- Compensation shall be done before the commencement of the project activities.

5.3.3 Disruption of Economic and Social Activities and Services

The proposed project areas might be used by people for cultivation, livestock keeping and beekeeping, to mention few. Land acquisition for the proposed project will force people to find other areas to get similar services.

Mitigation measures

- Awareness rising to community within the project core area; and
- Inclusion of local leaders (Ward/sub-ward chairpersons/executive officers or /and councillors.
- Development of RAP as per RPF including livelihood restoration measures.

5.3.4 Damage to Cultural Heritage

Inappropriate siting of facilities as well as construction (excavation) activities could result in damage to cultural heritage. While internationally and nationally protected sites are well documented and can be avoided this may not be the case with locally important sites.

Mitigation measures

- Implementation of the chance finds procedure as per Annex IV
- Screening of potential construction sites to identify cultural heritage.
- Engagement with local leaders and communities to understand the location of locally important cultural heritage (as part of screening).

5.4 Potential Environmental Impacts during the Preparatory Phase (Site Selection and Design)

5.4.1 Exploitation of Borrow Pits/Quarries and Other Natural Resources

Extractions of water, construction materials from both authorized borrow pits and quarries on government land, communal land and on private-owned land are associated with rampant degradation with no efforts of restoration/re-vegetation.

Mitigation measures

- Exploitation of construction materials will be from the authorized source only;
- Restoration of the borrow pits/quarries after use constituting levelling the area and seeding or planting of trees and/or grasses will be done in association with local government (natural resources department) and local environmental NGOs. If appropriate the levelled area will be left for natural re-vegetation;
- Re-use of the excavated soils and demolition rubbles as part of the sub-base material;
- Construction of underground water reserve tank and introducing rainwater harvest system; and
- Extraction of underground water resources.

5.4.2 Contamination and /Impaired Quality of Receiving Body – Land and Water

Main sources of construction waste are cleared vegetation and top-soil (overburden) and domestic waste from quarries. During quarrying activities, various type of wastes will be generated including solid and liquid wastes. The wastes may contaminate land or be washed into local surface and ground water resources and impair the quality of these receiving bodies.

Mitigation measures

- Efficient collection and disposal system based on the principles of reduction, re-use and recycling of materials, shall be instituted at project areas;
- To reduce the cost of the project, much of the excavated soil and rubble materials will be reused as initial filling materials where levelling of runway, taxiway and apron is required;
- Introduction of waste disposal bins, warning notices, posted at strategic points;
- No, on site burial or open burning of solid waste shall be permitted;
- Wastes not suitable for incinerations and general municipal waste damping (e.g. Batteries, plastics, rubbers, tyres, etc) shall be removed for recycling, treatment, and/or disposal by licensed contractor as appropriate; and

- Instructions to contractor to put on his/her methodologies for handling hazardous waste such as oils, lubricants and non-combustible waste during bidding process.

5.5 Potential Social Impacts During Construction Phase

Positive Social Impacts

5.5.1 Jobs Creation

The construction activities will be envisaged to create more employment opportunities to local people. The project components expect to employ many workers from the locality and it is expected that more jobs will be directly connected with construction of the infrastructure.

Enhancement measures

- As part of the bidding requirements the contractor shall be encouraged to employ local, unemployed yet willing to work hard, manpower to the extent viable subject to a maximum of 50% unskilled labour. This will ensure that local people are more benefited out of the project;
- Employment will be on the basis of non-discrimination / equal opportunities for both genders as well as free of other forms of discrimination on the basis of individual characteristics;
- Contractor shall provide on job skills and training to workers; and
- Local communities shall be encouraged by the APIUs to produce quality goods and services at the project site through early engagement of likely requirements.

5.5.2 Income to Local Suppliers and Service Providers

The proposed project will need construction materials and other services in respective project region. Materials needed for this project is very large. This is good news to suppliers of building materials as well as those who will provide food and waste collection services.

Enhancement measures

- Ensure monitoring of labour standards among contractors, sub-contractors, workers and service providers; and
- Academic institution to design appropriate means of collecting revenues.

5.5.3 Impacts on Knowledge

Whilst the operations related to constructions of concrete structures and installation of electrical wiring system and equipment are well known to local experts, the equipment and technology might be new to most practicing local engineers and consultants. The project activities will therefore benefit local experts in updating their knowledge and have opportunity for practical learning by participating in the whole process.

Enhancement measures

- Contractor shall provide on job skills and training.

POTENTIAL NEGATIVE SOCIAL IMPACTS DURING CONSTRUCTION

5.5.4 Occupational Safety and Health Impacts

On a daily basis, construction workers face dangerous employment conditions. Even though construction workers are trained and know basic safety measures, accidents can still happen. The risks taken every day during regular construction work make it difficult for job sites to remain accident-free. Accidents on site could be caused by defective or collapsing scaffold, electrocutions, falls, falls from ladders, and defective machinery such as forklifts, conveyors, hoists, cranes, malfunctioning tools and other equipment. Accidents can result in serious injuries or death. In case, construction is extensive, the potential significance of the risk to health and public safety will depend on the size of the population and the workers exposed and the degree of exposure. Workers permanently on the site will be exposed to air pollution throughout the construction period. Work accidents during construction work are quite common. This is due to the presence and handling of hazardous equipment and harmful building materials. It is therefore required that before the construction activities, there is need for the materials to be well inspected and harmonized to the occupational health and safety standards.

Mitigation measures

- Appropriate working gear (such as nose, ear mask and clothing) and good construction site management shall be provided by the contractor;
- Adequate training of contractors' workers on OHS and on proper use of PPE will be provided including but not limited to induction, tool-box talks (daily or weekly depending on activities) and 6 month refresher training sessions.
- During construction the contractor shall ensure that the construction site is fenced and hygienically kept with adequate provision of facilities including waste disposal receptacles, sewage, firefighting and clean and safe water supply;
- A well-stocked First Aid kit (administered by medical personnel) shall be maintained at construction site by the contractor. The medical personnel shall also be responsible for primary treatment of ailments and other minor medical cases as well as providing some health education to the workforce;

- Reporting mechanisms for the public to register concerns or complaints regarding perceived risks to their health and safety due to the construction operation;
- Developing a detailed health and safety plan and training all contractor staff on the plan.
- Emergency contact details in the event of an accident shall be provided by workers to the contractor.

5.5.5 Labour and Working Conditions

Contracted workers and those employed in the supply chain are at risk of being subjected to poor labour practices by their employers this may include lack of contracts, irregular pay, working long hours, lack of breaks etc. In addition, the use of child labour in the supply chain (e.g. the production of gravel is known to occur in Tanzania and will be avoided. Women are also at risk of being discriminated against in terms of employment opportunities by contractors. There is also a risk of sexual exploitation of women by their employers/ contractors which could include demands for sexual activities in exchange for recruitment, keeping their job etc by male supervisors.

Due to technological developments and investment in labour saving equipment, the skilled and non-skilled workforce will be needed. The skilled construction workers will be imported to the area of construction and will reside in labour camps. A smaller number of local low-skilled jobs may be envisaged. These will include protection and guarding of the construction companies' properties. Low skilled workers will be hired around the project jurisdiction if necessary. Labour camps will be the responsibility of the contractor under the supervision of the consultant and APIUs. In order to ensure that the labour camps comply with the national law and ESS4 contractors will be required to prepare camp management plans as well as codes of conduct for workers and compliance will be mandatory for all workers. Other measures for the protection of and operation of the workers camp will be as narrated in ESS2 as described in this ESMF and subsequent LMP.

Mitigation measures

- The project will develop Labour Management Procedures to guide the employment of all workers.
- Contractors will be required as part of the bidding documents to develop camp management plans and codes of conduct for workers,

- The contractor shall be encouraged to employ local, unemployed yet willing to work hard, manpower to the extent viable subject to a maximum of 50% unskilled labour. This will ensure that local people are more benefited out of the project;
- All workers will have contracts with terms and conditions that are consistent with national labour laws and policies as well as ESS2.
- Workers will have access to a specific worker grievance mechanism in line with ESS2, which will be documented in the LMP.
- Contractors will be required to apply equal opportunities/ non-discrimination to the employment of workers and not discriminate on the basis of gender or any other personal characteristics.
- Contractors will be required to ensure that no children are employed on the site and have in place measures to verify the age of workers. Child under 14 are prohibited from working while children aged 14-18 can only take on light work (which generally excludes work on construction sites).
- All workers must have an employment contract, be paid for their work and have the right to resign if they wish. Forced labour will be explicitly prohibited.
- Selection of companies in the supply chain will involve due diligence to avoid the use of companies which are involved in child labour.
- The project will develop a GBV Action Plan which will include prevention and response measures. This will include codes of conduct, training and capacity building, awareness raising, access to referral pathways etc.

5.5.6 Community Safety – Social Conflict

It is expected that the increased number of workers and higher concentration of residents near construction sites will have an impact on local communities. Uncontrolled movement of workers will affect residents around the settlements. Also, the construction of the project shall definitely be accompanied by in-migration of job seekers and opportunistic businesses and speculators. This will bring many people in the project areas. This will increase social interactions amongst the construction workers and local communities. The presence of workers increases the risk of SEA/SH (GBV) towards members of the community in particular female students who may be present on campus. Such risks are known to occur on construction projects.

Entry of a temporary labour force into an area could cause different negative impacts to the local communities including conflicts between local community members and newly arrived people due to the socio-cultural differences and other issues. The situation when temporary workers come from other regions and they are from different social and cultural backgrounds could easily create conflicts with the local social environment. Due to this,

workers must receive training and sign a labour code of conduct (Annex V), in order not to create conflicts with the local community.

Influx of temporary workers may have a potential increase in crime in the community. This may be experienced during the construction period if mitigation measures are not introduced. With an increase in construction activities and the possibility of job seekers arriving, it may be more difficult to identify strangers in the community. There may also be negative issues that need to be managed such as increases in local prices, increased rents, prostitution or alcohol consumption associated with labour influx or increased incomes of local workers.

It is expected that contractors will hire staff to provide security for their camps and other properties. Increased presence of security personal can lead to community health and safety risks associated with any inappropriate use of force, GBV(SEA/SH) and intimidation of the community.

Mitigation Measures

- Maintain good security in the area with signage like “No employment at the moment”, to keep away job seeker to avoid unnecessary people in project sites
- Local workers will be hired to the extent possible to minimise influx
- Workers will be required to sign worker codes of conduct.
- Contractors will need as part of their C-ESMP to include camp management requirements
- Ongoing engagement with local stakeholders including relevant authorities on construction activities
- Ensure that all stakeholders are aware of the grievance redress mechanism and have access to the same.
- GBV Action Plan will be developed to prevent and respond to project related GBV risks associated with the community.
- The PIU will ensure that contractor (i) make reasonable inquiries to verify that the direct or contracted workers retained to provide security are not implicated in past abuses; (ii) train them adequately (or determine that they are properly trained) in the use of force, and appropriate conduct toward workers and affected communities; and (iii) require them to act within the applicable laws of Tanzania.

5.5.7 Community Health – Communicable Disease Transmission

The construction of the project shall definitely be accompanied by in-migration of job seekers and opportunistic businesses and speculators. This will increase social interactions amongst the construction workers and local communities. The presence of a

large number of workers can give rise to an increased spread of communicable diseases. This among other factors may also produce an inherent increased risk of transmission of sexually transmitted diseases, HIV/AIDS and other contagious diseases taking into consideration that the project will be implemented within university campuses. In addition, the increase in disease like COVID-19 associated with the entry of a temporary labour force into community could also occur.

Mitigation measures

- In order to prevent more HIV/AIDS infection, during the implementation phase, the project shall include information education and communication component (IEC) for workers and the community in its budget. This will help to raise more awareness on HIV/AIDS and means to suppress its incidence.
- The contractor shall deploy locally available labour as practically possible
- A safety, health and environment induction training shall be conducted to all workers, putting more emphasis on HIV/AIDS and communicable diseases.
- Staff shall be encouraged the use of preventive measures like condoms by availing condom dispensers.
- Contractors will be required as part of the ESMP to include measures to demonstrate how they will work in a Covid-19 secure manner where relevant to minimise transmission risks.
- Worksites will be well maintained to avoid the creation of breeding sites for vectors. This will include to avoid the construction of small pools of water (mosquitos), waste (rodents) etc. which contribute to diseases transmission. (water will be stored in containers)
- Contractors will have access to potable water and adequate sanitation facilities to prevent disease transmission.

5.5.8 Community Health – Accidents and Injury

During the building works, the risks related on public safety and the personnel increase. The building works will induce possible harmful effects on public safety. The traffic related to construction will contribute to reduced road safety especially on local roads where some contractor's facilities are located, especially where the traffic passes through settled areas and towns located close to the road. The traffic to construction site will depart from the public roads. Residents from local settlements on these haulage roads will be exposed to increased possibilities for accidents and injuries. Traffic consisting of heavy vehicles and machinery is especially risky. The sources of the effects to public are

identified in the **Table 5-1** and could occur along transportation routes or as a result of the community entering construction sites. Children can be at particular risk of such impacts if they are unaware of project risks.

Table 0-1 Sources of the harmful effects on health and safety

Type of harmful effect	Sources of the threat
Accident risk (falls, trips, road traffic accidents, etc)	● During excavation work ● Movements and operations of heavy equipment ● Access to danger zones ● Transport, handling and storage of the materials ● Concrete batching and mixing plant ● Modification made to the known plans of route
Indirect health risk	● Environment Pollution ● Contamination of water or food

Mitigation measures

- Maintain good security in the area with signage like “No employment at the moment”, to keep away job seeker to avoid unnecessary people in project sites
- Develop and implement an emergency response plan including spill response and train workers on the same;
- Institute good site practices including prevent public access to the construction site by securing equipment and demarcate excavate, using warning signs with appropriate text (local language) and graphics programs;
- Institute traffic management and safety programme including, training and testing of heavy vehicles operators and drivers, enforcement of speed limits, maximum loading restrictions and compliance with all Tanzania transportation law and standards
- Undertake stakeholder engagement with local communities to inform them of activities on the site and associated risks.

5.6 Potential Environmental Impacts During Construction Phase

Impacts on physical environment

5.6.1 Impacts on Air Quality

Construction activities have potential to emit dusts and noxious gases such as CO2, CO, NOx, SO2, VOC and CH4. Vehicles and equipment's with internal combustion engines have potential to emit noxious gases. Construction works that are likely to generate dusts are mainly related to the movement of materials and machinery and construction work. When dust is exceptionally fine and when the populations resident undergo an exposure prolonged and persistent (such as in proximity of a career) there are risks of attacks of the public health. Potential sources of dust at the site and off site are summarized in **Table 5-2.**

Table 0-2 Project activities and Impacts

Activity	Source of production of dust
On-site building work producing dust and gaseous emissions	
Clearance and terracing of the site	Earthworks Initial soil spraying after excavation. The movement of construction traffic and movement of materials Stored materials subjected to wind action
Excavation	The important sources are: The movement of traffic of construction The handling and the storage of waste The excavation and the transport of materials and potential storage on the site.
Building Foundations	The important sources are: Foundation excavation The movement of construction traffic The handling and the storage of waste The excavation and the transport of materials and potential storage on the site.
Building Works	Movement of traffic of construction. Potential of a certain strongly localized harmful effect if the completion of work requires "smoothing and sanding" of the wall to obtain a desirable completion.
Auxiliary work -	
Off-site building work producing dust	
Main court	Any movement of traffic on unpaved roads Surface Materials brought by the wind

Activity	Source of production of dust
Aggregate mixing unit	Stored materials Input of the handling of the materials Filtering and another process of materials Handling of materials/loading output Traffic congestion
Tool maintenance course	Materials of surface brought by the wind Traffic of construction
Sites of borrow	Clearing the site Excavation Stored materials Material loading

With regard to the gaseous emissions, the sources of atmospheric emissions associated with construction activities are mainly from units of construction and the possible generators, by evaluating these sources, the following conclusions can be drawn:

- The majority of the sources are mobile and will generate dispersed emissions and in a temporary way;
- The majority of the emissions will be generated starting from the concentrations of activities which are rather far away from the sensitive receivers; and
- The level of the emissions of the precursory pollutants and the atmospheric pollutants will vary from day to day, according to the type of the activity, but even if the impact is very limited in time, it does not remain about it less than it is subjected to a factor of expansion in space with knowing the weather conditions. Of this fact the intensity of the impact of the building site on air pollution especially by the suspended particles is evaluated like average.

Mitigation measures

Impairment of air quality due to emissions

- Equipment shall be maintained in good running condition, no equipment to be used that generates excessive black smoke;
- Enforce vehicle road restrictions to avoid excess emissions from engine overloading, where practical switching off engines will be done when not in use;
- There will be routine inspection of equipment;
- Trucks transporting materials shall be fully covered; and
- Turn off engines to reduce idling.

Impairment of Air Quality Due to Dust

- Protect stockpiles of friable material subject to wind through wetting;
- Cover loads with of friable material during transportation;
- Restrict speed on loose surface roads to 30Km/hr during dry or dusty conditions; and
- Douse with water of roadways and work sites to reduce dust when necessary.

5.6.2 Impacts Through Noise

During construction works, the noises come mainly from the units of building site (power picks, mechanical shovels, cranes, concrete batching and mixing plant etc), trucks and semitrailers charged to transport materials as well as use of explosives (career of massive rock). The extent of the nuisance will depend on the spatial organization of the site and mainly the location of borrow pits, as well as the crushing plant, concrete plants and other noisy machines compared inhabited areas.

Mitigation measures

- Vehicles carrying construction materials shall be restricted to work during day time only;
- Machine operators in various sections with significant noise levels shall be provided with noise protective gear; and
- Construction equipment shall be selected, operated and maintained to minimize noise.

5.6.3 Impacts Through Vibration

Construction activity can result in varying degrees of ground vibration, depending on equipment and Method Employed. Vibration will be produced by construction vehicles, plant and machinery during delivery of materials, processing of materials, and actual construction work. The Construction activities that typically generate the most severe vibrations are blasting and impact pile driving for foundation. Due to an increase in activities and number of operational vehicles, the impacts vibration will cause disturbance to neighbours and physical damage to properties near the construction site.

Mitigation measures

- Impact pile driving shall be avoided where possible in vibration sensitive areas; and
- Vibratory rollers and packers shall be avoided.

5.6.4 Disadvantages Related to the Management of Wastewater

The types of wastewater generated during construction activities include sewage, gray water and process water. Sewage effluent from camps and associated buildings will be produced in the sanitary facilities provided and collected on site. Septic waste produced in scattered sites will also pose a problem to human health. This will be particularly severe if the waste is not collected directly and / or is released directly into the wild without any treatment. Gray sewage will pose less of a direct problem to human health but will be produced in large quantities in the camps. Hunting and process water will be generated from batching plants, equipment maintenance centers and ordinary sites. Wastewater discharge in the natural environment can pollute environment and causing unhygienic sanitary conditions and nuisances to the human perceptions. Types and sources of wastewater are shown in **Table 5-3**.

Table 0-3 Types and sources of waste water

Type	Source
Sewage	Works Camp
	Offices Other elements of the main camp
	Remote secondary facilities
	Sites
Gray water	Works Camp, cooking, personal and clothes washing
	Offices/Other camps
Hunting and process water	Oil spills
	Aggregates and process plants
	Equipment maintenance centers
	Ordinary sites

Mitigation measures

- Wastewater shall be properly treated in the Septic Tank Before disposal into the Soak Away Pit within the site;
- Contractor shall be instructed to put on his/her methodologies for handling hazardous waste such as oils, lubricants and non-combustible waste; and
- Training on waste management shall be done to all personnel, operators and services providers.

5.6.5 Disadvantages Related to the Management of Solid Wastes

Main sources of construction waste are cleared vegetation and top soil (overburden), scrape metals, asbestos, remnant of timbers and domestic waste from construction crews. During construction activities, various type of solid wastes will be generated

including solid wastes from food in cafeteria and offices. The wastes may contaminate land or be washed into local surface and ground water resources and impair the quality of these receiving bodies. Other associated impacts include flies and increased bird population (attracted by food waste).

Mitigation measures

- The contractor shall have adequate facilities for handling the construction waste; and
- Topsoil shall be stock piled and used for reclamation or re-vegetation practice at the site during landscaping.
- Hazardous waste such as asbestos will be handled with the designated and registered vendor by the National Environmental Management Council (NEMC).

5.6.6 Erosion of Exposed Surfaces

Inadequate compaction and resurfacing compounded by rain, trampling, vegetation clearance etc. may cause erosion and consequent sediment load in runoffs. This is mostly likely to happen if construction is undertaken during the months of rain seasons -heavy rains.

Mitigation measures

- The construction will be as per engineering design and procedure of which a maximum requirement of compaction strength is achieved during the construction. That is maximum dry density (MDD) specified in the design manual by consultant;
- Maintain gravel fill and/or re-vegetate around the structures;
- Unnecessary ground clearance and sensitive re-alignments shall be avoided;
- Directing flow to properly designated channels;
- All excavation works shall be properly backfilled and compacted; and
- Most of construction activities will be done during dry weather.

5.6.7 Landscape and Visual Impacts

Like any development, there is a ‘zone of visual intrusion’ from which it can be seen. These refer to the impacts of landscape change on people: on the views that people have from their homes, offices, footpaths, cars as they drive past etc. Construction activities shall affect the landscape by removing existing landscape features in place such as trees and replacing them by concrete and gravel surface. If operated at night, the lights will lead to the increase of light pollution. The following components of the landscape can be affected by development:

- Physical factors: geology, landform, microclimate, drainage, soil, ecology; and

- Aesthetic factors: proportion, scale, enclosure, texture, colour views as well as sounds

However, the proposed project components can also change the overall character of an area to make it look harder and more urban.

Mitigation measures

- Light pollution can be reduced by keeping lighting (e.g. of parking lots) to the minimum levels needed for safety, and through the careful choice of light fixtures such as the use of flat-glass lanterns in car parks; and
- Locating parts of the development further away from viewers.

5.7 Potential Social Impacts During the Operation Phase

The following social impacts have been identified during project preparation. However, following development of the Social Impact Assessment, LMP and GBV Action Plan for the Project these impacts will be revisited and updated where relevant.

Positive Social Impacts

5.7.1 Increase of Admission of Students to Universities and Colleges

The proposed project components will provide adequate academic facilities to academic institutions, people and the country at large. These will increase admission of students from high schools and other college as a result more Tanzanian people will be benefited. Also, the proposed project components shall provide adequate and conducive space for meetings, trainings, seminars, workshops etc. In order to maximise benefits, it is essential that increased admissions are inclusive and consider the needs of vulnerable groups and people. To this end it is important that curricula is inclusive, buildings are accessible and persons with disabilities are able to fully participate in learning opportunities.

Enhancement measures

- Gender will be considered during selection process in order to increase female participation. Selection criteria will be non-discriminatory.
- Curriculum and pedagogy development will take into consideration the requirements of vulnerable groups to avoid undermining language use, cultural practices, institutional arrangements, religious or spiritual beliefs of Vulnerable Groups. There is also an opportunity to incorporate traditional local knowledge from these communities in the curricula development and to design courses of study that address their needs.
- Institutions will be constructed using the principles of universal access and pedagogical approaches will consider persons with disability.

5.7.2 Increase of Revenue to Academic Institutions

Universities will increase students' enrolment which in return will increase revenues through university fees. This will increase academic institution's financial standing which will good governance and efficient running of the Universities/colleges. Thus, the goals of academic institutions to become centre for seeking knowledge and disseminating it to a wide spectrum of beneficiaries at national and regional levels are going to be fully realized.

5.7.3 Job Creation

Jobs generated by operations of project components can be divided into two (2) categories: direct and indirect jobs; their volume depends strongly on the level of operational activities. Direct jobs are those related to operational services, cleanliness, stationeries, catering and commercial activities. Indirect jobs are those created by the positive impact institutions to economic sectors. These are agriculture, livestock, energy and water sector. The ripple effect (or catalyst) on the entire regional and national economy is also the origin of the creation of 'indirect' jobs.

Enhancement measures

- Employment will be on equal opportunities/ non-discrimination for both genders and on the basis of any personal characteristics.

5.7.4 Increased Commercial and Social Activities Around Project Locations

Construction of the proposed project components is anticipated to attract more businesses in a way that create vibrant businesses within project respective areas. Also, it with cause a growth of the existing businesses around the project location.

Enhancement measures

- Good security within the project area and area of influence.

Negative Social Impacts

5.7.5 Increased Incidences of Diseases and Ill Health

The concentration of a large number of people within the proposed project area could contribute to increased levels of communicable diseases, which facilitate the spread of diseases such as Sexually Transmitted Diseases (STDs), HIV/AIDS, Covid 19 and other ailments.

Mitigation measures

- A safety, health and environment induction course shall be conducted to all students and workers, putting more emphasis on HIV/AIDS, which has become a national disaster;
- The project shall include information education and communication component (IEC) in its budget. This will help to raise more awareness on HIV/AIDS, and means to suppress its incidence;
- Environmental sanitation systems shall be improved; and
- Medical facilities shall be increased at university dispensary so as to meet the population demand.
- Follow all measures outlined to prevent spread of Covid 19 such as leaving a minimum distance of 1m between workers, washing of hands while entering and leaving the site, wearing of masks, and provision of facilities for frequent checkup to reduce new cases. Hand washing facilities will be provided at site.

5.7.6 Increased Pressure on Social Services and Utilities

The presence of the buildings has the potential to increase pressure on social services and utilities such as electricity and water. The demand may strain the existing service delivery system in one way or the other. The increase of population in due to employment opportunities and students enrolment will definitely strain the existing social services.

Mitigation measures

- Use of water conservatively by instituting technologies (e.g. self-lock water tape) and awareness raising notices to users, etc;
- Construction of underground water reserve tank and introducing rainwater harvest system;
- Extraction of underground water resources;
- Alternative measures like use of solar power, drilling a borehole at site, water recycling shall be explored and implemented if found feasible. For instance, use of energy savers bulbs shall be given high priority; and
- Use of air conditioning shall be kept to a minimum and maintenance of the cool indoor environment using natural ventilation system shall be strongly explored during the design process.

5.7.7 Risk of SEA/SH within Institutions

Students in particular female students are at risk of SEA/SH while participating in studies. This can include expectations of sexual favours in return for grades, sexual assault, verbal sexual harassment amongst others. SEA/SH may affect students and teachers and perpetrators can also include faculty staff, other students and none faculty staff. The

identification of SEA/SH risks during operation will be considered further as part of the GBV Action Plan.

Mitigation measures

A GBV Action Plan will be drafted, approved and implemented which will include the following:

a) Assess the SEA/SH risks associated with the project based on existing data and input from key stakeholders. This will include identification of risks to workers and communities during construction as well as risks to students within operating institutions.
b) Map out GBV prevention and response actors at the national level and at the institution level.
c) Define the GBV requirements and expectations in the bid documents including codes of conducts (to be signed by workers), training, awareness raising for workers and the community, GBV responsive GRMs and approach to GBV case management.
d) Define the GBV measures needed to protect students at the national level and the institutional level including the need for institutions to develop GBV policies to address SEA/SH, training and awareness raising, GBV responsive GRMs, educator/ staff codes of conduct (to be signed), student agreements, referral pathways etc.

5.8 Potential Environmental Impacts During the Operation Phase

Impacts on physical environment

5.8.1 Water Pollution

This pollution will be mainly a result of sanitation system (Septic tank system) that will be used during project operation. This is due to the fact the proposed project will increase number of students with time. Onsite sanitation systems always cause groundwater pollution due to infiltration of the effluent during disposal. Also, surface water is at risk of pollution due to drainage of contaminated impervious surfaces. In this case, the main pollutants include solid matters, floating and macro waste, heavy metals and organic matters. During the rainy season, the surface waters will drain the pollutants directly towards the natural discharge system if the project does not envisage pre-treatment of rain water. Thus, the risk of water degradation is assessed as important, which may have an indirect impact on the water table too.

Mitigation measures

- The developed Surface Water Quality Program and a Spill Prevention and Response Plan will be used to manage and mitigate the pollution of surface and ground water

on the proposed project sites. The ESMP describes the measuring and monitoring activities and tracks actions taken to manage surface and ground water discharges;
- Septic tank and soak away shall be designed in such a way waste treatment is achieved by 100% before disposal to the authorised disposal sites;
- Minimize oil spillage;
- Discharge and treat foul drainage and sewage; and
- Pass run off through oil interceptors.

5.8.2 Storm Water Generation and Overflow

The proposed project components will generate a lot of storm water due to presence pavements, concrete surfaces and building roofs. The structures will tend to compromise the infiltration capacity of the land surface hence rendering water free to the environment. The storm water generated might have impacts on structures downstream as well as being a factor for soil erosion and poor water quality.

Mitigation measures
- The design of storm water drainage will be given a high priority;
- Rainwater harvesting will be used encouraged in proposed project sites; and
- The design shall consider enough greeneries in the project site.

5.8.3 Health and Safety Risks Due to Fire Hazards

Buildings are very prone to fire hazards because of different types of combustible materials and machines, which are used and installed, respectively. Electrical fault is by large the main culprit in fire accidents in buildings in Tanzania. The components of a fire are fuel (combustible substance), heat and oxygen. Unless all three are present fire will not occur. Fire can cause the following effects:
- Loss of lives;
- Serious Injuries;
- Loss of properties etc.

Mitigation measures
- Adequate number of portable fire extinguishers shall be placed at strategic locations;
- Good housekeeping shall be maintained at all sites to reduce the fire risk;
- The design of buildings shall strictly adhere to the Fire Safety Standards;
- Fire detectors and sprinkler system shall be installed in the buildings; and
- The proponent shall insure buildings against fire Hazards.

5.9 Potential Social Impacts During Decommissioning Phase

5.9.1 Loss of Employment and Revenues

The people employed by the project will lose their jobs. This will have significant impact on these people and their families. Other dependents of the project, such as suppliers of various services (e.g. Security Company) will lose the market. Also, Universities will be loose revenue in case of the decommissioning of the project, the revenue generated will cease. This impact is considered negative, long term and of moderate significance.

5.10 Potential Environmental Impacts During Decommissioning Phase

5.10.1 Loss of Aesthetics Due to Haphazard Disposal of Demolished Waste

In the event of future rehabilitations and upgrading, the buildings may need to be demolished necessitating disposal of demolished waste. Haphazard disposal may cause contamination/impaired quality of receiving body – especially land, and water resources.

Mitigation measure

- The debris resulting from the demolition will either be transported by a licensed waste transporter for dumping at an approved site or used as base material for new construction work;
- All the necessary health and safety measures will be implemented including provision of personal protective equipment such as, safety harnesses, helmets, gloves, respirators, safety shoes, coveralls, goggles and ear protectors; and
- Restoration of the affected land will involve the filling in of any open pits and grading the land to its natural contours, then planting appropriate tree species and under cover vegetation to hold the soil in place and to prevent flooding.

5.10.2 Dust and Noise Pollution from Demolishing Works

In the event of future rehabilitations and upgrading, the building needs to be demolished necessitating disposal of demolition waste. The noise pollution and air quality will be most affected during the demolition work with the emission of dust particles from machinery like excavators, electric grinders and mixer. The impact receptors are likely to include site workers and neighbours. The substances which will most significantly contribute to air pollution, will be Particulate Matter. Particulate matters may cause health hazards when inhaled in significant amounts and can also reduce the visibility. Most of those dust particulates will come from dust particulates which themselves come from the concrete rubbles and blocks.

Mitigation Measure

In the event of dust generation during decommissioning dust suppressors and blockers will be used such as water and fencing of the site during works to avoid dust from spreading to nearby areas.

5.10.3 Loss of Revenue to Institutions and the Government

As discussed above both town and Central government will be receiving revenue from the project. In case of the decommissioning of the project, the revenue generated will cease.

Mitigation Measure

In case of lost revenue from the project due to decommissioning the government will have to look for alternative source of revenue or increase some of the revenues such as fuel, drinks and levies to compensate for the lost revenue from the project. The government may introduce new sources of revenue to ensure that the amount collected is not affected.

5.11 Environmental and Social Management Plan (ESMP)

The ESMP provides general guidance for the management of environmental and social impacts, which will be identified from specific sites environmental and social assessments. Once the specific sites are identified, implementing institutions in collaboration with the NPIU will conduct screening using procedures outlined in this ESMF. The results of the screening will guide the way impacts will be assessed and mitigation measures designed. For sub-project which will require EIA (as a result of screening), separate ESMPs will be prepared (as part of ESIA) of which C-ESMPs will be derived from at a later stage. Whereas project whose screening result will not necessitate the preparation of ESIA, the project will ask the contractor to prepare C-ESMP directly. The general Environmental and Social Management Plan (ESMP) for the identified impacts is presented in **Table 5-4.**

Table 0-4 Environmental and Social Management Plan

Identified Impact	Mitigation Measure	Responsible Institution	Time of mitigation	Monitoring frequency	Cost in (TSH)
Preparatory phase					
Land acquisition and population displacement	○ The proponent shall determine project affected people PAP) with land rights or properties or crops or another form of physical or economic displacement ○ Compensation calculation and payment shall be guided by the Resettlement Action Plan (RAP) that will be developed in line with the Project RPF; and ○ Full implementation of the RAP shall be completed before the commencement of the project.	Implementing Institutions (APIU) / Universities (UPIU), MoEST (NPIU)	Preparatory phase	As per RAP	
Disruption of Economic and Social Activities and Services	○ Awareness raising to community within the project core area; and ○ Inclusion of local leaders (Ward/sub-ward chairpersons/executive officers or /and councillors. ○ Development of RAP as per RPF including livelihood restoration measures.	Implementing Institutions (APIU) / Universities (UPIU), MoEST (NPIU), Contractors and Supervision Consultant	Preparatory phase	As per RAP	

Identified Impact	Mitigation Measure	Responsible Institution	Time of mitigation	Monitoring frequency	Cost in (TSH)
Damage to Cultural Heritage	○ Implementation of the chance finds procedure as per Annex IV ○ Screening of potential construction sites to identify cultural heritage. ○ Engagement with local leaders and communities to understand the location of locally important cultural heritage (as part of screening). ○	Implementing Institutions (APIU) / Universities (UPIU), MoEST (NPIU), Contractors and Supervision Consultant	Preparatory phase	Quarterly	
Exploitation of existing authorized borrow pits/quarries and other natural resources	○ Exploitation of construction materials will be from the authorized source only; ○ Restoration of the borrow pits/quarries after use constituting levelling the area and seeding or planting of trees and/or grasses will be done in association with local government (natural resources department) and local environmental NGOs. If appropriate the levelled area will be left for natural re-vegetation; ○ Re-use of the excavated soils and demolition rubbles as part of the sub base material; ○ Construction of underground water reserve tank and introducing rainwater harvest system; and ○ .	Contractors and Supervision Consultant	Preparatory phase	Daily	

Identified Impact	Mitigation Measure	Responsible Institution	Time of mitigation	Monitoring frequency	Cost in (TSH)
Contamination and Impaired Quality of Receiving Body-Land and Water	○ Efficient collection and disposal system based on the principles of reduction, re-use and recycling of materials, shall be instituted at project areas; ○ To reduce the cost of the project, much of the excavated soil and rubble materials will be reused as initial filling materials where levelling of runway, taxiway and apron is required; ○ Introduction of waste disposal bins, warning notices, posted at strategic points; ○ No, on site burial or open burning of solid waste shall be permitted as this is contrary to Municipality as well as national environmental management Act and its regulations; ○ Wastes not suitable for incinerations and general municipal waste damping (e.g. Batteries, plastics, rubbers, tyres, etc) shall be removed for recycling, treatment, and/or disposal by licensed contractor as appropriate; and ○ Instructions to contractor to put on his/her methodologies for handling hazardous waste such as oils, lubricants	Contractors and Supervision Consultant	Preparatory phase	Daily	

Identified Impact	Mitigation Measure	Responsible Institution	Time of mitigation	Monitoring frequency	Cost in (TSH)
	and non-combustible waste during bidding process.				
Deteriorated / Impairment of Local Air Quality due to Emission Generated from Equipment's	○ Maintain equipment in good running condition, no equipment to be used that generates excessive black smoke. ○ Enforce vehicle road restrictions to avoid excess emissions from engine overloading, where practical switch off engines when not in use. ○ Routine Inspection of equipment	Contractors and Supervision Consultant	Preparatory phase	Daily	
Construction Phase					
Job Creation	○ The contractor shall be encouraged to employ local, unemployed yet willing to work hard, manpower to the extent viable subject to a maximum of 50% unskilled labour. This will ensure that local people are more benefited out of the project; ○ Employment will be on equal opportunities for both genders as well as free of other forms of discrimination; ○ Contractor shall provide on job skills and training; and	Contractor and Supervision Consultant	Construction phase	Monthly	

Identified Impact	Mitigation Measure	Responsible Institution	Time of mitigation	Monitoring frequency	Cost in (TSH)
	○ Local communities shall be encouraged to produce quality goods and services at the project site.				
Income to Local Suppliers and Service Providers	○ Ensure monitoring of labour standards among contractors, sub-contractors, workers and service providers; and ○ Academic institution to design appropriate means of collecting revenues.	Contractors and Supervision Consultant APIU) / Universities (UPIU), MoEST (NPIU),	Construction phase	Monthly	
Impacts on Knowledge	○ Contractor shall provide on job skills and training.	Contractors and Supervision Consultant	Construction phase	Monthly	
Labour and Working Conditions	• The project will develop Labour Management Procedures to guide the employment of all workers. • Contractors will be required to develop camp management plans and codes of conduct for workers, • The contractor shall be encouraged to employ local, unemployed yet willing to work hard, manpower to the extent viable subject to a maximum of 50% unskilled labour. This will ensure that	Contractors and Supervision Consultant APIU) / Universities (UPIU), MoEST (NPIU),	Construction phase	Monthly	

Identified Impact	Mitigation Measure	Responsible Institution	Time of mitigation	Monitoring frequency	Cost in (TSH)
	local people are more benefited out of the project; • All workers will have contracts with terms and conditions that are consistent with national labour laws and policies as well as ESS2. • Workers will have access to a grievance redress mechanism which will be documented in the LMP • Contractors will be required to apply equal opportunities to the employment of workers and not discriminate on the basis of gender or any other personal characteristics. • Contractors will be required to ensure that no children are employed on the site and have in place measures to verify the age of workers • All workers must have an employment contract, be paid for their work and have the right to resign if they wish. • Selection of companies in the supply chain will involve due diligence to avoid the use of companies which are involved in child labour.				

Identified Impact	Mitigation Measure	Responsible Institution	Time of mitigation	Monitoring frequency	Cost in (TSH)
	• The project will develop a GBV Action Plan which will include prevention and response measures. This will include codes of conduct, training and capacity building, awareness raising, access to referral pathways etc.				
Social Conflict	○ Maintain good security in the area with signage like “No employment at the moment”, to keep away job seeker to avoid unnecessary people in project sites ○ Local workers will be hired to the extent possible to minimise influx ○ Workers will be required to sign worker codes of conduct. ○ Contractors will need as part of their C-ESMP to include camp management requirements ○ Ongoing engagement with local stakeholders including relevant authorities on construction activities ○ Ensure that all stakeholders are aware of the grievance redress mechanism and have access to the same.	Contractors and Supervision Consultant APIU) / Universities (UPIU), MoEST (NPIU),	Construction phase	Monthly	

Identified Impact	Mitigation Measure	Responsible Institution	Time of mitigation	Monitoring frequency	Cost in (TSH)
	○ GBV Action Plan will be developed to prevent and respond to project related GBV risks associated with the community.				
Communicable Disease Transmission	○ In order to prevent more HIV/AIDS infection, during the implementation phase, the project shall include information education and communication component (IEC) for workers and the community in its budget. This will help to raise more awareness on HIV/AIDS, and means to suppress its incidence. ○ The contractor shall deploy locally available labour as practically possible ○ A safety, health and environment induction training shall be conducted to all workers, putting more emphasis on HIV/AIDS and communicable diseases. ○ Staff shall be encouraged the use of preventive measures like condoms by availing condom dispensers. ○ Contractors will be required as part of the ESMP to include measures to demonstrate how they will work in a	Contractors and Supervision Consultant APIU) / Universities (UPIU), MoEST (NPIU),	Construction phase	Monthly	

Identified Impact	Mitigation Measure	Responsible Institution	Time of mitigation	Monitoring frequency	Cost in (TSH)
	Covid-19 secure manner where relevant to minimise transmission risks. ○ Worksites will be well maintained to avoid the creation of breeding sites for vectors. This will include to avoid the construction of small pools of water (mosquitos), waste (rodents) etc. which contribute to diseases transmission. (water will be stored in containers) ○ Contractors will have access to potable water and adequate sanitation facilities to prevent disease transmission. ○				
Accidents and Injury	○ Maintain good security in the area with signage like “No employment at the moment”, to keep away job seeker to avoid unnecessary people in project sites ○ Develop and implement an emergency response plan including spill response and train workers on the same; ○ Institute good site practices including prevent public access to the construction site by securing equipment and demarcate excavate, using warning	Contractors and Supervision Consultant APIU) / Universities (UPIU), MoEST (NPIU),	Construction phase	Monthly	

Identified Impact	Mitigation Measure	Responsible Institution	Time of mitigation	Monitoring frequency	Cost in (TSH)
	signs with appropriate text (local language) and graphics programs; ○ Institute traffic management and safety programme including, training and testing of heavy vehicles operators and drivers, enforcement of speed limits, maximum loading restrictions and compliance with all Tanzania transportation law and standards ○ Undertake stakeholder engagement with local communities to inform them of activities on the site and associated risks. ○				
Impacts on air quality	○ Equipment shall be maintained in good running condition, no equipment to be used that generates excessive black smoke. ○ Enforce vehicle road restrictions to avoid excess emissions from engine overloading, where practical switching off engines will be done when not in use. ○ There will be routine inspection of equipment ○ Trucks transporting materials shall be fully covered	Contractor and Supervision Consultant	Construction phase	Daily	

Identified Impact	Mitigation Measure	Responsible Institution	Time of mitigation	Monitoring frequency	Cost in (TSH)
	○ Turn off engines to reduce idling ○ Protect stockpiles of friable material subject to wind through wetting. ○ Cover loads with of friable material during transportation. ○ Restrict speed on loose surface roads to 30Km/hr during dry or dusty conditions. ○ Douse with water of roadways and work sites to reduce dust when necessary.				
Impacts through noise and vibrations	○ Vehicles carrying construction materials shall be restricted to work during day time only; ○ Machine operators in various sections with significant noise levels shall be provided with noise protective gear; and ○ Construction equipment shall be selected, operated and maintained to minimize noise.	Contractors and Supervision Consultant	Construction phase	Daily	
Disadvantages related to the management of wastewater,	● Wastewater shall be properly treated in the Septic Tank Before disposal into the Soak Away Pit within the site; ● Contractor shall be instructed to put on his/her methodologies for handling	Contractor, Supervising Consultant, Implementing Institutions	Construction phase	Quarterly monitoring and Verification Report	

Identified Impact	Mitigation Measure	Responsible Institution	Time of mitigation	Monitoring frequency	Cost in (TSH)
garbage and yard waste	hazardous waste such as oils, lubricants and non-combustible waste; and ● Training on waste management shall be done to all personnel, operators and services providers.	(APIU) / Universities (UPIU), MoEST (NPIU)			
Erosion of Exposed Surfaces	○ The construction will be as per engineering design and procedure of which a maximum requirement of compaction strength is achieved during the construction. That is maximum dry density (MDD) specified in the design manual by consultant; ○ Maintain gravel fill and/or re-vegetate around the structures; ○ Unnecessary ground clearance and sensitive re-alignments shall be avoided; ○ Directing flow to properly designated channels; ○ All excavation works shall be properly backfilled and compacted; and ○ Most of construction activities will be done during dry weather. ○	Contractors and Supervision Consultant	Construction phase	Quarterly monitoring and Verification Report	

Identified Impact	Mitigation Measure	Responsible Institution	Time of mitigation	Monitoring frequency	Cost in (TSH)
Landscape and visual impacts	○ Light pollution can be reduced by keeping lighting (e.g. of parking lots) to the minimum levels needed for safety, and through the careful choice of light fixtures such as the use of flat-glass lanterns in car parks; and ○ Locating parts of the development further away from viewers.	Contractors and Supervising Consultant	Construction phase	Quarterly monitoring and Verification Report	
Potential Impacts on the human health and safety	○ Awareness campaigns /Education on HIV and STDs shall be provided to workers ○ Appropriate working gear (such as nose, ear mask and clothing) and good construction site management shall be provided. ○ During construction the contractor shall ensure that the construction site is fenced and hygienically kept with adequate provision of facilities including waste disposal receptacles, sewage, firefighting and clean and safe water supply. ○ A well-stocked First Aid kit (administered by medical personnel) shall be maintained at construction site.	Contractors and Supervising Consultant, Implementing Institutions (APIU) / Universities (UPIU), MoEST (NPIU)	Construction phase	Quarterly monitoring and number of complaints on health issues	

Identified Impact	Mitigation Measure	Responsible Institution	Time of mitigation	Monitoring frequency	Cost in (TSH)
	The medical personnel shall also be responsible for primary treatment of ailments and other minor medical cases as well as providing some health education to the workforce. ○ Reporting mechanisms for the public to register concerns or complaints regarding perceived risks to their health and safety due to the construction operation; ○ Incident recording and immediate reporting protocols shall be in place ○ Emergency contact details in the event of an accident shall be provided ○ Develop and implement an Emergency Plan including spill response ○ Training all contractor staff in emergency planning and spill response ○ Developing a detailed health and safety plan and training all contractor staff on the plan.				
Operations Phase					
Increase of Admission of Students to	○ Gender will be considered during selection process in order to increase female participation.	Implementing Institutions (APIU) /	Operations Phase	Quarterly monitoring and	

Identified Impact	Mitigation Measure	Responsible Institution	Time of mitigation	Monitoring frequency	Cost in (TSH)
Universities and Colleges	○ Curriculum and pedagogy development will take in to consideration the requirements of vulnerable groups to avoid undermining language use, cultural practices, institutional arrangements, religious or spiritual beliefs of Vulnerable Groups. There is also an opportunity to incorporate traditional local knowledge from these communities in the curricula development and to design courses of study that address their needs. ○	Universities (UPIU), MoEST (NPIU)		Verification Report	
Job Creation	○ Employment will be on equal opportunities for both genders.	Implementing Institutions (APIU) / Universities (UPIU), MoEST (NPIU)	Operations Phase	Quarterly monitoring and Verification Report	
Increased Commercial and Social Activities Around Project Locations	○ Good security within the project area and area of influence.	Implementing Institutions (APIU) / Universities (UPIU), MoEST (NPIU)	Operations Phase	Quarterly monitoring and Verification Report	

Identified Impact	Mitigation Measure	Responsible Institution	Time of mitigation	Monitoring frequency	Cost in (TSH)
Diseases and ill health	○ A safety, health and environment induction course shall be conducted to all students and workers, putting more emphasis on HIV/AIDS, which has become a national disaster; ○ The project shall include information education and communication component (IEC) in its budget. This will help to raise more awareness on HIV/AIDS, and means to suppress its incidence; ○ Environmental sanitation systems shall be improved; and ○ Medical facilities shall be increased at university dispensary so as to meet the population demand. ○ Follow all measures outlined to prevent spread of Covid 19 such as leaving a minimum distance of 1m between workers, washing of hands while entering and leaving the site, wearing of masks, and provision of facilities for frequent checkup to reduce new cases. Hand washing facilities will be provided at site. ○	Implementing Institutions (APIU) / Universities (UPIU), MoEST (NPIU)	Operations Phase	Quarterly monitoring and Verification Report	

Identified Impact	Mitigation Measure	Responsible Institution	Time of mitigation	Monitoring frequency	Cost in (TSH)
Increased pressure on social services and utilities	○ Use of water conservatively by instituting technologies (e.g. self-lock water tape) and awareness raising notices to users, etc; ○ Construction of underground water reserve tank and introducing rainwater harvest system; ○ Extraction of underground water resources; ○ Alternative measures like use of solar power, drilling a borehole at site, water recycling shall be explored and implemented if found feasible. For instance, use of energy savers bulbs shall be given high priority; and ○ Use of air conditioning shall be kept to a minimum and maintenance of the cool indoor environment using natural ventilation system shall be strongly explored during the design process.	Implementing Institutions (APIU) / Universities (UPIU), MoEST (NPIU)	Operations Phase	Quarterly monitoring and Verification Report	
SEA/SH Risks	A GBV Action Plan will be drafted, approved and implemented which will include the following:	Implementing Institutions (APIU) / Universities	Operations Phase	Quarterly monitoring and	

Identified Impact	Mitigation Measure	Responsible Institution	Time of mitigation	Monitoring frequency	Cost in (TSH)
	○ Assess the SEA/SH risks associated with the project based on existing data and input from key stakeholders. This will include identification of risks to workers and communities during construction as well as risks to students within operating institutions. ○ Map out GBV prevention and response actors at the national level and at the institution level. ○ Define the GBV requirements and expectations in the bid documents including codes of conducts (to be signed by workers), training, awareness raising for workers and the community, GBV responsive GRMs and approach to GBV case management. ○ Define the GBV measures needed to protect students at the national level and the institutional level including the need for institutions to develop GBV policies to address SEA/SH, training and awareness raising, GBV responsive GRMs, educator/ staff codes of conduct (to be signed), student agreements, referral pathways etc. ○	(UPIU), MoEST (NPIU)		Verification Report	

Identified Impact	Mitigation Measure	Responsible Institution	Time of mitigation	Monitoring frequency	Cost in (TSH)
Risk of pollution and degradation of water quality	○ The developed Surface Water Quality Program and a Spill Prevention and Response Plan will be used to manage and mitigate the pollution of surface and ground water on the proposed project site at Msalato. The ESMP describes the measuring and monitoring activities and tracks actions taken to manage surface and ground water discharges. ○ Constructed wetland, septic tank and soak away shall be designed in such a way waste treatment is achieved by 100% before disposal to the authorised logons in Dodoma municipality via sewerage system to be constructed ○ Minimize oil spillage ○ Discharge and treat foul drainage and sewage ○ Pass run off through oil interceptors	Contractors and Supervising Consultant	Operation phase	Quarterly monitoring and Verification Report	
Stormwater generation and Overflows	○ The design storm water drainage will be given a high priority, with the limitation of gradient (slope) required for the runway, taxiway and apron. ○ Proper hydrology analysis will be carried out as part of subproject ESIA/ESMP, considering the airport topographical	Contractors and Supervision Consultant	Construction phase	Quarterly monitoring and Verification Report	

Identified Impact	Mitigation Measure	Responsible Institution	Time of mitigation	Monitoring frequency	Cost in (TSH)
	features, amount of rainfall and catchments area as the major factors of design of storm water channel. Channel with the capacity of accommodating the amount of water found will be provided/designed. ○ Rainwater harvesting will be used at the project facilities. ○ The design shall consider enough greeneries in the project site				
Health and Safety Risks Due to Fire Hazards	○ Adequate number of portable fire extinguishers shall be placed at strategic locations. ○ Good housekeeping shall be maintained at all sites to reduce the fire risk. ○ The design of the airport shall strictly adhere to the national Fire Safety Standards ○ Fire detectors and sprinkler system shall be installed in the project facilities, where feasible ○	Contractor, Supervising Consultant and NPIU	Operation phase	Quarterly monitoring and Verification Report	
Increased Pressure on Social	○ Use of water conservatively by instituting technologies (e.g. self-lock water tape) and awareness raising notices to users, etc.	Contractor, Supervision	Operation phase	Quarterly monitoring and	

Identified Impact	Mitigation Measure	Responsible Institution	Time of mitigation	Monitoring frequency	Cost in (TSH)
Services and Utilities	○ Alternative measures like use of solar power, drilling a borehole at site, water recycling shall be explored and implemented if found feasible. For instance, use of energy savers bulbs shall be given high priority ○ Use of air conditioning shall be kept to a minimum and maintenance of the cool indoor environment using natural ventilation system shall be strongly explored during the design process.	Consultant and NPIU		Verification Report	

CHAPTER SIX

PROCEDURES TO ADDRESS ENVIRONMENT AND SOCIAL ISSUES

6.1 Introduction

This chapter provides specific stages to be taken for environmental and social screening process, review and approval of HEET project activities. Once the project components have been identified and locations selected, project implementing team will have to use this section as the guideline for screening project component and implementing the appropriate measures while ensuring compliance to all respective WB environmental and social framework (ESF) and country's legislative requirements for screening environmental and social impacts for development projects as stipulated in Environmental Impact Assessment and Audit (Amendment) Regulations, 2018. The procedures presented in this section are established as a framework to ensure compliance throughout project cycle i.e. identification, preparation and implementation.

6.2 Environmental and Social Screening and Review Procedures for Project Components

Environmental and social screening process helps to foresee whether the future project activities are likely to have potential adverse impacts. The process identifies impacts and proposed mitigation measures; incorporates mitigation measures into project design; and reviews and approves project components proposal. In addition, the screening process and other procedures specified in the ESMF will apply to all project components financed under HEET project.

Once the project component activity is defined and the location selected, the project implementing institutions through environmental and social specialists will compile project conceptual and/or preliminary design details and fill the screening form by using Environmental and Social Screening Form (**Appendix IIIA, IIIB and IIIC**) to decide if environmental and social standards must be complied by project activities. The Environmental and social specialist from the project implementing institution will be assisted by NPIU and World Bank (for approval). This exercise will involve identifying the preliminary potential environmental and social impacts, determining their significance and assigning the appropriate environmental risky category.

Once the project component has been screened and approved by World Bank, the project implementation institutions (APIU/UPIU) will hire an environmental consultant who will conduct the environmental and Social Impact assessment. The assessment will be based on WB environmental and social framework (ESF) as well as Environmental Management Act, 2004; EIA and Audit (Amendment) Regulations, 2018, in which upon submission to

NEMC, the environmental authority shall advise on the nature of information and instrument required for approval decision of the sub-project.

Table 6-1 shows categories of the project identified in EIA and Audit (Amendment) Regulations, 2018. Two outcomes of screening at NEMC are possible; No ESIA required or ESIA required.

Table 0-1 Category of the project and instrument as per the Tanzanian Environmental Laws and Regulations

Category	Required submissions for screening	Instrument
A- Mandatory project	Scoping	EIA
B1- Borderline project	Scoping report	EIA
B2- Non-mandatory	Project brief	EMP/ESMP
Special category	Scoping	EIA

If the project is under category ‘B2”, Project implementer shall hire environmental expert to prepare the project brief under supervision of project implementation unit. Where the Council is satisfied that the potential impacts will be sufficiently managed by application of proposed mitigation measures in project design, and the project would not cause significant negative impacts; the subproject will not require an ESIA. NEMC may recommend to the Minister to approve the project and issue a certificate.

In the event that a subproject is screened and found to be in category A, B1 or Special; it will be categorized for detailed assessment, and a full ESIA (involving scoping and development of TOR followed by detailed impact assessment study) will be required. For project component that may result into involuntary resettlement or displacement (including economic displacement), the project implementing institution will be required to submit a RAP to the relevant authority for approval. Moreover, the project implementer will be responsible for sourcing and paying for the service of environmental impact assessment from the consultant, review costs and charges for certificate at NEMC. This level of assessment may require a team of experienced Environmental and Social specialists/consultants.

6.3 Approval of project components

Environmental and Social Specialist at the institution level in collaboration with NPIU will have the mandate to clear the project sub-components designs and proposals that comply with environmental and social management and then submitting to World Bank

for approval. Generally, the project document is accompanied with the copy of completed environmental and social screening forms. During the approval processes the following documents must be submitted for considerations; a) Environmental and Social Screening results, b) Environmental and social checklists, c) project proposal, designs and implementation schedule, d) Environmental clearance or Certificate for project components that undertook ESIA, and e) Environmental and Social Management Plan (ESMP). The World Bank will review and clear subprojects after satisfactorily confirming that, the project design have identified and considered environmental and social impacts, mitigation plan, management plan, monitoring plan and institutional measures to be undertaken during implementation and operation of the subproject.

6.4 Preparation of Environmental and Social Instruments

6.4.1 Preparation of ESIA and ESMP

An ESIA along with an ESMP shall be prepared based on the outlines given in the ESIA and Audit Amended Regulations of 2018. ESIAs will address direct, indirect, induced and cumulative impacts. ESIA and ESMPs will have to be submitted to NEMC as well as the World Bank approval and for obtaining certification as appropriate. In this situation environmental procedures (from registration, scoping, to preparation of ESMPs/EIA, review, to issuing of an EIA certificate) as provided by NEMC will apply. Apart from adhering to report structure and content, the EIA shall have attachment on summary of public consultations carried out, Terms of Reference for which guided preparation of an EIA and drawings for the project component. Detailed content for ESIA and Scoping reports as well as submission criteria for category A, B1 and B2 projects are described in ESIA and Audit Regulations of 2005 and its Amendment of 2018.

The ESMP shall provide all mitigations with associated monitoring measures as well as responsible institution for particular action. The ESMF requires the ESMP to be implemented during implementation and operations of all project components under HEET project. This will be done to minimize identified adverse environmental and social impacts to levels that will not have negative impact to the nearby surrounding or area of influence. The ESMP will be one of the crucial documents for submission during approval of the project component and will be made part of the legal contract for contractors to ensure its compliance. Key aspects of the ESMP are described hereunder; every mitigation measure shall be well explained and how it will be implemented. In case the implementation will involve other institutions apart from the implementing institution then other institutions will also be mentioned and their specific roles for implementing the mitigation measure and implementation costs

Monitoring of Environmental and Social Impact Assessment and Environmental and Social Management Plan

The monitoring is a process for assessing the effectiveness of the mitigation measure applied for specific impacts by observing the response of the indicator of the impact. The objectives for monitoring are: (i) to alert project implementing institutions and to provide timely information about the success or otherwise of the ESIA process as outlined in this ESMF in such a manner that changes to the system can be made, if required; (ii) to make a final evaluation in order to determine whether the mitigation measures designed into the infrastructure projects have been successful in such a way that the pre-infrastructure project environmental and social condition has been restored, improved upon or worse than before.

In order to assess whether these goals are met, the infrastructure projects will indicate parameters to be monitored, institute monitoring milestones and provide resources necessary to carry out the monitoring activities. Environmental monitoring activities will be based on parameter to be measured/ direct or indirect indicators of emissions, noise, effluents, resource use applicable to the particular project as well as indicators of social impacts of the project. Monitoring activities will indicate methods to be used to measure a specific parameter, sampling locations and frequency. Monitoring frequency will be sufficient to provide representative data for the parameter being monitored. The monitoring will be conducted by trained individuals, following monitoring and record-keeping procedures and using properly calibrated and maintained equipment. The monitoring data will be analysed and reviewed at regular intervals and compared with the operating standards based on Tanzanian Standards/WHO standards.

The ESMP will also provide specific period set for monitoring purposes because some of the impacts are short term and others are long terms. Therefore, it will reach a time when monitoring of short-term impacts will cease while the long term one will continue. The ESMP will also be cost effective to avoid unnecessary costs.

The following are indicators for monitoring of the implementation of mitigation plans for HEET subprojects.

Environmental Indicators

The indicators for environmental monitoring include:

- Air quality - particulate pollution, noise pollution
- Water quality - chemical content, sediment load and bacterial counts
- Bio-indicators of environmental conditions - presence or absence of selected species of mammals, reptiles, birds, insects and aquatic animals
- Vegetation change

Social Indicators

- Levels of decision-making of affected people
- Availability of number of GBV cases and how they were solved/attended
- Availability/provision of post violence legal aid to affected people
- Number of gender discrimination cases and how they were attended
- Level of understanding of project impacts and mitigation/ resettlement options
- Effectiveness of local authorities to make decisions
- Frequency and quality of public meetings
- Degree of involvement of women or disadvantaged groups in discussions

- Height-weight ratio for children to measure nutritional status and food security
- Malaria prevalence, bilharzia (intestinal and urinary), and water-borne vector diseases (blood and stool testing)
- Amount of waste generation and disposal from camps as well as rubbish disposal and sanitation arrangements for camps
- Availability of water use and safe drinking water
- Conditions of local dispensaries and staffing
- Availability of STD/VCT Services for addressing HIV/AIDS issues and prevention program for project area and camps
- Quality of buildings in project area and temporary dwellings for worker camps
- Effectiveness of compensation payments and procedures
- Effectiveness of resettlement of affected families and procedure -provisions for support in relocation
- Traffic safety
- Worker safety, referral system to hospitals and work site inspections
- Effectiveness of Grievance Redress Mechanisms (GRMs)
- Levels of employment of local people on the project site
- Percentage of Population influx and general security in the project area

6.4.2 Preparation of Resettlement Action Plan (RAP)

Project components will be mostly sited on the current location of existing infrastructure. Where land is required, i.e expansion or extension, the project will utilize land acquired from individuals. Compensation procedures and payment of compensation costs for physical and economic displacement will be in accordance with RAPs prepared and approved for respective subprojects in accordance with the Resettlement Policy Framework (RPF) developed in parallel with ESMF.

6.5 Consultation and Disclosure of Environmental and Social Documents

6.5.1 Consultation

Stakeholder consultation will be done to people affected by land acquisition, utility service providers, Districts/municipalities, wards, Ministries, vulnerable groups and other interested parties. This will continue throughout the project life i.e. design, during construction and operation. This includes during preparation of E&S instruments. Participation needs to be meaningful and inclusive of all stakeholders and communities, with emphasis on gender, ethnicity, income groups, minorities and vulnerable people.

However, the level of stakeholder engagement will depend on subproject phase, location, likelihood and magnitude of impacts. The project will provide all required information but will focus on meaningful engagement involving dialogue and discussion. All consultations for project related investments will be a two-way dialogue with provision of project related information and obtaining feedback from participants. Collected feedback will need be used to improve project design and mitigation plans. Consultations such as during preparation of ESIA will be documented. This includes list of stakeholders, issues raised, response provided and how those issues reflected in the design. Under COVID 19 situations the WB advises the consultation to be conducted virtually through online meetings, email, video conference and all other non contact measures for data collection. Virtual method of consultation is aimed at reducing new cases of COVID 19 which might compromise the project performance. Other measures could include diversified mechanisms for sharing engagement, smaller meetings and use of mechanisms such as radio etc.

6.5.2 Disclosure

Upon final clearance of the project components, institutions through Project Implementing Unit will disclose the approved project components information (ESIA, ESMP) to the public. More than one avenue can be used as most suitable to the project area however at the minimum the Team shall ensure that the key findings of the environmental and social impacts and mitigation process are:

- Accessible in a public place i.e. notice board, public information point /centre/ library, Ward, District, etc; for notification and response to issues raised by stakeholders.
- Presented in an understandable form, manner and language by using the non-technical summaries of the ESMP that is in both Kiswahili and English; and
- The Bank will make the E&S documents available to the public in accordance with Bank ESS 10 and Policy on Access to Information

6.6 Key Issues During Project Implementation Phases

6.6.1 Procurement of Contractors

The Project Teams will ensure that all relevant resources (human and financial) for proposed mitigations are complete before initiating subproject implementation. Execution of project works and operation of some facilities (e.g. wastewater treatment, storm-water drainage) will be undertaken by institutions implementing projects through Contractors. Project Team in institutions will have to work with Procurement Section (responsible for supervising the tendering process) so that environment and social issues are taken on board and incorporated in the contracts throughout project life. Contractors must be aware of their obligations upfront and demonstrate their understanding of the requirements and costs and resources for implementing the Environmental and Social (E&S) (including health and safety) requirements and conducting self-monitoring in their proposals. Contractors' contracts will include all the E&S health and safety requirements, including requirements for the contractor to develop Construction Environmental and Social Management Plans (CESMPs) during construction for issues such as noise, traffic, labour and grievances by workers and communities and carrying out self-monitoring during implementation.

6.6.2 Permits and Notifications

The sub-project implementation shall be carried out in accordance with international and Tanzania environment, health, safety and security requirements, standards and best practices including all conventions ratified by Tanzania. The equipment and materials used will have all necessary certification/registration and fully compliant with specific requirements for subproject size and purpose.

Proponents will seek and obtain the necessary permits and/or MOUs from relevant authorities and undertake notifications as per environmental management regulations. The Project Teams will ensure that all relevant project approvals including ESIA Certificate, building permits, OSHA etc. are in place. APIU and UPIU at the institution and implementing partners/agencies/universities will carry further the consultations before commencement and during the implementation of individual subproject.

6.6.3 Management Controls by Sub-project Contractor

The Contractor shall ensure that those mitigation measures that are to be implemented during mobilisation and construction and operation are attended to according to ESMP and specific work plans. The Contractor shall simultaneously undertake monitoring and reporting of environmental and social performance/improvement in implementation. Mitigation implementation shall specifically entail:

- Waste Management Plan;
- Occupational and Community Health and Safety Plan;
- Stakeholders Engagement Plan; and
- Emergency Response Plan (ERP).
- HIV/AIDS Management Plan
- GBV (SEA/SH) Action Plan
- Traffic Management Plan (where necessary)

The purpose of the construction environmental and social management plans is to outline how during construction the contractor will avoid, minimize or mitigate effects on the environment and surrounding area. CESMPs are 'live' documents that will be reviewed and updated at regular intervals throughout the project life cycle. The CESMP will be approved by the Supervision Engineer/Consultant and will be made as part of the contract to ensure its compliance. Construction environmental and social management plans may be structured as follows:

i. Introduction
ii. General purpose,
iii. Scope and structure of the document.
iv. Scope of work and sub-project description
v. Environmental requirements and controls – Policy and planning, environmental impacts, risks and mitigation, procedures for monitoring the construction processes against environmental objectives, pollution control measures, environmental risk register, incidents/accidents register
vi. Consents and permissions
vii. Management plans – Specific management plans such as noise and vibration, traffic, labour, grievances etc.,
viii. Health and safety procedures and requirements
ix. Community consultations / site-specific GRM
x. Training
xi. Incident reporting and investigation
xii. Emergency response measures/plans
xiii. GBV Action Plans

6.6.4 Occupational Health and Safety and Environmental and Social sensitization

The awareness and sensitization programme will be implemented with participation of project Contractor(s) to ensure continued project acceptance by the stakeholders' groups, manage expectations and minimize conflicts. The programme will be developed mindful of type of communication information, awareness creation tools, communication channels and messages fit for specific targets/audience. The key aspects shall include but are not

limited to: Defining issue of Project's health, safety, and security procedures and requirements concerning the communities (site hazards during construction; vehicle movements and traffic accident; interactions with project personnel; exposure to disease and transmissions (HIV/AIDS).

NPIU with support from the supervision consultant will ensure regular training to permanent and temporary workers (including community workers) on occupational health and safety to workers and information relevant to health risk including malaria, yellow fever, hepatitis, COVID-19 etc is provided to workers. During the construction period the contractor shall provide, equip and maintain adequate personal protective equipment, first-aid stations and sign boards directing where these services are situated and transport in case of emergency. Appropriate protective gear including, but not limited to helmets, heavy duty gloves, safety vests and boots, will be provided to site workers and visitors. All workers will also be required to abide to measures to prevent spreading of COVID 19 such as leaving a minimum of 1m in between workers while on site, washing of hands while entering and leaving the site, wearing of mask at all times while at site and temperature check ups while entering the site.

6.6.5 Environmental Supervision during Construction

The Supervision engineer/consultant will oversee the construction activities and ensure compliance with the contractor Environmental and Social Management Plans. Where non-compliances are observed, the supervision engineer/consultant will work with the contractor to rectify the problem in coordination with the APIU and UPIU. In case of significant non-compliance in particular where there is harm to individuals, communities and or the environment the work will be stopped and the information will be shared with the NPIU immediately. Chance Find Procedure is included as **Appendix IV** will be followed if tangible cultural heritage is encountered during civil works Environmental and social supervision of works will also be carried out directly by MoFP.

6.6.6 Subproject Review and Audit

After a period of implementation, the ESMPs of sub-project will be subject to annual reviews / audits. Annual Reviews of sub-projects will be carried out using external/independent reviewers/auditors as commissioned by NPIU. These are to be Third Party audits (by independent Local Consultant, NGO or Service provider) which will review the implementation of environmental and social management in the project. The purpose and use of the audit recommendations are to improve the implementation and compliance of ESMPs to ensure timely and quality delivery of project activities. In case the audit has found a non compliance to one of the ESMPs adequate measures will be taken as per the contract agreement.

6.6.7 Grievances Redress Procedures

6.6.7.1 Purpose

A Grievance Redress Mechanism (GRM) is necessary for addressing the legitimate concerns of the project affected persons. Grievance handling mechanisms provide a formal avenue for affected groups or stakeholders to engage with the project on issues of concern or unaddressed impacts. Grievances are any complaints or suggestions about the way a project is being implemented, and they may take the form of specific complaints for damages/injury, concerns around resettlement and compensation, concerns about routine project activities, or perceived incidents or impacts.

The stakeholder engagement process will ensure that the PAPs are adequately informed of the procedure. The GRM is designed with the objective of solving disputes at the earliest possible time, which will be in the interest of all parties concerned and therefore, it implicitly discourages referring such matters to a tribunal/court for resolution.

6.6.7.2 Principles

A functional GRM has to be established and/or strengthened in eligible universities, colleges, beneficiary government agencies (COSTECH, HESLB, TCU, NACTE, MUHAS and MJNUAT) as well as the Ministry of Education, Science and Technology (MoEST) in order to ensure grievances emanating from the HEET project implementation are reported and raised accordingly. GRM is necessary for addressing the legitimate concerns of the project affected persons (PAPs). In addition, GRM provide a formal avenue for affected groups or stakeholders to engage with the project on issues of concern or unaddressed impacts. In the interest of all parties concerned, the GRMs are designed with the objective of solving disputes at the earliest possible time. Such mechanisms are fundamental to achieving transparency and voicing PAPs' concerns about overall project activities.

(a) Construction GRM

This will be administered by the respective project implementing institutions and will address grievances associated with the construction of new buildings and rehabilitation of existing buildings including grievances related to land and contractor's grievances.

a) Step 1: Submission of Grievances

The affected person shall file their grievance to the GHO, which will be recorded in writing. The grievance note should be signed and dated by the aggrieved person. A grievance can be submitted to in a number of ways as follows:

- through suggestion box (which will be in accessible locations including at construction site).
- during regular meetings held with stakeholders;
- through the Local Consultative Forums established in the affected locations;
- during informal meetings;
- through communication directly with management – for example a letter addressed to site management/ institution; and
- email, what's app messages and telephone (where appropriate).
- all complaints about abuse in service, potential corruption must be channelled to proper authorities no more than 5 days after the complaint is received.

b) Step Two: Logging the Grievance

The CGC keeps records of all complaints received, whether and how the CGC resolved them, and which complaints were forwarded to the VC. Once a grievance has been received it must first be logged in the grievance database register by the CGC. A sample grievance logging form is provided in Annex 2.

Anonymous grievances will be accepted recognizing that this may limit the possibility of investigation and resolution. Those who collect grievances will be trained on how to collect grievances related to GBV in the appropriate manner (see below).

c) Step Three: Providing the Initial Response

The person or community or stakeholder that lodged the initial grievance will then be contacted within 2-3 days to acknowledge that CGC has received the complaint. This response will either accept or refute responsibility for the grievance. This notification will include details of the next steps for investigation of the grievance, including the person/department responsible for the case and the proposed timeline for investigation and resolution which will depend on the severity of the incident. In some cases it may be necessary to provide an immediate response to avoid further harm while more detailed investigations are undertaken eg in the case of fatalities, workplace accidents, community safety pollution of natural resources, conflict with communities etc.

d) Step Four: Investigating the Grievance

The CGC will aim to complete investigation within two weeks of the grievance first being logged. Depending on the nature of the grievance, the approach and personnel involved in the investigation will vary. A complex problem may involve external experts for example. A more simple case may be easier, and quicker to investigate. The CGC will involve the aggrieved person/people in this investigation, where possible, to ensure

participation. The CGC will continually update the aggrieved on the progress of the investigation and the timeline for conclusion. Unless highly complex, the investigation will be completed within 14 days, although efforts should be made to complete this process faster.

e) Step Five: Communication of the Response

The CGC will outline the steps taken to ensure that the grievance does not re-occur and any measures needed to resolve the complaint. The response will be communicated within 1 day of the resolution being determined.

f) Step Six: Complainant Response

If complainant is satisfied then SGC will seek their sign off from the complainant and determine what if any follow up is needed to monitor the implementation of the resolution. The resolution will be implemented promptly. This may happen at the time the resolution is proposed or within a timeframe agreed between the CGC and complainant but ideally within 5 days.

g) Step Seven: Grievance Closure or Taking Further Steps if the Grievance Remains Open

Once the measures have been implemented to the complainant's satisfaction the grievance will be closed. If, however the grievance still stands then the CGC will initiate further investigation and determine the steps for future action. Once all possible redress has been proposed and if the compliant is still not satisfied then they will be advised of their right to appeal to the next level as outlined above.

If the grievances can not be resolved at the PIU or MoEST, the complainant will be advised of their right to legal recourse.

Gender Based Violence (GBV)

The Project may result in incidences of Gender Based Violence (GBV) and Sexual Exploitation and Abuse (SEA) affecting workers and the community. GBV cases are different from other complaints that are typically handled through the grievance redress mechanisms. As outlined in the ESMF, a GBV action plan will be developed for the Project and will be modified for each PIUs once service providers have been identified. A GBV referral pathway will be identified in each district mapping services with the appropriate

capacity and quality of service delivery. The CGC will be trained on how to manage GBV related grievances including matters of confidentiality, treating survivors with empathy and what non-identifiable data will be collected and how to close the case. In addition, members of the village council will also be trained on how to receive and manage this information. However, the Village Council will not be involved in resolving GBV related cases as this will be determined by the survivor with support from the appropriate service providers based on their needs and wishes.

In cases involving a Project Worker, the contractor and PIUs will be advised about the case who will in turn inform the GBV Specialist at the national level who will instigate any investigation required involving the contractor, PIUs, services providers etc. They will then recommend action to be taken by the contractor/CGC in ensuring that administrative sanctions are taken against an alleged perpetrator of sexual assault.

Adaptation for Vulnerable Groups

This GRM will be presented to Vulnerable Groups and adapted as needed to meet their requirements and decision-making processes while maintaining the principles underlying the mechanism and the roles and responsibilities. Such adaptations will be discussed and agreed during the preparation of the Vulnerable Groups Plans but may include roles for traditional leaders and decision-making processes for example in addressing land issues. The aim for this adaptation is to ensure that vulnerable groups are able to raise their concerns in a manner they feel will be listened to and which they feel is accountable to them.

(b) Operational GRM

Grievance emanating from the operational activities, will be handled at the institutional level (university, college and agency level) ideally through the appointed *Grievance Handling Officers (GHOs)*. At the Institutional level a Grievance Handling Officers comprising of HEET Project Coordinator, Environmental Officer and Community Development Officer/Sociologist will be responsible for addressing all grievances related to Project performance. The GHOs shall maintain records where grievances and complaints, including minutes of discussions, recommendations and resolutions made, will be recorded as outlined below which will be adapted, where relevant, to align with the institution while maintaining the requirements outlined.

Grievance emanatings from the Institution operations, will be handled at the local institutional level (university, college and agency level) ideally through the appointed *Grievance Handling Officers (GHOs)*. To ensure effectiveness and efficiency, GRM the procedures for handling grievance will be simple. The GHOs shall maintain

records where grievances and complaints, including minutes of discussions, recommendations and resolutions made, will be recorded. Quarterly reports on grievances received, registered, resolved or channelled to the appropriate departments/Institutional staff for explanation or resolution as well as grievances referred to the responsible Government Institutions for further scrutiny such as the *Prevention and Combating Corruption Bureau-PCCB, Commission for Human Rights and Good Governance-CHRGG, security and legal recourse,* will be submitted to the Grievance Redress Integrity Committee (GRIC) for discussion and way forward.

The GRM has the following steps:

Step 1: The Project Affected Person (PAP) shall file the grievance through a special e-mail established for receiving grievances, suggestion boxes, meetings or directly to the GHO who will record grievances/complaints receipt and resolution form (**Appendix II**). Grievance will be recorded in the grievance/complaints register. All alternative ways of submitting grievances to the management of the Institution concerned will be made known to the PAPs for easy communication.

The GHOs will keep records of all complaints received and the responses made in order to track the resolution of grievances. The GHO will acknowledge the complaint has been received. The response will either accept or refute responsibility for the grievance and next step will be the investigation and resolution or immediate actions to be taken. The GHOs will aim at completing investigation within two weeks of the grievance first being logged and will involve the aggrieved person/people in this investigation to ensure their views are incorporated.

If complainant is satisfied, the GHOs will seek their sign off and determine if any follow up is needed to monitor resolution implementation. Once the measures have been implemented the grievance will be closed. If the grievance still stands then the GHO will initiate further investigation and determine the steps for future action.

Step 2: If the PAP is not satisfied with decision of GHOs, the grievance is referred to the Grievance Redress Integrity Committee (GRIC) respond within 2 weeks' time from the submission. The GRIC members would preferably be senior staff who would be required to present the status of Grievance handling to the decision organ of the responsible Institution for discussion and decision on proposed mitigation measures. GHOs will present the report of the number of grievances registered and attended to the Grievance Redress Integrity Committee (GRIC) for discussion and way forward.

Step 3: If the PAP is not satisfied with decision of GRIC, the grievance is reported to the HEET Project Implementation Unit at agency (APIU) or university level (UPIU).

Step 4: If the PAP is not satisfied with decision of APIU/UPIU, the grievance(s) is reported to MoEST (NPIU). If the PAP is not satisfied with decision of MoEST (NPIU), he/she is will channel the grievance to legal redress.

The HEET project GRM flow chart is presented in **Figure 6-1** below:

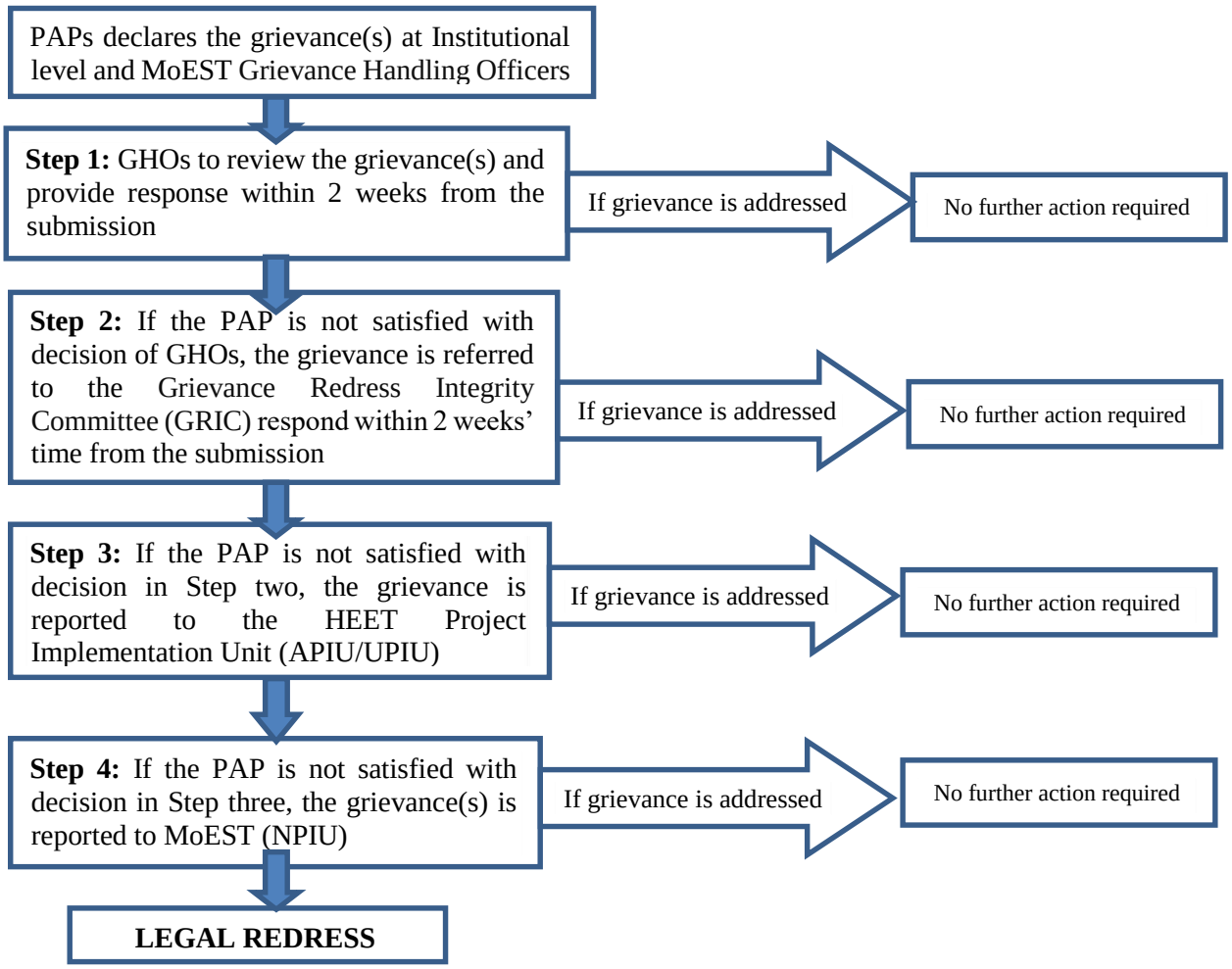


Figure 0-1: The flow chart for steps in Construction and General GRM

(c) Gender Based Violence (GBV) Grievance Redress Mechanism:

In case of complaints related to **Gender Based Violence** (GBV), the GHO will treat these grievances with due confidentiality. Specific provisions will be included for complaints related to Sexual Exploitation and Abuse (SEA) that could be derived from

the project to ensure the survivor's confidentiality and rights. The GRM will ask for, or record, information on three aspects related to the GBV incident: (a) the nature of the complaint (what the complainant says in her/his own words without direct questioning, (b) if, to the best of their knowledge, the perpetrator was associated with the project, and (c) if, possible, the age and sex of the survivors. Survivors will be advised of their right to referral pathways include security and legal recourse, health services and, psychosocial counselling. Details of the GBV GRM will be included in the GBV action plan.

(d) Resettlement Grievance Redress Mechanism

Resolution of involuntary resettlement and construction related grievances will be handled by the existing land dispute resolution structures established at the village/mtaa level to the Ward and District level. The project affected persons (PAPs) shall file the grievances to the local government (village/mtaa) office for mediation and resolution of disputes emanating from resettlement issues.

In situations where PAPs are not satisfied with the village/mtaa government decision on resettlement disputes, the PAPs can approach the Village Land Council (VLC) for mediation. The VLC will try as much as possible to arrive at a compromise for the complaints raised. This may be obtained through series of conciliations, mediations and negotiations exercises between the two parties *(the PAPs, the subproject proponents and head of the institution concerned).* If disagreement on the resolutions persists, the PAPs will be allowed to submit their appeal to the Ward tribunal, District land and Housing tribunal, Ministry of Land, Housing and Human Settlement Development before being transferred to the court of law and court of appeal, where necessary, with a view to determine claims validity and compensation required. The response time for cases handled will depend on the issues addressed but it will be as short as it is possible.

6.6.7.3 Records Keeping of GRM

All comment responses and, grievances are to be logged using grievance logging forms and registers. This includes details of the claim/grievance/complaint, the claimant/aggrieved, and ultimately the steps taken to resolve the grievance. A master database will be maintained by the CGC to record and track management of all grievances. Regardless of the actual establishment of such a database, typically documentation on grievances keeps track of the following:

6.6.7.4 **Monitoring of GRM**

It is vitally important to monitor the effectiveness of the grievance mechanism. Appropriate measures for this include monthly reporting on the number of grievances received, resolved and outstanding and associated timeframes. This will be undertaken by the CGCs and reported to PIUs/MoEST. As part of stakeholder engagement and consultation, involving the views of the stakeholders for whom the Grievance Mechanism is designed will be part of NPIU Monitoring.

CHAPTER SEVEN

PROJECT IMPLEMENTATION ARRANGEMENTS, RESPONSIBILITIES AND CAPACITY BUILDING

7.1 Implementation Arrangement for Environment and Social Issues

Ministry of Education, Science and Technology shall have an environmental and social officers who will be responsible for E&S monitoring and surveillance of all project components investments that will be undertaken by project implementing institutions; and will report results of this monitoring to the World Bank **(ToR for the E&S Specialists are attached as Appendix VI).** Each project implementing institution shall also obtain an environment and social person who will be able to coordinate different activities to ensure that, the project meets the country legal and World Bank requirements in regard to Environment and Social Framework. Investments under the project will be subjected to environmental and social screening during the planning stage, and appropriate prevention and mitigation steps will be taken based on the results of the environmental and social screening process outlined in this document (**Figure 7-1**).

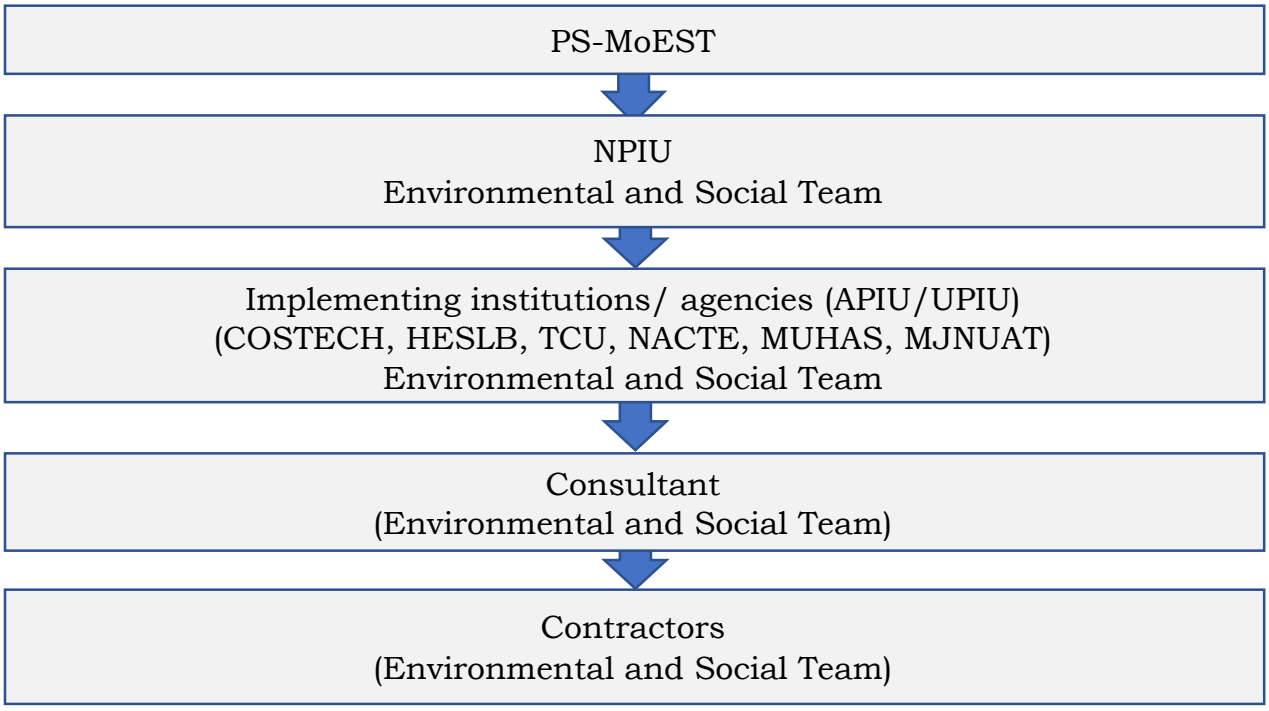


Figure 0-1: Institutional Arrangement for Environmental and Social Management

The Environmental and Social specialist(s) at project implementing institutions shall also coordinate specialist/consultants for any support missions or attend different meetings and provide any guidance in the bid to ascertain that the different challenges identified for each sub-project/activity are duly covered from risk.

The specialist(s) shall also support the procurement officer at respective project implementing institutions in making sure that the bidding documents clearly cover the health, safety and environmental component with appropriate provisions of the same for the contractors to bid.

The specialist shall coordinate preparation of ESIA and environmental and social management plans (ESMPs) done by consultant and site-specific ESMPs (SSESMP). He/she will ensure that contractors have an Environmental Health and Safety Officer (EHS), who are familiar with the compliance requirements, including WB EHS guidelines. He/she also review progress reports by the supervision engineer/consultant during civil works and conduct inspection of the sites.

7.1.1 Roles and Responsibilities of ESIA Consultants

i. Work with the NPIU/APIU/UPIU to understand the requirements of the environmental and social assessment;
ii. Conduct initial site visits with the NPIU/APIU/UPIU to understand the sub-project setting and site-specific requirements;
iii. Prepare the ESIAs and ESMPs based on the procedures described in the ESMF including carrying out an alignment walk, alternatives analysis and baselines studies, identifying the E&S risks and impacts, developing mitigation measures and monitoring plans incorporating EHS requirements;
iv. Cost all the mitigation and management measures proposed in the ESMPs and SSEMPs
v. Propose a capacity building plan for the implementation of the sub-projects for all actors involved with cost estimates and schedule;
vi. Carry out public consultations;
vii. Conduct trainings as needed;
viii. Assist the APIU/UPIU in preparing documentation to obtain certification from NEMC for the ESIAs and ESMPs.

(a) Design Consultants

i. Understand the sub-project setting and site-specific requirements with discussions with the APIU/NPIU;
ii. Incorporate the issues identified in the ESIAs, ESMPS into the project design
iii. Provide cost estimates for implementing the design requirements, including mitigation measures proposed in ESIA/ESMP.

(b) Supervision Engineer/Consultant

The NPIU shall hire an independent firm which have a Supervision Engineer, Environmental Specialist, Social Specialist, Occupational Health and Safety Specialist to monitor and review on-site implementation of the E&S measures. The duties of the officer responsible for E&S supervision shall include the following:

i. Assist the NPIU to ensure that the necessary environmental, health and safety authorizations and permits have been obtained;
ii. Maintain open and direct lines of communication between the NPIU and contractor(s) with regard to environmental matters;
iii. Review and approve the contractor's site-specific construction ESMPs (CESMP), Health and Safety, Labour Management Plans and Traffic Management Plans together with the NPIU; Conduct regular site inspections of all work areas to ensure compliance with CESMPs and E&S specifications for contractors Assist the contractor in finding environmentally responsible solutions to problems;
iv. Instruct the contractor(s) to take remedial actions within a specified timeframe, and carry out additional monitoring, if required, according to the contractual requirements and procedures in the event of non-compliances or complaints;
v. Instruct the contractor(s) to stop activities which generate adverse impacts, and/or when the contractor(s) fails to implement the ESMP requirements / remedial actions;
vi. Provide training to the contractor on the EHS requirements to be followed;
vii. Monitor the contractor's environmental awareness training program for all personnel working onsite;
viii. In case of any accidents or incidents, immediately notify the APIU/UPIU and support the process of documenting and reporting the case to the WB;
ix. Prepare written reports for the NPIU such as weekly report of non-compliance issues; summary monthly report covering key issues and findings from supervision activities; and consolidated summary report from contractor's monthly report.

7.1.2 Roles and Responsibilities of the Contractor

The contractor and his employees shall avoid or minimize the impacts that may result from the civil works and implement the mitigation measures to prevent harm and nuisances on local communities, and to minimize the negative impacts to the

environment. The contractor shall appoint an Environmental, Social, Health and Safety Officer to oversee the E&S aspects. The duties of the contractor include:

i. Compliance with relevant environmental and social legislative requirements (project-specific, district- and national level), including allocating adequate budget for implementation of these requirements;
ii. Work within the scope of contractual requirements and other tender conditions;
iii. Prepare CESMPs based on the ESMP in the bidding documents and contracts;
iv. Train workers about EHS (including relevant WBG EHS Guidelines) and the site-specific environmental and social measures to be followed;
v. The EHS officer of the contractor will participate in the joint site inspections with the APIU/UPIU and Environmental Supervision Engineer/consultant;
vi. Immediate notification of the NPIU and supervision engineer of any significant social or environmental health and safety incident linked with the project, and indication about the measures taken or that are planned to be taken to address the incident as well as propose any measures to prevent its recurrence.
vii. Carry out any corrective actions instructed by the Supervision Engineer/consultant;
viii. In case of non-compliances/discrepancies, carry out investigation and submit proposals on mitigation measures, and implement remedial measures to reduce environmental impact;
ix. Propose and carry out corrective actions in order to minimize the environmental impacts;
x. Send weekly reports of non-compliance to the Supervision Engineer/consultant;
xi. Send monthly progress reports to the Supervision Engineer/consultant.

7.1.3 Roles and Responsibilities of World Bank

World Bank will be part of project implementation team whose responsibilities will involve but not limited to;

i. Review the ESIAs, ESMPs and site specific ESMPs;
ii. Review quarterly reports by the implementing agencies;
iii. Monitor compliance with the ESMF; and
iv. Undertake implementation support missions.

7.1.4 Roles and Responsibilities of the National Environmental Management Council (NEMC)

NEMC will play role in the project based on their legal mandate in development projects as described in the Environmental Management Act of 2005. Their roles in HEET will include\

i. Receive ESIA/ESMP reports, review and provide recommendations for improvement and further guidance

ii. Provide environmental permit where necessary upon receiving of ESIA / ESMP reports prepared by consultants on behalf of clients.
iii. Invited to deliver presentations in some of the trainings conducted by the project on environmental and social issues in the country. They can be invited as participants sometimes to allow them share experience.
iv. Conduct monitoring of environmental and social issues during project implementation and provide guidance on the way forward

7.2 Existing Capacity, Gaps and Weakness in Addressing E&S Issues

Tanzania has provided substantial supporting environment for addressing environmental and social issues in various interventions. A clear framework for environmental management is defined through Environmental Policy and Environmental Management Act. Most of the ministries, departments and local governments do not have the required capacity to comply with the requirements of the Environmental Policy and Environmental Management Act. Similar situation may also be revealed in this project in which the institutions may lack the necessary capacity to implement the ESMF. Major gaps and weaknesses in addressing the E&S issues include among others inadequate understanding of requirements of the World Bank ESF, procedures and guidelines.

Therefore, the institution which is the implementing project component does not have the capacity to screen, review and clear their sub-projects under the HEET Project. These weaknesses define the inadequacies on managing environmental and social issues along with implementing the ESMF in this project. Thus, the ESMF will be implemented through administrative and management structure defined in this project. However, the implementing sector has to be strengthened in terms of resources and training for capacity building. For instance, Part III (e) of EMA, 2004 provides requirement for all government ministries to set up sections and staff responsible for environmental management.

7.3 Needs for capacity building

7.3.1 Capacity for Project Implementing Unit in addressing E&S issues

In order to ensure that there is adequate capacity to implement and monitor the performance E&S issues, it is advised that an Environmental Specialist /officer and Social specialist be appointed by institutions executing the project. The Specialists will report to the main bodies responsible for execution of the project. The capacity building will also be needed to project team in the institution to facilitate effective mitigation of E&S issues. The capacity building will enable improvement of the understanding and capacity for monitoring and evaluation reporting expected by NPIU and compliance with the World

Bank standards and procedures. Under this ESMF, the capacity building objectives will intend to achieve the following:

- Develop and impart skills to EO and project team in respective institution for screening and monitoring environmental and social concerns; and
- Impart skills to contractors, service providers and communities to prepare subproject proposals and plans in line with the WB ESF and national legislations; and Facilitate Professional Service

7.3.2 Training Needs to Environmental and Social Specialists and Other Project Staff

For successful implementation of the E&S issues, capacity enhancement through training will be done to institution project team. The training can be in the form of the whole project staff or Training of Trainers (TOT), and it can be in the form of short or long workshop. This training will ensure that the project specialists are able to manage and monitor the environmental and social aspects of project activities. The workshop will take place in early stages of HEET project implementation. The workshop can be conducted by an external consultant with substantial knowledge on the environmental management requirements for Tanzania, including World Bank ESF and its ESS requirements. Other relevant staff members of the institution can be included in the training in order to widen the familiarization of the E&S issues of the project.

However, before selection of specific trainings that will be conducted, training need assessment will be conducted to identify gaps of knowledge, skills and abilities for employee who will be involved in implementation of E&S related activities. The gap between existing capacity and required one for successful implementation/supervision of environmental and social related actions will be used for identification of specific training. Thus, key training areas can include, but not limited to the following;

(a) Environmental and Social assessment process:

- Screening process;
- Impact prediction and identification;
- Formulation of mitigation measures;
- How to prepare terms of reference for environmental and social impact assessment;
- How to integrate environmental and social management considerations in project design and preparation of contract documents for constructions;
- Reviewing, approving ESIAs;
- Formulation of environmental and social management plan;
- Public participation in ESIA process; and
- Monitoring and reporting of project implementation.

(b) Environmental and Social policies, procedures and guidelines:

- How to incorporate Environmental and social policies and legislation according to the nature of project;
- World Bank Environmental and Social Standards (ESS);
- Review of ESIA and ESMP; and
- Collaboration with relevant institutions.

(c) Occupational Safety and Health issues:

- Hazard identification
- Hazard assessment and management
- Risk assessment and management
- Emergency preparedness plan and Response
- Risks and crises management
- Stakeholder engagement and grievance management, including in relation to the worker grievance mechanism, for the social and environmental staff.

(d) Other key topics on environmental and social issues:

- How to prepare Environmental and Social Management System;
- How to screen projects; appraise and approve ESIAs;
- How to review of environmental and social screening and assessment process;
- How to supervise and report the implementation of the project components;
- How to create baseline information prior to project implementation;
- Environmental pollution;
- Waste management; and
- Protection of water resources against pollution.

(e) Capacity building for GRM focal persons and members of the Grievance Redress Integrity Committee (GRIC)

Focal persons (Grievance Handling Officers - GHOs) and members of the Grievance Redress Integrity Committee (GRIC) of the eligible Institutions will have to get trained on the use of GRM guide which include grievances handling, reporting and escalation to the respective authorities. The guide has to be prepared in a manner that GRM could capture and report Sexual Exploitation, Abuse and Harassment (SEAH) and Gender Based Violence cases. In order to ensure optimal utilization of the GRM by the PAPs at work places, publicization and sensitization on the existence of GRM is mandatory and has to be done by the responsible institution.

7.3.3 Cost for addressing environmental, social, safety and health issues

The ESMF requirement ensures sustainability of the project by integrating environmental and social issues in all subprojects. Some of the key issues which are addressed in the ESMF are; screening, training, capacity building, reviewing and monitoring mechanisms. Thus, adequate budget allocation is a critical requirement for effective implementation of the environmental and social management framework.

An estimated budgetary allocation of **US$ 140,000** will be required to ensure effective implementation of the ESMF to comply with environmental and social standards that will be likely triggered by project components (**Table 7.1**). All the costs are estimates based on previous experience. The proposed costs are only indicative, will the proposed development proceed with the suggested changes, Institutions will work out on actual costs and include them in the overall cost of the project.

The aspect of cost will cover training in the form of short and long workshop to enhance skills on environmental and social issues which are likely to be addressed in the project implementation such as environmental and Social policies, procedures and guidelines, screening process, impact assessment, developing mitigation plans, monitoring and reporting. Other training will include environmental and social issues like gender, environmental pollution, waste management and occupational health and safety issues.

Table 0-1 Cost for implementing ESMF

No	Proposed ESMF Activity	Responsible Entity	Deadline	Indicator	Budget
1.	Cost for engaging consultants for preparation of Environmental and Social Instruments	Project Implementing Institution /Consultant	Before finalization/ preparation of bidding documents for civil works	Reports	US$ 30,000
2.	Develop/Review gender policy to mainstream gender outcomes into the HEET project	Project Implementing Institution/Consultant	During first year following Project approval by the Bank	Report approved by the board	US$ 10,000
3. Training/capacity building					
3.1	Environmental and Social assessment process: ● Screening process; ● Impact prediction and identification; ● Formulation of mitigation measures; ● Formulation of environmental and social management plan; ● How to prepare terms of reference for environmental and social impact assessment; ● How to integrate environmental and social management considerations in project design and preparation of contract documents for constructions; ● Reviewing, approving ESIAs; ● Public participation in ESIA process; and ● Monitoring and reporting of project implementation.	Project Implementing Institution/Consultant	Before end of first Quarter following Project approval by the Bank	Verification Report	US$ 20,000

No	Proposed ESMF Activity	Responsible Entity	Deadline	Indicator	Budget
3.2	Environmental and Social policies, procedures and guidelines: ● How to incorporate Environmental and social policies and legislation according to the nature of project; ● World Bank ESF; ● Review of ESIA and ESMP; and ● Collaboration with relevant institutions.	Project Implementing Institution/Consultant	Before end of first Quarter following Project approval by the Bank	Verification Report	US$ 20,000
3.3	Occupational Safety and Health issues: ● Hazard identification ● Hazard assessment and management ● Risk assessment and management ● Emergency preparedness plan and Response ● Risks and crises management ● Stakeholder engagement and grievance management, including in relation to the worker grievance mechanism, for the social and environmental staff.	Project Implementing Institution/Consultant	Before end of first Quarter following Project approval by the Bank	Verification Report	US$ 20,000
3.4	● How to prepare Environmental and Social Management System; ● How to screen projects; appraise and approve ESIAs; ● How to review of environmental and social screening and assessment process;	Project Implementing Institution/Consultant	Before end of first Quarter following Project approval by the Bank	Verification Report	US$ 20,000

No	Proposed ESMF Activity	Responsible Entity	Deadline	Indicator	Budget
	● How to supervise and report the implementation of the project components; ● How to create baseline information prior to project implementation; ● Environmental pollution; ● Waste management; and ● Protection of water resources against pollution.				
3.5	● Capacity building for GRM focal persons and members of the Grievance Redress Integrity Committee (GRIC)	Project Implementing Institution/Consultant	Before end of first Quarter following Project approval by the Bank	Verification Report	US$ 20,000
Grand Total					**US$ 140,000**

CHAPTER EIGHT

SUMMARY AND CONCLUSION

8.1 Introduction

The Higher Education for Economic Transformation (HEET) project proposed activities are expected to comply to all the requirements of WB ESS as per the ESF. The United Republic of Tanzania and institutions have strengths and opportunities to comply with World Bank ESF. The ESMF recognizes the importance of strengthening the capacity of key staffs at the implementing institutions in order to be able to comply with the requirements of the World Bank ESF and Tanzania environmental and social policies and laws. This will enhance their capacity in future to address environmental and social issues appropriately. Training will be conducted to key staff involved in decision making, screening, reviewing, monitoring and approvals at the implementing institution. Thus, the subproject will entail minimal adverse environmental impacts if adequate mitigation measures are proposed and incorporated in the project design. In that regard, the project is expected to have enormous socio-economic benefits in education sector to Tanzania. The major issues of concern are land degradation, pollution, Stormwater generation and overflows, increased pressure on Social Services and Utilities and Occupational health and safety during construction.

The project implementers will ensure compliance of all requirements of the ESMF. The ESMF outlines all key processes and procedures to be followed so that the project risks and impacts are adequately and timely mitigated. Institutions will have to be committed in implementing all the recommendations given in this ESMF and further carrying out the environmental auditing and monitoring schedules

9.0 REFERENCE AND BIBIOGRAPHY

Ministry of Health and Social Welfare (MoHSW) (Tanzania Mainland) Ministry of Health (MoH) [Zanzibar], National Bureau of Statistics (NBS), Office of the Chief Government Statistician (OCGS), and ICF International (2015). Tanzania Service Provision Assessment Survey Key (TSPA) 2014-15 Key Findings. Dar es Salaam, Tanzania, and Rockville, Maryland, USA: MoHSW, MoH, NBS, OCGS and ICF International.

Ministry of Health and Social Welfare (2012). National Guideline for the Management of HIV and AIDS

Ministry of water and Irrigation (2017). Climate Resilient Water Supply Project, Simiyu

National Bureau of Statistics (NBS) and the Ministry of Industry, Trade and Investment (MITI), (2016). The 2013 Census of Industrial Production: Analytical Report, Dar es Salaam, Tanzania

National Bureau of Statistics (NBS) (2013). The 2012 Population and Housing Census, Population Distribution by Age and Sex (Volume II), Dar es Salaam, Tanzania

The United Republic of Tanzania Mainland (2015). Literacy and Education Monograph, 2012 Population and Housing Census, Volume IV

The United Republic of Tanzania (2015). National energy policy, 2015

The United Republic of Tanzania Mainland (2015). Education for All 2015, National Review Report:

The United Republic of Tanzania (2013). Ministry of Health and Social Welfare, Mid Term Review of the Health Sector Strategic Plan III 2009 – 2015, Geita Region, Field Report,

The United Republic of Tanzania (URT) (2016). Basic Demographic and Socio-Economic Profile, Kilimanjaro Region Tanzania

The United Republic of Tanzania (URT) (2016). Basic Demographic and Socio-Economic Profile, Tanga Region Tanzania

The United Republic of Tanzania (URT) (2016). Basic Demographic and Socio-Economic Profile, Dar Es Salaam Region, Tanzania

The United Republic of Tanzania (URT) (2016). Basic Demographic and Socio-Economic Profile, Kagera Region Tanzania

The United Republic of Tanzania (URT) (2016). Basic Demographic and Socio-Economic Profile, Manyara Region Tanzania

The United Republic of Tanzania (URT) (2016). Basic Demographic and Socio-Economic Profile, Geita Region Tanzania

The United Republic of Tanzania (URT) (2016). Basic Demographic and Socio-Economic Profile, Simiyu Region Tanzania

The United Republic of Tanzania (URT) (1998). Arusha Region Socio- Economic Profile, Arusha Tanzania

The United Republic of Tanzania (URT), (2014). Dar Es Salaam Socio-Economic Profile

The United Republic of Tanzania (URT), (2014). Basic Demographic and Socio-Economic Profile

The United Republic of Tanzania (URT), (2014). Basic Demographic and Socio-Economic Profile, Statistical Tables, Tanzania Mainland.

The United Republic of Tanzania (URT), (2014). Dar Es Salaam Region Socio-Economic Profile

The united republic of Tanzania (URT) (2013). Mara Regional Profile

The United Republic of Tanzania (2013). National Health Policy.

The United Republic of Tanzania, National Environmental Policy, 1997

The United Republic of Tanzania, The Environmental Management Act, 2004

The United Republic of Tanzania, The Environmental Impact Assessment and Audit Regulations, 2005

The United Republic of Tanzania, The Environmental Management (Environmental Impact Assessment and Audit) (Amendment) Regulations, 2018

The United Republic of Tanzania, Environmental Management (Hazardous Waste Control and Management) Regulations of 2008

The United Republic of Tanzania (URT) Environmental Impact Assessment and Audit Regulations G.N. No 339. Government Printers, Dar es Salaam, 2005.

The United Republic of Tanzania (2010). Ministry of Education and Vocational Training, Proposed Secondary Education Development Program (SEDP II)) 2010 – 2014.

The Tanzania Development Vision 2025

The United Republic of Tanzania (2015). The Employment and Labour Relation Act No. 6 of 2004

The United Republic of Tanzania (2015). The Environment Impact Assessment and Audit Regulations, 2005 (G.N. No. 348/2005)

The United Republic of Tanzania (2015). The Environmental Management Act, Cap 191
The United Republic of Tanzania (2015). The Land Use Planning Act No.6 of 2007

The United Republic of Tanzania (2015). The National Construction Policy (2003)

The United Republic of Tanzania (2015). The National Environmental Policy (1997)

The United Republic of Tanzania (2015). Land Disputes Courts Act (No. 2 of 2002).

The United Republic of Tanzania (2015). Land Acquisition Act (1967).

The United Republic of Tanzania (2015). Land Regulations, 2001.

The United Republic of Tanzania (2015). Constitution of Tanzania 1977

The United Republic of Tanzania (2015). The National Employment Policy (1997)

The United Republic of Tanzania (2015). The National Energy Policy (URT 1992)

The United Republic of Tanzania (2015). The Land Act, 1999 (No.4 of 1999)

The United Republic of Tanzania (2015). The Land Policy (1997):

The United Republic of Tanzania (2015). The National Environmental Policy (URT 1997)

The United Republic of Tanzania (2015). The National Health Policy (1990)

The United Republic of Tanzania (2015). The National Land Act, Cap 113

The United Republic of Tanzania (2015). The National Land Policy (URT, 1996)
The United Republic of Tanzania (2015). The National Policy on HIV/AIDS (2001)

The United Republic of Tanzania (2015). The National Water Policy (URT, 2002)

The United Republic of Tanzania (2015). The Occupational Health and Safety Act, 2003 (Act No. 5/2003)

The United Republic of Tanzania (2015). The Tanzania Development Vision 2025

The United Republic of Tanzania (2015). The Urban Planning Act No. 8 of 2007

The United Republic of Tanzania (2015). The Water Resource Management Act, 2009 (Act No. 12/2009)

The United Republic of Tanzania (2015). The Workmen's Compensation Act Cap 263

APPENDICES

Appendix I. Universities Baseline Information

1. Ardhi University (ARU)

Existing land use: The proposed land use plan generally makes provisions for various land use components namely: academic functions (28.2ha), administrative facilities (2.1 ha), students support facilities (12.3ha), sports facilities (4.1ha), Science park (1ha), community facilities (3ha), staff housing (4.1ha) waste treatment facilities (2.5 ha), main roads (7.1), environmental conservation areas (in steep slopes and valleys) (10.5ha) and investment zone (5ha).

Students statistics: The University has gradually been increasing students' enrolment. Recent data shows that during the 2020/21 academic year the University enrolled a total of 4,619 students in which 2,870 were male and 2,047 were female. The students' enrolment is expected to increase to 8,870 by 2024/25.

Staff statistics: In terms of staffing, as at 6th February 2021 ARU had total of 463 staff (270 male and 193 female). Academic staff were 257 (169 male and 88 female) and administrative/technical staff were 206 (101 male and 105 female). The academic and administrative/technical members of staff are expected to be 522 and 295 respectively by 2024/25.

Staff housing: Currently, the University has 55 housing units for staff. Most of staff stay outside the campus.

Students accommodation: The University has hostels on campus with capacity to accommodate 518 both undergraduate and postgraduate students with priority given to female students. The remaining students stay outside the campus.

Vegetation within and surrounding the university: Data from satellite image shows that trees space in Ardhi university it covers about 227,638 square meters, Grey surface (Roads, paved surface and buildings) covers about 35,126 square meters and open space have coverage area of 12,616 square meters.

Neighboring areas: The neighboring environment is mixed land use and there is interaction with the university.

Waste management: The University has a waste management system for solid waste, liquid waste and storm water. Solid waste is managed by an outsourced contractor while wastewater is treated at the campus using an Upflow Anaerobic Sludge blanket (UASB) reactor. There are storm water drainage channels around the entire developed area of the University.

Water: ARU consumes 178,882.8 metric tonnes of water per year. The existing supply meets the daily requirements. The existing network is gradually expanded to meet the expected population projections.
Energy: TANESCO is the main source of power. The consumption is 6,852,780 MJ per year. As a back-up service, three (3) standby generators serve a cluster of buildings which include administration building, library, laboratory and some academic offices.

2. Mbeya University of Science and Technology (MUST)
Mbeya University of Science and Technology is located on Block FF, Plot No. 1 and it occupies 489 hectors at Iyunga Industrial Area in Mbeya City, Mbeya Region. Mbeya City is located on the southern highlands of Tanzania. MUST can be reached by road, air and railway. The surrounding area is composed of short vegetation and sparse eucalyptus trees on the South, East and unplanned residential buildings on the North and some industries (Coca Cola and Tanzania Breweries) in the West. Topographically the Block is relatively flat in some parts and slightly sloping in some areas.
The existing infrastructure occupies only 10% of the total area of 490Ha and includes lecture rooms, classrooms seminar rooms, library, computer laboratory, workshops hostels health centre, staff houses, sport fields and mini-shopping centre. These facilities are connected among them by unpaved roads. The University is connected to TANESCO for electricity supply and linked to MBEYA-UWASA for water supply and waste collection. The solid wastes are collected from designed areas and transported to Nsalaga Dump Site after sorting them.

MUST offers programmes ranging from certificates, diploma, masters and doctorial level. Current student population is 6,645 students were 1,481 are female students and 5,164 are male students. The future plans in to increase enrolment up to 15,000 students and strength service delivery related to research, consultancy and community outreach activities.

3. Moshi Cooperative University (MoCU)
The Moshi Co-operative University (MoCU) is one of the higher learning institutions in Tanzania. MoCU came into being as a result of transforming Moshi University College of Co-operative and Business Studies (MUCCoBS) to full-fledged University in September, 2014. The University is organized into campus, faculties, directorates, an institute, and a bureau. The University has a campus at Moshi and the teaching centre in Shinyanga region known as Kizumbi Teaching Centre. There are two faculties namely; Faculty of Co-operative and Community Development (FCCD) and Faculty of Business and Information Sciences (FBIS). There are four directorates namely; Directorate of Research and Postgraduate Studies (DRPS), Directorate of Co-operative Library and Archives (DCLA), Directorate of Human Resource Management and Administration (DHRMA); and Directorate of Planning and Finance (DPF). In addition, the University has a Bureau of Consultancy Services (BCS) and the Institute of Continuing Co-operative Education (ICCE). The University has a network of Regional Offices throughout Tanzania Mainland. It operates 13 Regional Offices catering for all the regions in Tanzania.

MoCU Main Campus has an area of 80.01 Acres. Within this area, the developed land is 70% while undeveloped land is 30% of the total land. The existing land use development in the campus is explained in terms of zones. These are the administration zone (3.06%), academic zone (12.79%), students' hostel zone (5.70%), staff housing zone (23.36%), welfare zone (1.99%), recreation zone (8.01%), commercial zone (4.61%) and the estate zone (1.81%). Explanation of the existing land use will also include undeveloped land, river valleys and road network. The University has a total of 9285 students; 4539 female (49%) and 4746 male (51%). Only 20 percent of them stay in campus and the rest are off campus. The total number of University staff is 335 out of which 126 are female (38%) and 209 are male (62%). There are a number of private and public institutions surrounding the University premises. In addition, there are residential houses and other private buildings around the University. Liquid waste disposal system is directly connected to Municipal sewerage system. The University has its own solid waste collection points using standard skip buckets. Once full, skip buckets are collected by Municipal Council using solid waste collection trucks and disposed into a designated Municipal dump site. The University has a minibus, ambulance and other vehicles. The minibus is used for official trips by students and staff while other vehicles are used for general administrative functions. On daily basis, students and staff either walk or use private or public transport to and from University premises.

4. Mwalimu Julius K. Nyerere University of Agriculture and Technology (MJNUAT)

Existing Land Use: The University obtained a title deed for this land in September 2020. This land parcel has the size of 231. 93 Hectares (612 Acres) and was previously occupied by Butiama Artificial Insemination Centre (BAC) which was a Tanzania Government owned unit under the Ministry Responsible for Livestock. The project site has several old buildings which were used for artificial insemination of animal and a total of 14 staff houses. These old and dilapidated buildings occupies less than 10% of the university land. The rest of the land is covered by shrubs and short grasses. Some of the existing facilities will be rehabilitated for use by the planned Animal Science Department, while some existing facilities including the 14 old and dilapidated staff houses, will be demolished to pave the way for the construction of new university facilities.

Students' Enrolment Capacity: This is a new Institution which is yet to enrol students. The full enrolment capacity expected from the implementation of this project is 6000 students with a total of 600 academic staff and about 400 administrative and technical staff. When the project implementation reaches year 5, which the final year of project implementation, the University will have a total of 4900 students, composed of 3283 male and 1617 female students. It is projected that at least 50% of students, will be accommodated within the campus and the rest will be accommodated in the private houses in the Butiama Township, which is about 2 Km from the university. Arrangement are also underway to engage private sectors so that it can develop students hostels in areas bordering the university, which is currently covered by shrubs and short grasses, and thus open for investment. In consideration of the involved short distance, students who will be residing outside the campus may not need transport to come to the university. In any, case the university is located on the road side of a highway from Musoma to Arusha which is under construction, and as such there is public transport from Butiama

to Nyamuswa / Mugumu. The public transport from Butiama to Nyamuswa is expected to expand as the market demand expands.

Vegetation within and surrounding the university: The project is located within a bare land with few existing buildings. The plant species are dominated by exotic trees. The vegetation at the proposed site is composed of indigenous, exotic and crop plants. Some of them form the riparian corridor along the project boundary. The general biodiversity present at the project sites is low and can be grouped according to habitat and site locations.

Neighbouring areas: The project site is surrounded by mixed land usage. Few dispersed buildings can be seen from a far. The dominant occupations of villagers in the neighbouring settlements are subsistence crop farming and indigenous livestock keeping. Generally most of the neighbouring areas have not been surveyed nor are they planned.

Waste management: Currently, the earmarked university site does not produce any waste, as the area is bare land with no activities going on. However, specific waste management options have already been proposed in consideration of the planned activities during the project implementation phase and the operation phase of the institution. The envisaged wastes are: construction waste; residential house and offices; motor vehicle workshop and generator houses; and laboratory chemicals. Solid waste collection site and liquid wastes treatment sites are both provided in the master plan, and will be implemented. Collected solid wastes will be transported to a Town Council operated dumping site. Hazardous waste incinerators will be constructed and operated.

Social Services: Available social services within the proximity the University Site are: secondary schools and primary schools; the government district hospital; highway road from Musoma to Arusha; banks; police station; fairly accessible to all mobile phone networks which are Airtel, Vodacom, Halotel, TTCL and Tigo,

5. Mzumbe University (MU)

Location: Mzumbe University has three campuses: Main Campus, which is located in Morogoro, Dar es Salaam Campus College in Dar es Salaam city, and Mbeya Campus College in Mbeya city. The Main Campus is located in Mzumbe area, Mvomero district, about 25km South-West of Morogoro Municipal Centre, about 3.5km off the Dar es Salaam – Lusaka Highway. The University is located at latitude 6°55'29.8"S and longitude 37°34'04.6"E. It is 220kms away from the Julius Nyerere International Airport in Dar es Salaam. It takes about 5 hours from Dar es Salaam to Morogoro Msamvu Bus Terminal. From Msamvu Bus Terminal to Mzumbe University, it takes about 28 - 45 minutes depending on the type of the transport. The Dar es Salaam Campus College is located in Olympio Street, Upanga area and Mbeya Campus College is located in the Forest Area of Mbeya City at a walking distance from the Dar es Salaam – Lusaka Highway.

Students and Staff: Mzumbe University has a total of 12,343 students; whereby female are 5810 and male students are 6533. Those who are staying on campus (i.e. staying in the University hostels) are only 3064; Female are 1613 and Male are 1451. Currently the

University has a total of 296 academic staff; 89 are female and 207 are male. At the Main campus, most of the students do walk to the University as they are staying nearby. At Dar es Salaam campus, most students have to ride public buses or private cars to the University. At the Mbey Campus, only few students have to use transport to the University.

Existing Land Use: Currently development of Mzumbe University is confined to the eastern part of the campus, occupying about a quarter of the total land. Expansion of the existing development has been taking place trough infill of the available space (pockets of land) within the developed area and extension of the buildings mainly due to proximity to other activities and availability of service infrastructures. Currently, the University has the following infrastructure: two (2) lecture halls, three (3) lecture theatres, 32 class rooms, six (6) computer laboratories, three (3) libraries, 31 students' hostels, one (1) cafeteria, two (2) canteens, 300 staff offices and two (2) health centres.

Topography: The larger part of Mzumbe University Main Campus site is characterized by gently sloping land. Generally, the whole area is suitable for all kinds of development and it does not need additional costs in terms of grading for construction of houses and infrastructure facilities.

Vegetation: The main type of existing natural vegetation cover at Mzumbe campus is scattered bushes which are found in the western and southern part of the area. This type of natural vegetation does not limit the spatial expansion of Mzumbe University. Planted trees are also found more prominently on the far eastern side of the site emanating from the main gate. This vegetation needs to be conserved for environmental considerations and aesthetic values of the University.

Neighboring areas: Mzumbe University is surrounded by various villages such as Kipera, Changarawe, Mongola and Tangeni. These villages have established the permanent settlement with their major economic activities largely depends on the existence of the University. The University also in southern part shares common boundary with Mzumbe Secondary School.

Solid Waste Management: Solid wastes generated at Mzumbe University Main Campus are categorized into institutional solid waste, domestic solid waste and hazardous solid waste. Institutional solid wastes are mainly paper wastes from offices, halls of residence, cafeteria, and health centre, thus contributing a larger portion of all wastes generated. Domestic solid wastes are generated at the residential areas and cafeteria. Such wastes are organic in nature with a characteristic of rapid decomposition. Hazardous wastes, termed so because of their potential of being harmful to micro- and macro organisms, are generated at areas such as health centre and they require discrete handling. Waste disposal practices at Mzumbe campus are open air burning, open pit dumping and open land dumping.

Environment and Social Information: Generally, the University is guided by the established Environmental Policy.

6. The Nelson Mandela African Institution of Science and Technology (NMIST)

Existing land use: The Institution has land in two different areas, one is in Tengeru where the Tengeru campus is situated, which is 199 acres and it has offices, lecture halls, staff houses, library, dispensary, laboratory, Hostel, other facilities. Second one is on Karangai which has 3,285 acres of land and it is not developed.

Students Information: Total students 541, male 352 Female 189 and 41 students stay off campus. The student enrolment is expected to increase to 1000 students
Total number the number of staff is 220 of which male are 119 and female are 101; among of them academicians are 84, administrative 110 and technical are 26.

Staff housing: All staff stay off campus with some few foreign staff and some key supporting staff like doctor who stay in campus as there only eight houses in campus for staff.

Vegetation within and surrounding the university: The institution has land use master plan and 60% is covered by vegetation.

Neighboring areas: The neighboring areas is Nambala village and it is not planned. The land use is mixed residential and farming

Waste management: The Institution uses natural process in treating waste water and has incinerator for destroying solid waste.

7. University of Dar es Salaam (UDSM) – Mkwawa University College of Education (MUCE)

Students Information: The university has a total of 5189 students whereas 2342 are female and 2847 are males. Of the 5189 students, only 1147 are accommodated in the College Hostels. The means of transport to the College is mainly Bajaj and Bodaboda with a few bus commuters.

Number of staff: The university has the total of 298 staff whereas 191 are males and 107 are females.

Vegetation within and surrounding the university: The campus is covered by natural and planted trees, grasses and flowers. The former is more prominently in the undeveloped land that covers about 80% of the total land. This vegetation does not constrain further development of the University College. The latter is more prominent in the developed areas that were planted for beautification of the respective areas.

Existing Land Use: The existing land use in the campus is explained in terms of zones. These are the administration zone (0.04%), academic zone (5.01%), staff housing zone 2.52%), students' hostel zone (3.31%), health centre zone (0.78%), recreation zone (4.39%), commercial zone (0.17%) and the estate zone (0.29%). Explanation of the

existing land use will also include road network (1.62%) and parking as well as undeveloped land (81.89%).

Neighboring areas: MUCE is surrounded by the planned residential areas of Wilolesi at the eastern, Ilala at the southern, Mkwawa at the western and Mtwivila at the northern sides. Thus, MUCE is connected to Ilala and Mkwawa through Gate Number 1 and 2 along the Mkwawa Road and Mtwivila through Gate Number 3 respectively. Map 1.4 shows the existing developments around MUCE. In the south, there are unplanned areas, the Makanyagio squatters.

Existing Sewerage Network: The existing sewerage system in the campus covers students' hostel blocks, academic buildings as well as the staff residential buildings. Thus, wastewater in the campus is collected, transported and disposed into the IRUWASA Sewerage Network connected at western part of the campus along Mkwawa Road. The system transports waste water up to the IRUWASA treatment plant that serves Iringa Municipality.

Estimation of Waste Water Generation: According to Tanzania Water and Wastewater Design Manual (2009), between 60 to 85 percent of the per capital consumption of water becomes waste water. For the purpose of this design, it is considered that 70% of water consumed will be discharged as waste water. Thus, as water demand is **1,233m3** per day, the amount of wastewater to be generated is expected to be **863m3** per day.

Existing Solid Waste Management Plan: Waste management (estimated amount of solid and liquid waste generation, transportation, and disposal, use of incinerator or vendor for disposal). The College is connected to the Municipal sewer system whereby the liquid waste is disposed through the Municipal system. The solid waste management at MUCE Campus is currently collected and disposed at the Municipal dumpsite. Iringa Municipal Council is contracted by service providers to collect solid waste from all zones within the campus. The College has a Health Centre which has been installed with incinerators for managing hospital waste. Project must note expansion of infrastructures has taken into account environmental issues. A reference can be made from approved College Masterplan (2019-2039).

8. The University of Dodoma (UDOM)

Existing land use: UDOM land is used for several purposes including offices, lecture halls, library, dispensary/hospital, other facilities like swimming pool, sports facilities and so on. Plans exist for the part of the land to be used for staff houses, that will be constructed in the future.

Total number of students, male, female, and staff: Total number of registered students is 29,595 of which
male students are 18,070 and female students are 11,525 and Staff are1,371

Students staying on campus or outside: A large number of students are staying on campus. The University has enough facilities to accommodate all students on campus.

Since there are no staff houses, the majority of staff are staying off campus except wardens who are staying on students' hostels.

Means of transport: The University is close to Dodoma Township and well-connected with regular minibuses *(Daladala)* and motorcycles (bodaboda) that shuttle between the city centre and the colleges. Besides *daladala* and bodaboda, there are readily available online cab services (Bolt) that offer rides at your convenience at a reasonable cost.

Vegetation within and surrounding the university: UDOM is surrounded with several hills with a variety of natural tree species. The trees make UDOM evergreen during rainy seasons

Neighboring areas: UDOM is neighbored by human settlements. On the other part, the settlements are planned while the rest is unplanned. There is healthy relationship between the community and the University.

Waste management: The liquid waste collected from various places such as hostels and offices is directed to the sewer system. The University has hired a vendor to manage solid waste for disposal. The disposal is done periodically to proper management of waste. The estimated amount of solid and liquid waste generation is 1,200 tons.

9. Muhimbili University of Health and Allied Sciences (MUHAS)

Existing land use: MUHAS land at Mloganzila Campus is currently used for two main purposes namely the teaching hospital (Muhimbili National Hospital-Mloganzila Campus) and building facility for the Centre of Excellence in Cardiovascular Sciences. The Mloganzila land has a well-developed master plan that includes the development of infrastructure proposed under the HEET project, and other being undertaken by the MoEST.

Students and staff information: Total number of registered students is 4,466, Male students are 2,594 and Female students are 1,872 and Staff are 654.

Students staying on campus or outside: In utilizing the teaching hospital at MUHAS-Mloganzila Campus, all students commute to the campus, as there are no accommodation facilities at this campus, the accommodation facilities are situated at the Upanga Campus and Chole Hostels - Masaki.

Means of transport: Student and staff using MUHAS-Mloganzila campus for teaching and learning do commute using university provided transport, as well as self prescribed transport (including public buses, motorcycle and private car).

Vegetation within and surrounding the university: MUHAS-Mloganzila Campus is surrounded by several vegetation, and natural tree species, as well as areas of small hills.

Neighboring areas: MUHAS-Mloganzila Campus is neighbored by human settlement. Settlements are a mixture of planned and unplanned, and the University enjoys a healthy relationship with the surrounding community.

Waste management: The Hospital infrastructure has a well-designed liquid waste collection system that is directed to the main sewer. There is an incinerator for managing dangerous and other waste, within the hospital premises.

10. Dar es Salaam University College of Education (DUCE)

Students and staff information: DUCE has a total of 5,402 Students whereas 2812 are males and 2590 are females. Of the 5,402 students, only 1,147 are accommodated in the College Hostels. The means of transport to the College is mainly Bajaj and Bodaboda with a few bus commuters. The university has the total of 5523 Staff whereas 288 are males and 235 are females.

Vegetation within and surrounding the University: The Campus is covered by planted trees and flowers. Planted trees are more prominently in the University College that covers about 80% of the total land. This vegetation does not constrain further development of the University. F

Existing land use: The existing land use development in the Campus is explained in terms of zones. These are the Administration Zone (0.87)%, Academic Zone (19.29%), Students' Hostel Zone (96.81%), Staff Housing Zone (6.38%), Demonstration Schools Zone (21.17%), Welfare Zone (3.50%), Recreation Zone (20.13%), Commercial Zone (1.87%), Estate Zone (1.96%), Open Space and Road Network (11.09%) and Road Network (6.93%).

Neighboring areas: Dar es Salaam University College of Education is located in Temeke Municipality in the Dar es Salaam City. It is bordered with the National Stadium to the South, Mgulani JKT to the East and Chang'ombe Mchichani that is a mixed commercial and residential communities with the Muslim Institute to the West and Mgulani to the North. In its location, DUCE is well accessible from various parts of Dar es Salaam City and the country in general. In Dar es Salaam City, DUCE is accessible from the Central Business District (CBD) at Askari Monument within 4.37 Kilometres through Taifa Road, Chang'ombe Road, Pugu Road, Nkrumah Street and Samora Avenue. Also, it is accessible from the Kariakoo Business District (KBD) at Msimbazi Traffic Light within 3.79 Kilometres through Taifa Road, Chang'ombe Road, Pugu Road and Msimbazi Street. The road network trunk infrastructure connects DUCE to almost all key areas in Dar es Salaam City. Also, there is a proposed Bus Rapid Transit (BRT) Station at DUCE that will connect the University College to the BRT Trunk Infrastructure in Dar es Salaam City.

Existing Sewerage System: Onsite sanitation system is used in the Campus by the use of septic tanks and soak away pits. However, the capacity of the septic tanks and soak away pits are low to serve the increased enrolment of students and employment of staffs. Furthermore, the challenges of using septic tanks and soak away pits is frequently dislodging using cesspit emptier or over flowing of soak away pits. Also, they are not suitable with the proposed vertical expansion of the University.

Estimation of Waste Water Generation: According to Tanzania Water and Wastewater Design Manual (2009), between 60 to 85 percent of the per capital consumption of water becomes waste water. For the purpose of this design, it is considered that 70% of water consumed will be discharged as waste water. Thus, as water demand is 1,271m3 per day, the amount of waste water to be generated is expected to be 890m3 per day.

Existing Solid Waste Management Plan: The solid waste management at DUCE in Temeke Municipality is currently collected by a private company and disposed at the Municipal dump site. Thus, solid wastes are collected by the service provider from the three solid waste transfer stations and then transported by solid waste truck to damping site. Two transfer stations are located in the Demonstration Schools while only one is located in the University College. Other solid wastes such as from the dispensary are incinerated while food waste from the cafeteria is managed by caterer. In the staff housing zone, open air burning and open land dumping are the disposal methods used by staff members. However, these methods are not good due to the environmental issues as well as lack of space resulting from the proposed vertical expansion of the staff houses that are expected to accommodate more families.

11. Tanzania Commission For Science and Technology (COSTECH)

Under HEET Project, COSTECH is expecting to Construct Technology and Innovation Support Centre at Mtumba in the Government City. Currently, the area is covered with small to medium sized woody plants (shrubs). On its two sides, two roads separate the area with the neighbors (hookey pitch at the south and not specified neighbor at the East). Other neighboring institutions are Registrar of political parties (North), the office of director of public prosecutions (North-West) and Law Reform Commission (South – West). Moreover, there no Waste management infrastructure now.

12. Sokoine University of Agriculture (SUA)

The Sokoine University of Agriculture consists of five campuses namely; Edward Moringe Campus (2,376 ha), Solomon Mahlangu Campus (1,050 ha), Olmotonyi practical Training Forest (840 ha), Mazumbai Forest Reserve (320 ha) and Mizengo Pinda Campus (63 ha). The University has 71 Postgraduate programmes, 41 Undergraduate programmes, 06 Diploma and 02 Certificate programmes while the current number of students (2020/2021) stand at 14,404 which include 8914 males and 5490 female. University has 35 students hostels located in different places (13 Edward Moring, 18 SMC, 2 at Town center). About 3754 students residing in the University Hostels. The University has 74 teaching spaces (Lecture halls, Theatre and Class rooms) with different sizes and sitting capacity. The Class size range from 30 to 232 sitting capacity. Furthermore, University has 72 laboratories of varying capacity ranging from 8 to 100 students. By December, 2020 University has 1227 staff (498 academic staff and 728 administrative staff). About 370 staff family residing in the University staff houses (13 Olmotonyi Arusha, 161 at Edward Moringe Campus, 166 at SMC). Most of the staff uses their own and public transports as means of reaching to their respective working areas. There are two main National Agricultural libraries (one at Edward Moring campus with capacity of 250 students and Solomon Mahlangu Campus with capacity of 500 students). University has Department of Hospital services which operate two Hospitals. The services available

includes Outpatient, Impatient, Diagnostic facilities, specialties, reproductive and child health care and treat people living with HIV/AIDS. University is surrounded by both natural and planted vegetation with various species include fruits, timbers, flowers, bushes and alike. The university is bordered by government institutions (Mzinga Military Camp and Livestock Institute) and neighboring communities / settlements. The surrounding communities are interacting with the University due to the geographical location. Currently, University has a draft Environmental Management Plan which will be approved on March, 2021. The plan will provide a framework on issues relating to waste production and management. Currently the University control its waste through Municipal sewerage systems and using own Ponds situated within the campuses.

13. The Open University of Tanzania (OUT)

Existing land use: The proposed land use plan generally makes provisions for various land use components namely: Total Land (522.09 acres), academic functions (60 acres), administrative facilities (20 acres), students support facilities (4 acres), Sports facilities (8acres), Science park (NIL), community facilities (4 acres Bungo), staff housing (NIL) waste treatment facilities (NIL), main roads (2.4 km), environmental conservation areas (in steep slopes and valleys) and investment zone (402.09).

Student's statistics: The delivery mode of the Open University of Tanzania (OUT) is the Open and Distance Learning (ODL), the University has gradually been increasing students' enrolment. Recent data shows that during the 2020/21 academic year the University enrolled a total of 10,853 students in which 6,939 were male and 3,914 were female. The students' enrolment is expected to increase to 40,000 by 2024/25.

Staff statistics: In terms of staffing, as by February 2021 OUT had total of 637 staff (365 male and 272 female). Academic staff were 319 (203 male and 116 female) and administrative/technical staff were 318 (162 male and 156 female). The academic and administrative/technical members of staff are expected to be 725 and 495 respectively by 2024/25.

Staff housing: Currently, the University has no housing units for staff. Therefore, all staff is stay outside the campus.

Student's accommodation: There are no dormitories for Students; all are stay outside the campus.

Neighboring areas: The neighboring environment is mixed land use and there is interaction with the University.

Environment information: No Waste management at the Campuses but expect to have them in the proposed building sites.

Water - OUT consumes 1,200,412.8 metric tonnes of water per year. The existing supply meets the daily requirements. The existing network is gradually expanded to meet the expected population projections.

Energy - TANESCO is the main source of power. The consumption is 26,814,000 MJ per year. As a back-up service, three (3) standby generators serve a cluster of buildings which include administration building, library, laboratory and some academic offices.

14. State University of Zanzibar (SUZA)

Existing land use: State University of Zanzibar is complex in nature, with nine campuses located in different localities in Zanzibar. Generally, the lands for respective campuses are used for several purposes, specifically for offices, lecture halls, library. The existing plan is to revise the master plan aiming at reallocating the respective use of land following the merging of 2016/2017. The land is now planned to be used for investments on building administrative offices for new schools, lecture halls, laboratory complex, student center and sports facilities and hostels.

Total number of students, male, female, and staff: Total number of registered students are 4996, of which 2033 are males and 2963 are females; Staff are 752, out of which 295 are females and 457 are males.

Students staying on campus or outside: A large number of students are staying outside the campuses. The university does not have enough facilities to accommodate student stay in the campuses. The university does not have staff houses, the majority of staff either, and therefore majority are staying off campus

Means of transport: The University uses public transport available in the main routes at the respective campus.

Vegetation within and surrounding the university: The State University of Zanzibar is surrounded with several with a variety of natural tree species and planted species. The trees provide shade for comfortability of students when they are in the university premises.

Neighboring areas: Planned neighborhood with few institutions such as IPA, High Court, and Office of Vice president of Tanzania, office of parliament, South region office, and district migration office and district police. There is good interactions with university.

Waste management: Generally, the university does not have waste management facilities. However, we collect the waste depending on the location of the respective campus. All solid waste within the campus are collected in special bins and taken to nearby modern facility that handle all waste of the Zanzibar municipality. Liquid wastes are managed firstly by temporarily using by sceptic tanks, which after they are full, the waste is also collected and taken to special modern facility that handle all waste of the Zanzibar municipality

Appendix II: Grievance Receipt And Resolution Form For HEET Project Affected Persons (PAPs)

Grievance/Complaint Registration Number……Date……

A. COMPLAINANT

1. Important information of the Complainant

First Name .....Middle Name .....Last Name: .....
Occupation:.....Tittle.....
Address:.....
Mob. Phone..... E-mail:…….....

2. Who is complaining

i. Project Affected Persons (PAPs)..... ☐

Specific PAPs are:

- Institution staff..... ☐
- Student ..... ☐
- Representative of complainant. ☐
- Others ..... ☐

ii. Technicians/Local Fundis ..... ☐

B. EXPLANATION OF THE GRIEVANCES

1. Source of Grievance/ Complaint.....
2. Brief explanation of the Grievance/Complaint emanating from the project implementation.....
.....
.....
.....
.....
3. Event/person being complained about .....
.....
4. Place where the event occurred .....
5. Date of the event .....
6. Have you ever filed the same grievance before? .....**Yes**.... ☐ .....**No.**..... ☐

C: LODGING THE GRIEVANCE/COMPLAINT

1. Method used to lodge the grievance/complaint

☐ Letter ☐ Phone ☐ Face to face ☐ E-mail ☐ Others (Mention).....

2. Name of Person registered and Filed the complaint
   Name……Position……Date…….
3. Agreed time frame for feedback on the processed grievance/complaint:
   (a) Immediately ☐ (b) Three day ☐ (c) One w ☐ (d) Two weeks … ☐

GRIEVANCE/COMPLAINTS RESOLUTION

1. Date of conciliation session.....☐.....☐.....
2. Was the complainant present? **Yes** **No**
3. Was field verification of complaint conducted? **Ye** ☐ ☐
4. Findings of field investigation…
   ……
   ……
   .....
5. Summary of Conciliation Session……
   .....
   .....
   .....
6. Was agreement reached on the issues? ☐ **s** ☐
7. If agreement was reached, give the details of the agreement
   ……
   ……
8. If agreement was not reached, specify the points of disagreement and promise given to the client
   .....
   .....

Signed (Arbitrator/ Complaints handling Officer-GHO): ……Date.....
Signed (Complainant).....Date.....
Signed (Independent Observer)
.....Date.....

Appendix IIIA: Environmental and social Screening Form

Guidelines for Screening

The evaluator will undertake the assignment after;
• Gaining adequate knowledge of baseline information of the area
• Gaining knowledge of proposed project activities for the area
• Having been briefed/trained in environmental and social screening.
The form is to be completed with the consensus of at least three people, knowledgeable of the
Screening processes (such as the Environmental Management Officers)

The filled form is to be submitted to the Environmental and Social Officers in the NPIU for review and clearance.

Name of project: ……..……..……...…
Name of Institution: ……....……...……...
Contact details of the person who is responsible for filling out this form
Name: …….…….....
Title; …….…….....
Telephone Number: ……..…….….....
Fax number: …….…….....
E-Mail address: ……..……..……....
Date: …….....……..…….....
Signature: ……...……

1. Project Description
Please provide information on the type and scale of the project (project area, area of construction buildings, access roads, and landscape), waste generated (solid, liquid and air).
2. The Natural Environment
a) Describe the vegetation/trees in/adjacent to the project area.
……
……
b) Estimate and indicate where vegetation/trees might need to be cleared
……
……
c) Are there any environmentally sensitive areas or threatened species (specify below) that
Could be adversely affected by the project?
Yes …… ….....No …….

i. Natural Forests Yes ……. No ……
ii. National Parks Yes ……. No ……
Iii. Rivers Yes ……..... No ……
iv. Lakes Yes ……. No ……
v. Wetlands (swamps, seasonally inundated areas)
Yes …….....No ……
vi. Habitats of endangered species for which protection is required under Tanzania laws And/or international agreements
Yes ……. No ……..
vii. Others (describe). Yes …….. No ……

3. River Ecology
Is there a possibility that, due to the installation of structures, such as houses and water system, the river ecology will be adversely affected? Attention will be paid to water quality and quantity, the nature, productivity and use of aquatic habitats and variations of these over time.
Yes……No……
4. Protected Areas
Does the project component area (or components of the project) occur within/adjacent to any
Protected areas designated by government (national park, natural reserve, world heritage site
Etc.)?
Yes……No……
If the project component is outside, but close to, any protected area, is it likely to adversely affect the ecology within the protected areas (e.g. interference with the migration routes of mammals or
Birds)?
Yes……No……
5. Geology and Soils
Based upon visual inspection or available literature, are there areas of possible geologic or soil
Instability (erosion prone, landslide prone, subsidence prone)?
Yes……No……
Based on visual inspection or available literature, are there areas that are at risk of a large-scale
Increase in soil leaching and/or erosion?
Yes……No……
6. Landscape/aesthetics

Is there a possibility that the project component will adversely affect the aesthetic attractiveness of the local landscape?

Yes……No……

7. Invasive Plant species

Is the sub project likely to result in the spread of invasive plant species

Yes……No……

8. Historical, Archaeological or cultural heritage sites

Based on and local knowledge available source, and after consultation with local authorities and/or observations, could the project component alter any historical, archaeological or cultural heritage sites or require excavation near these sites?

Yes……No……

9. Resettlement and/or Land Acquisition

Will involuntary resettlement, land acquisition, or loss of access to land as defined by World Bank ESS5 be caused by project component implementation?

Yes……No……

10. Loss of Crops, Fruit trees and Household Infrastructure

Will the project component result in the permanent or temporary loss of crops, fruit trees and household infrastructure?

Yes……No……

11. Noise pollution during construction and Operations

Will the operating noise level exceed the allowable decibel level for the zone?

Yes……No……

12. Will the project have adverse impacts on natural habitats that will not have acceptable Mitigation measures according to ESS 6 on Natural Habitats?

Yes……No……

13. Public Consultation Process

Briefly describe the sub project consultation process in terms of when consultations took place, where they took place, who participated and what criteria were used to select participants in this process that were the contributions from the participants, was it recorded and were the contributions from participants included in decision making, (use separate sheet if necessary).

……

……

14. Did the consultation and participatory process described in 13 above involve the following

Social/ vulnerable groups?

Women: Yes……..……No……..……

The elderly: Yes……..……No……..……..

Widows/widowers: yes……No……..…….

Orphans: Yes……No…….

15. Will the groups (in 14 above) have access to and benefit from this project component?
Yes……No…….....

Appendix IIIB: Environmental Categorization and Scope of ESIA

Based on the results of the screening, would the project have potential to cause (check one):

The filled form is to be submitted to the Environmental and Social Officers in the NPIU for review and clearance.

Impact	**Check (✓) if yes**	**Description**
Significant, diverse, unprecedented negative environmental and/or social impacts?		If checked, the project is a Category A as per the Tanzania environmental laws and Regulations and will proceed according to the ESIA standards for content, consultation and disclosure included in World Bank ESF, and the format for a full ESIA according to NEMC guidelines.
Moderate environmental and social impacts that are largely site-specific.		If checked, project is Category B and will proceed with the appropriate level of environmental assessment and include mitigation measures based on the ESF and country regulations. EA will be consistent with NEMC guidelines for EA.
Minimal or no environmental and social impacts.		If checked project is Category C and can utilize basic environmental guidelines to mitigate any impacts or no further action required if no impacts noted in the checklist.

Please explain rationale for environmental category selected

Please tick all World Bank Environmental and Social Standard to be complied

Environmental and Social Standards	**Compliance Requirements** (check (✓) appropriate)
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; • Environmental and Social Standard.	
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	N/A
ESS 10: Stakeholder Engagement and Information Disclosure.	

Please outline next steps for compliance with NEMC requirements and World Bank ESF, including dates as relevant:

Appendix IIIC: Checklist Questions

S/N	No. Answer the following questions	YES	NO
1	Will the project cause or facilitate any significant loss or degradation to natural habitats, and their associated biodiversity and ecosystem functions/services (temporary or permanently) that require additional management measures to be in place to avoid, minimize, mitigate and/or offset?		
2	Will the project have negative socio-economic and cultural impacts (temporary or permanently) that require additional management measures to be in place to avoid, minimize, mitigate and/or offset?		
3	Will the project propose to create or facilitate significant degradation and/or conversion of natural habitats of any type, including those that are legally protected, officially proposed for protection, identified by authoritative sources for their high conservation value, or recognized as protected by traditional local communities?		
4	Will the project propose to carry out unsustainable harvesting of natural resources –animals plants, timber and/or Non-Timber Forest Products (NTFPs) - or the establishment of forest plantations in critical natural habitats?		
5	Will the project propose an introduction of exotic species that can certainly become invasive and harmful to the environment, for which is not possible to implement a mitigation plan?		
6	Will the project contravene major international and regional conventions on environmental issues?		
7	Will the project involve involuntary resettlement, land acquisition, and/or the taking of shelter and other assets belonging to local communities or individuals?		
8	Does the project plan to implement activities related to agricultural extension services including the use of approved pesticides (including insecticides and herbicides) whether lawful or unlawful under national or international laws?		
9	Will the project involve the removal, alteration or disturbance of any physical cultural resources?		
	If YES, is the answer to any of the questions above, the project requires additional environmental and social management actions – proceed to national legislative and WB ESF requirements presented in Chapter 4		

	If NO is the answer to all of the questions above, please proceed with approval of the project component with World Bank		

Appendix IV: Chance Find Procedures

Introduction

For the purposes of the IFC's Performance Standard and for the purpose of use in the HEET project, a cultural heritage refers to (i) tangible forms of cultural heritage, such as tangible moveable or immovable objects, property, sites, structures, or groups of structures, having archaeological (prehistoric), paleontological, historical, cultural, artistic, and religious values; (ii) unique natural features or tangible objects that embody cultural values, such as sacred groves, rocks, lakes, and waterfalls; and (iii) certain instances of intangible forms of culture that are proposed to be used for commercial purposes, such as cultural knowledge, innovations, and practices of communities embodying traditional lifestyles.

The client is responsible for siting and designing a project to avoid significant damage to cultural heritage. When the proposed location of a project is in areas where cultural heritage is expected to be found, either during construction or operations, the client will implement chance find procedures established through the Social and Environmental Assessment. The client will not disturb any chance finds further until an Assessment by a competent specialist is made and actions consistent with the requirements of this Performance Standard are identified.

Initial Identification and/or Exposure

Physical cultural heritage resources be identified during construction or accidently exposed. The initial procedure when such sites are found aim to avoid any further damage. The following steps and reporting structure must be observed in both instances:

- The person or group (identifier) who identified or exposed the burial ground must

cease all activity in the immediate vicinity of the site; The find location will be recorded, and all remains will be left in place.

- The identifier must immediately inform his/her supervisor of the discovery;
- The supervisor must ensure that the site is secured and control access; and
- The supervisor must then inform the Client through the Consultant who will immediately inform relevant government authority responsible for physical cultural heritage.
- Potential significance of the remains will be assessed by the relevant government authority in collaboration with the Client, Consultant and Contractor and mitigation options will be identified.
- If the significance of the remains is judged to be sufficient to warrant further action and they cannot be avoided, then the relevant government authority will determine the appropriate course of action.
- In case the physical cultural heritage are of the nature of human remains they will be handled accordingly in accordance with the local and national laws and guidelines by the relevant government authority in collaboration with the Client and Consultant to ensure that there are no complaints at a later stage from the relatives of the deceased whose human remains were found.

Consultation

Where a project may affect cultural heritage, the client will consult with affected communities within the host country who use, or have used within living memory, the cultural heritage for long-standing cultural purposes to identify cultural heritage of importance, and to incorporate into the client's decision-making process the views of the affected communities on such cultural heritage. Consultation will also involve the relevant national or local regulatory agencies that are entrusted with the protection of cultural heritage.
Since cultural heritage is not always documented, or protected by law, consultation is an important means of identifying it, documenting its presence and significance, assessing potential impacts, and exploring mitigation options.

For cultural heritage issues, the following groups may be relevant for consultation:

- Historical or traditional users and owners of cultural heritage
- Indigenous Peoples
- Traditional communities embodying traditional lifestyles
- Ministries of archaeology, culture or similar national or heritage institutions
- National and local museums, cultural institutes, and universities
- Civil society concerned with the cultural heritage or historical preservation, areas of environmental or scientific interest, affected indigenous peoples, and religious groups for whom the cultural heritage is traditionally sacred
- The client will make special efforts to consult with the historical or traditional users or owners of tangible cultural heritage, especially inhabitants of the area impacted by a project within the host country, since the interests of these users or owners may be different than the

Cultural Heritage desires expressed by experts or government officials
-The client will provide early notification and engage with such groups regarding possible public use, relocation of or other adverse impacts on significant cultural heritage resources
-The consultation process will actively seek to identify concerns of these users or owners of tangible cultural heritage, and, where possible, clients will take these concerns into account in the way their project deals with the cultural heritage.

Removal of Cultural Heritage
Most cultural heritage is best protected by preservation in its place, since removal is likely to result in irreparable damage or destruction of the cultural heritage. The client will not remove any cultural heritage, unless the following conditions are met: There are no technically or financially feasible alternatives to removal. The overall benefits of the project outweigh the anticipated cultural heritage loss from removal Any removal of cultural heritage is conducted by the best available technique

Critical Cultural Heritage
Critical cultural heritage consists of (i) the internationally recognized heritage of communities who use, or have used within living memory the cultural heritage for long-standing cultural purposes; and (ii) legally protected cultural heritage areas, including those proposed by host governments for such designation. The client will not significantly alter, damage, or remove any critical cultural heritage. In exceptional circumstances, where a project may significantly damage critical cultural heritage, and its damage or loss may endanger the cultural or economic survival of communities

within the host country who use the cultural heritage for long-standing cultural purposes, the client will: (i) meet the requirements of Paragraph 6 of the performance standard No. 8; and (ii) conduct a good faith negotiation with and document the informed participation of the affected communities and the successful outcome of the negotiation. In addition, any other impacts on critical cultural heritage must be appropriately mitigated with the informed participation of the affected communities. Legally protected cultural heritage areas are important for the protection and conservation of cultural heritage, and additional measures are needed for any projects that would be permitted under the applicable national laws in these areas. In circumstances where a proposed project is located within a legally protected area or a legally defined buffer zone, the client, in addition to the requirements for critical cultural heritage cited above in Paragraph 9, will meet the following requirements: Comply with defined national or local cultural heritage regulations or the protected area management plans Consult the protected area sponsors and managers, local communities and other key stakeholders on the proposed project Implement additional programs, as appropriate, to promote and enhance the conservation aims of the protected area

Project's Use of Cultural Heritage

Where a project proposes to use the cultural resources, knowledge, innovations, or practices of local communities embodying traditional lifestyles for commercial purposes, the client will inform these communities of: (i) their rights under national law; (ii) the scope and nature of the proposed commercial development; and (iii) the potential consequences of such development. The client will not proceed with such commercialization unless it: (i) enters into a good faith negotiation with the affected local communities embodying traditional lifestyles; (ii) documents their informed participation and the successful outcome of the negotiation; and (iii) provides for fair and equitable sharing of benefits from commercialization of such knowledge, innovation, or practice, consistent with their customs and traditions.

Appendix V: Code of Conduct

Contractors and workers will sign a code of conduct which will include provisions on the following issues:

- Interactions between contractors/workers and the community including students.
- Adhere to a zero alcohol and drug policy during work activities, and refrain from the use of illegal substances at all times.
- Treat women, children (persons under the age of 18), and men with respect regardless of race, colour, language, religion, political or other opinion, national, ethnic or social origin, property, disability, birth or other status.
- Not use language or behaviour towards women, children or men that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.
- Not participate in sexual contact or activity with children.
- Not engage in sexual harassment—for instance, making unwelcome sexual advances, requests for sexual favours, and other verbal or physical conduct, of a sexual nature, including subtle acts of such behaviour.
- Not engage in sexual favours—for instance, making promises or favourable treatment dependent on sexual acts—or other forms of humiliating, degrading or exploitative behaviour.
- Unless there is the full consent[3] by all parties involved, not have sexual interactions with members of the surrounding communities. This includes relationships involving the withholding or promise of actual provision of benefit (monetary or non-monetary) to community members in exchange for sex—such sexual activity is considered "non-consensual".
- Not interact with children (students) who are attending schools where rehabilitation activities are being undertaken.
- Contractors/Workers will not utilise student or teacher sanitation facilities at schools where rehabilitation activities are ongoing.

- Reporting through the GRM any suspected or actual GBV by a fellow worker, whether employed by my company or not, or any breaches of the Code of Conduct.
- Sanctions for any breaches in the code of conduct in line with national labour

[3] Consent is defined as the informed choice underlying an individual's free and voluntary intention, acceptance or agreement to do something. No consent can be found when such acceptance or agreement is obtained through the use of threats, force or other forms of coercion, abduction, fraud, deception, or misrepresentation. In accordance with the United Nations Convention on the Rights of the Child, the World Bank considers that consent cannot be given by children under the age of 18, even in the event that national legislation of the country into which the Code of Conduct is introduced has a lower age. Mistaken belief regarding the age of the child and consent from the child is not a defense.

laws.

Community Health and Safety

Contractors and workers will participate in any and all training related to health and saving including but not limited to:

GBV, SEA and sexual harassment prior to working on the Project which will be provided by the Community Social Officers from the LGA and on the Child and Gender desk of the police. This will include information on the GBV reporting mechanisms.

Contractors will be provided with signage on issues such as HIV/AIDS, GBV etc which will be posted at worksites.

Contractors/workers will attend education sessions on disease transmission notably HIV/AIDS, malaria and will implement the control measures needed to protect public health.

Contractors / workers will ensure good housekeeping arrangements on site to avoid creating breeding grounds for rodents and insects which can spread diseases.

Contractors will ensure access to potable water for all workers.

Contractors will be required to abide by national law in relation to vehicle conditions and movements and behaviour of drivers.

Signage will be erected at construction sites to advise the community of the dangers of entering the site and appropriate barricades (fencing, tape etc) will be put in place especially around quarries, trenches etc.

Appendix VIA: Terms of Reference for the Contracting of the Environmental Expert for the Environmental Management and Supervision of the Project investments

1. Introduction

The Government of the United Republic of Tanzania through the Ministry of Education, Science and Technology (MoEST) is preparing Higher Education for Economic Transformation (HEET) project. HEET is a five-year project through the World Bank support, to promote higher education as a catalytic force in the new Tanzanian economy. The project is designed to revitalize and expand the capacity of 18 institutions to contribute to key areas for innovation, economic development, and labour market relevance. The project will invest in requisite infrastructure for modern and effective teaching and research, and by training to the highest standard the teachers, researchers and administrators needed by universities to achieve to their full potential.

The Higher Education for Economic Transformation (HEET) Project is geared towards meeting the following strategic objectives (i) increase enrolment capacity in degree programs in priority disciplines, (ii) improve the quality and labour market relevance of programs; and (iii) promote research and innovation capacity in select higher education institutions that will contribute into creation of skills that suits the requirement of labor market, generation of entrepreneurs, investors and employers. The project will have three major components; i) Transforming universities with a focus on priority disciplines for economic growth; ii) Strengthening management of the higher education system and iii) Support for Project Coordination and Management.

2. Specific Tasks

The specific tasks of the Environmental Expert will be:

- Supervise the overall environmental management of the project and its subcomponents, specifically those related to Component 1 on the construction of works and installations. Provide guidance, support and orientation to increase environmental and social good practice and improve Environmental Management in school construction and operation in Tanzania.
- Coordinate closely with the Project Coordination teams (NPIU, UPIU and APIU) at the national, university and agency levels on anything related to the environmental aspects of the project, supervision, monitoring, consultations, stakeholders involvement, participation in project development in order to reduce environmental and social impacts.

- Interact and coordinate closely with the Social Experts, hired or appointed by the project to co-lead the Environmental and Social Management of the Project.
- Interact and coordinate with other national agencies (NEMC, Ministry of Water, Ministry of Environment and other stakeholders to maintain a clear dialogue between the project, National institutions and the local stakeholders.
- Provide support in preparation/review of the Environmental Section of the Operations Manual based on the Project's established ESF instruments (ESMF, SEP, ESCP, and other approved instruments) and the World Bank's environment health and Safety guidelines.
- Prepare and review terms of reference for contracting environmental evaluations, training, capacity building activities as described in the ESMF and the ESCP to increase national, university and agency/institution capacities in environmental management (ESMP, waste and pollution management, Laboratory guidelines, waste management plan and manuals, feasibility studies, etc.).
- Participate in training workshops for use of Operations Manual under the programme.
- Provide support in reviewing the Project bidding Documents, Direct Contracts, etc. to ensure the proper environmental and social management of the project by contractors.
- Maintain dialogue and report about the project advances and overall development to the community, local stakeholders, national agencies, collaborators, etc.
- Supervise contractors during construction and rehabilitation works and monitor compliance to the ESIA, ESMP and ESMF, National Legislation and the World Bank Environmental and Social Standards.
- Monitor timely environmental and social performance of the project, contractors and subcontracts and other parties.
- Develop capacity building activities to increase environmental management capacity of contractors and counterparts.
- Track and verify performance of the project in the application of the in achieving the PDO outcomes and the intermediate results.

3. Qualifications

The Environmental specialist will have the following qualifications:

(a) A Master degree in Environmental Management, Environmental Engineering, Biology, Ecology or related field;

(b) At least five years of experience in Environmental impact assessment of civil works and working as environmental supervision, inspection, monitoring and or coordinator of environmental management plan;

(c) The experience in the World Bank Safeguards Policies will be an added advantage;
(d) The professional will be registered in NEMC and be active to present NEMC documentation;
(e) Must have knowledge and experience in the country environmental regulations and permitting processes (civil works, water, waste management, etc.)
(f) Demonstrated ability to work in teams and have leadership skills.
(g) Fluency in English and good communication and writing skills.
(h) Must be an organized person to keep track of many different project activities

4. Reporting

The Environmental expert will report to the NPIU. He/She will be required to submit the following reports:

- Monthly progress report on the overall work of the portfolio in preparation, construction and operation to Implementing Agents/Universities
- Half year Report to Implementing Agents/universities
- Annual Report to Implementing Agents/universities
- Midterm Review Report to Implementing Agents /universities

All reports will be required to highlight project application of the ESMF, SEP, ESCP and other instruments approved for the Project by the World Bank and in the application of national regulations. Reports will be share with the Bank when requested.

5. Duration.

The assignment will be for the duration of Project Implementation expected to last 5 years.

Appendix VIB: Terms of Reference for the contracting of the Social Expert for the Social Management and Supervision of the Project Investments

1. Introduction

The Government of the United Republic of Tanzania through the Ministry of Education, Science and Technology (MoEST) is preparing Higher Education for Economic Transformation (HEET) project. HEET is a five-year project through the World Bank support, to promote higher education as a catalytic force in the new Tanzanian economy. The project is designed to revitalize and expand the capacity of 18 institutions to contribute to key areas for innovation, economic development, and labour market relevance. The project will invest in requisite infrastructure for modern and effective teaching and research, and by training to the highest standard the teachers, researchers and administrators needed by universities to achieve to their full potential.

The Higher Education for Economic Transformation (HEET) Project is geared towards meeting the following strategic objectives (i) increase enrolment capacity in degree programs in priority disciplines, (ii) improve the quality and labour market relevance of programs; and (iii) promote research and innovation capacity in select higher education institutions that will contribute into creation of skills that suits the requirement of labor market, generation of entrepreneurs, investors and employers. The project will have three major components; i) Transforming universities with a focus on priority disciplines for economic growth; ii) Strengthening management of the higher education system and iii) Support for Project Coordination and Management.

2. Specific Tasks

The specific tasks of the Social Expert will be:

- Supervise the overall social management of the project and its subcomponents, especially those related to Component 3 associated with the construction of new schools and the rehabilitation of existing schools. This will include providing guidance and support to improve social management in school construction and operation in Tanzania.
- Coordinate closely with the HEET Coordination Team (MOEST, Universities and Agencies) in order to identify and manage social risks and impacts and ensure that these are given the required management attention.
- Interact and coordinate closely with the Environmental counterparts hired or appointed by the project to co-lead the Environmental and Social Management of the Project at the Universities and Agencies.
- Interact and coordinate with other national agencies (NEMC, Ministry of Land, Ministry of Labor etc.) and other stakeholders to maintain a clear dialogue Between the Project, National institutions and the local stakeholders in

collaboration with the environmental counterparts

- Provide support in preparation/review of the social section of the Project Operations Manual based on the Project's established ESF instruments (ESMF, SEP, ESCP, RF and VGPF) and the World Bank's Environmental, Health and Safety Guidelines as well as national legislation.
- Prepare and review terms of reference for contracting social evaluations, training, capacity building activities as described in the ESMF and the ESCP to increase national, regional, district and local capacities in social management (resettlement, labor and working conditions, community health (e.g. HIV/AIDS), vulnerable groups etc.)
- Participate in training workshops for use of Operations Manual under the programme.
- Provide support to participating universities and agencies in reviewing the Project bidding documents, direct contracts, etc. to ensure the proper environmental and social management of the project by contractors.
- Provide support to participating universities and agencies to undertake engagement in line with the requirements of the Stakeholder Engagement Plan (SEP).
- Provide support to participating universities and agencies to supervise contractors and monitor compliance with Project and national requirements related to environmental and social management.
- Develop and implement capacity building activities to increase knowledge and Awareness of social management, and track and verify performance of the project in achieving the PDO outcomes and the intermediate results.

3. Qualifications

The social specialist will have the following qualifications:

(a) A Master degree in Sociology, Anthropology or related field.
(b) At least five years of experience in managing social impacts including Resettlement planning and implementation, stakeholder engagement, information and education campaigns etc. on civil works site.
(c) The experience in international standards for social management ideally the World Bank Safeguards Policies will be added advantage
(d) Must have knowledge and experience in Tanzanian regulations and permitting processes related to social risk management
(e) Demonstrated ability to work in teams and have leadership skills.
(f) Fluency in Kiswahili and English and good communication and writing skills.
(g) Must be an organized person to keep track of many different project activities.

4. Reporting

The Social Expert will report to the coordinator at the NPIU and will work closely with

participating universities and agencies who will implement the Project. He/She will be required to submit the following reports.

- Monthly progress report to the NPIU on the overall work of the portfolio in preparation, construction and operation
- Half year Report to NPIU and shared to World Bank
- Annual Report to NPIU and shared to World Bank
- Midterm Review Report to NPIU and share to World Bank

All reports will be required to highlight project application of the ESMF, SEP, ESCP, RF and VGPF and other instruments approved for the Project by the World Bank and the application of national regulations. Reports will be share with the Bank.

5. Duration

The assignment will last for the duration of the Project (expected to be 5 years).

Appendix VII: List of participants to the stakeholders' meeting for the Higher Education for Economic Transformation (HEET) project

Day 1 Physical attendants

S/N	NAME	TITLE	ORGANISATION	Contact
1	Dkt. Leonard D. Akwilapo	PS	MoEST	0754 307462
2	James E. Mdoe	DPS	MoEST	0754 269947
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4	Nicodemus Mallya	CA	MoEST	0713 777030
5	Hawa Petro Tundui	Senior Lecturer/focal Person	Mzumbe Univ	0754 482 860
6	Jane Adam Moshi	Accountant	Mzumbe Univ	0758 327969
7	Lutamyo Nambela	Lecturer	UDSM	0767 978188
8	Theophilus E. Mlaki	Consultant	DOT Tanzania	0754 323597
9	Japhes Asedy B.	President of students' organization	SUA	0742 619406
10	Dr. Orestes Kapinga	Deputy Project coordinator	MUCE	0769 762641
11	Joseph Mhilu	Planning Offer	MUST	0753 233421
12	Nasero Muze	Accountant	SUA	0715 220412
13	Joyce B. Lewambungu	Head of Legal Unit	OSHA	0713 339383
14	Edness Rutta	Wadern	MUST	0753 771714
15	Mussa Hussen Idd	President of students' organization DARUSO	MUCE	0689 247595/ 0768 665352
16	Festo Joseph Karoli	President of students' organization	MZUMBE Univ DAR	0655 378838/ 0693 641676
17	Moshi J. Kabengwe	DAHRM	MoEST	0713 443304
18	Prof. Godliving Mtui	Acting VC	MUST	0754 560827
19	Rukia Mzee	Secretary/Administrator Project Implementation	ARU	0754 654338/ 0657 527716
20	Dr. Pamela Semiono	Lecturer	OUT	0713 515741
21	Dr. Gervas Machimu	Senior Lecturer	MoCU	0754 417599

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22	Vincent Pande	H/Planning	MoCU	0748 221302
23	Dr. Elbert A. Mbukwa	Lecturer and CQA	DUCE	0687 908344
24	Dr. A. S. Samingi	Senior Lecturer/Director - lib	OUT	0754 605302
25	Tosha H. Tosha	HICTU	MoEST	0787 605675
26	Dr. Baltazar Safari Awe	Planning Manager	DUCE	0787 729630
27	Fatuma Jamir Mokiwa	Head of Procurement Unit	ARU	0655 541878
28	Geofrey Nselime	H/Estate	MUCE	0767 207302
29	Salum R. Chezem	Asst. Project Coordinator	MJNUAT	0713 708913
30	Daniel Lohay Fissoo	Assistant Project Coordinator	NM-AIST - ARUSHA	0754/0784/ 0713 382593
31	Zainab Hussein	Environmental Expert	UDOM	0687 652671
32	Charles Y. Lugomela	Representative VC	NM-AIST - ARUSHA	0784 230 023
33	Amina A. Hamad	Environmental Expert	SUA	0657 059821
34	Dr. Alban D. Mchopa	Procurement Expert	MoCU	0716 247497/ 0757 387333
35	Dkt. George Matto	Senior Lecturer	MoCU	0784 545758
36	Happy Itpos Sanga	Vice President DARUSO	UDSM	0746 323327
37	Samweli Mchele Limbu	Lecturer	UDSM	0784 600922
38	Prof. Agnes Mwakaje	Ag. Representing VC	MJNUAT	0784 391220
39	Dr. Zakia M. Abubakar	VC	SUZA	0774 371617
40	Editha M. Ndunguru	Lecturer	Mzumbe	0783 833890
41	Goodluck James Mollel	President of students' organization	MoCU	0624 002437
42	Charles Marwa	Secretary, MUASA	MUHAS	0713 422199
43	Hamis D. Wambura	Deputy Team Leader	MJNUAT	0786 820619

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45	Victor G. Mugendi	Procurement Expert	UDOM	0710 609980
46	Anorld R. Kaihula	General Secretary	UDOM	0656 721324
47	Dr. Zacharia Katambara		MUST	0756 662009
48	Dr. Aloyce M. Andrew	SRO	COSTECH	0739 796663
49	Dr. Lukumola Kironyi	Lecturer	MNJUAT	0752 773890
50	Dr. Hoyce A Mshinda	SHO	NM-IAST	0756 422279
51	Dr. Lihoya A. Chamwali	Lecturer	MZUMBE	0686 712258
52	Dr. Evaristo Haulle	Ag. DP-AC	MUCE	0773 959591
53	Alpha Honest Massawe	Ag. ACLA	MLHHSD	0755 046819
54	Kambarage Dominic	ITT Chair	SUA	0784 502101
55	Hadija Kweka	ITT Member	ENTAF	0786 524040
56	Richard Masika	ITT Member	TAN COLLEGE ARUSHA	0784 292420
57	Anna Mhere	CIA	MoEST	0784 424141
58	Dr. Lecton Leskar Moris	Secretary	TAHLISO	0762 240634
59	Godeberth N. Rugazia	Planning Officer	UDSM	0687 251645
60	Prof. Ganka D. Nyamsogoro	DVC (A)	Mzumbe	0784 327832
61	Khamis Kea Juma		TAHLISO	0779 894073
62	Beatrice Mchome	Facilitator	…	0784 464816
63	Ntoteye Baatha M.	Deputy Minister, Students with special needs	DARUSO	0762 839209
64	Dr. Magreth Matonya	Director, Special Needs Education	MoEST	0758 349195
65	Prof. Gabriel R. Kassenga	DVC A/Ag. VC	ARU	0713 599181
66	Dr. Philpo John	Chairperson UDASA	MUCE	0753 555046
67	Dr. Gibson Munisi	DPD	ARU	0752 309909
68	Hirtrudice J. Jisenge	Director, Procurement and Supply	MoEST	0753 420814
69	Sufian Ally Amiri	Vice Chairperson	UDSA-DARUSO	0754 340240

S/N	NAME	TITLE	ORGANISATION	Contact
70	Nicholaus Fabian Mwageni	Lecturer/Environmental Expert	ARU	0712 790905
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72	Juma Pembe Juma	Procurement Officer	SUZA	0772 265639
73	Mohamed H. Mohammed	Director of Finance	SUZA	0773 700700
74	Festo S. Siame	EJM4	MoEST	0752 455618
75	Mary J. Nyonyi	Senior Teacher	MoEST	0686 835520
76	Thabitha G. Etutu	Environmental and Social Specialist	MoEST	0716 626631
77	Ukundi John Nkya	Principal Accountant	OUT	0784 763131
78	Oliva B. Kato	Public Relation Officer	MoEST	0785 854421
79	Dr. Nuru N. Kitara	Project Environmental and Social safeguards office	NIT	0716 209210
80	Fatma Ali Kombo	Acting Director, HR	SUZA	0773 003 991
81	Buxiane Madyeoye	Principal Accountant	MUCE	0737 700132
82	Fundikira Ekerege	PEO		0762 930669
83	Benjamin F. Bussi	DPD	OUT	0754 289246
84	Julius Mngumi	Environmental Impact Expert	DUCE	0713 519210
85	Cornel Msembwa	DPI	MUST	0759 100800
86	Cathbert Nissilu	Environment Official	MUCE	0753 200275
87	Kelvin E. Mkude	Representative for Students with Special Needs	UDOM	0687 950511
88	Paul E. Riziki	Supplies Officer	UDSM	0655 385999
89	Fadhaili Chitanda	HPMU	MoEST	0739 811858
90	Consalva Msigwa	Lecturer	DIT	0787 663256
91	Evelyn Makala	DLSU	MoEST	0754 470803

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93	Jerline J. Mwaipyaina	Accountant/Directorate Finance - UDSM		0657 960950/0783 519825
94	Hilary Looken	President of students' organization	MUST	0763 939404
95	Dr. Fredrick Salukele	Estates Manager	ARU	0715 400480
96	Winfred Mbungu	Lecturer	SUA	0712 818080
97	Dr. Buberwa Tibesigwa	Lecturer	MUST	0658 359685
98	Dionice Lukweme	ICT	MoEST	0689 299329
99	Prof. R. J. Chibunda	VC	SUA	0713 296571
100	Ngussa L. Kinamhala	Planning and Development	CBE	0746 832273
101	Gerald Kafuku	Innovation and Technology Manager	COSTECH	0766 604977
102	Sakanda Gaima		MoEST	0787 184034

Day 1 Online attendants

SN	Name (Original Name)	Organization
1	WB485896	
2	Dionice	
3	Roselyn Wilbard Kaihula	
4	Gemma	
5	Deusdedit Kibbassa	World Bank
6	RMB	
7	wb156749	
9	Innocent Mulindwa	World Bank
10	PETER NIBOYE	
11	Dr Innocent Tesha	
12	iPhone de Tom lee Masija	
13	NKANDA JONATHAN	
14	Yona m henge	
15	Said Sima	
16	Henry Kulaya	
17	Ochola Wayoga	

18	Sylvester Rugeihyamu	
19	Alistidia	
20	Faraja Nyalandu	
21	Thomas Masija	
22	Ole M	
23	Susan Bipa (Allan Buluku)	
24	Valentin Ngorisa	
25	Nelson Mbawala	
26	TECNO POP 2 Power	
27	Dr. Naima Besta	World Bank

Day 2 Physical attendants

S/N	NAME	TITLE	ORGANISATION	Contact
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2	Dkt. K. Hosea	DHE	MOEST	0684 237851
3	Nicodemus A. Mallya	CA	MOEST	0767 777030
4	Theophilus E. Mlaki	Consultant	DOT TZ	0754 323597
5	Beatrice S. Mchome	Consultant		0784 464816
6	Margareth S. Mussai	Assistant DHE	MOEST	0713 300555
7	Hamisi D. Wambura	Deputy Team Leader	MJNUAT	0786 820619
8	Prof. A. Mwakaje	UPIU TEAM	MJNUAT	0784 391220
9	Salum R. Chezeni	UPIU TEAM	MJNUAT	0713 708913
10	Hirtudice J. Jisenge	DPMU	MOEST	0753 420814
11	Dominic Kambary	ITT Chair	SUA	0874 502101
12	Richard Masika	ITT Secretary	TAN COLEGE ARUSHA	0784 292420
13	Dr. David Koloseni	Treasurer	MAT	0718 919148
14	Nasero Muze	Accountant	SUA	0715 220412
15	Dominic J. Mtibu	Senior Accountant	UDOM	0712 508772
16	Tosha H. Tosha	HICTU	MOEST	0787 605675

17	Amina A. Hamad	Environmental Expert	SUA	0657 059821
18	Lutamyo Nambela	Lecturer	UDSM	0767 978188
19	Samwel Mchele Limbu	Lecturer	UDSM	0784 600922
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26	Winfred Mbungu	Coordinator	SUA	0712 818080
27	Moshi J. Kabengwe	DAHRM	MOEST	0713 443304
28	Emmanuel E. Hanai	Lecturer	UDSM	0713 854577
29	Oliva Kato	Public Relation Officer	MOEST	0785 854421
30	Mary J. Nyonyi	Senior Teacher	MOEST	0686 835520
31	Alpha Honest Massawe	Ag. ACLA	MLHHSD	0755 046819
32	Fundikira Ekerege	PEO		0762 930669
33	Evelyn Makala	DLSU	MOEST	0754 470803
34	Festo Siame	EJM4	MOEST	0752 455618
35	Sakanda Gaima	EJM3	MOEST	0787 184034
36	Caroline Kinasha	Program Manager	CAMFED	0767 012 545
37	Tabitha Etutu	Environmental and Social Specialist	MoEST	0716 626 631

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Other consulted via email and Physical visit

1. **Oblige for Vulnerable Children Tanzania [OVCT]**
2. **Legal and Human Rights Center - LHRC**
3. **Zuberi Maregesi**
4. **Survival International**
5. **TEN-MET**
6. **Survival International**
7. **Batwel Sanga**
8. **Tz Worlded**
9. **TNRF**
10. **Paicodeo**
11. **John Prismus Mwingira**
12. **Hakielimu**
13. **TGNP mtandao**
14. **Envirocare**
15. **The Foundation for Civil Society (FCS)**
16. **Legal and Human Rights Center**
17. **Lawyers' Environmental Action Team (LEAT)**