ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT-STUDY REPORT

PROPOSED CONSTRUCTION OF A HOSTEL FOR FEMALE TRAINNEES, A PERIMETER WALL AND EQUIPPING THE TECHNICAL LABORATORY AND CONSTRUCTION OF A MODERN BUILDING HOUSING- OFFICES, LECTURE HALLS AND EQUIPED LABORATORY

AT

MTC AND UNIVERSITY OF JUBA SOUTH SUDAN

BY

MINISTRY OF LABOUR SOUTH SUDAN

April 2023

Client	Consultant	Submitted to
The Government of the Republic of South Sudan Juba, South Sudan	ESIA Consultant & Project Implementation Team (PMT)	Ministry of Environment and Forestry Juba South Sudan

DECLARATION

We, the undersigned, hereby declare that this ESIA Study Report represents the facts pertaining to the proposed **CONSTRUCTIONS TO SUPPORT TVET FOR VALUE CHAIN DEVELOPMENT (STVET-VCD) PROJECT" JUBA, SOUTH SUDAN** at MTC and University of Juba – Juba South Sudan by the Ministry of Labour.

ON BEHALF OF MINISTRY OF Labour Republic of South Sudan

Sign: _____

Dated: _____

DETAILS OF EXPEERTS WHO CONDUCTED THE EIA
Stephen Obiero Anyango, PhD. - lead expert/ MININISTRY OF ENVIRONMENT AND FORESTRY Ref. no. MININISTRY OF ENVIRONMENT AND FORESTRY/EIA/VOL. II/2022/14

Sign: _____

15/04/2023

Dated: _____ _____

Table of Contents

LIST OF ACRONYMS AND ABBREVIATIONS

AfDB	**Africa development bank**
EAC	**Environmental Advisory Committee**
EPB	**Draft Environmental Protection Bill (Version 2022)**
ESIA	**Environmental and Social Impact Assessment**
ESMP	**Environmental and Social Management Plan**
FGD	**Focus Group Discussion**
GBV	**Gender Based Violence**
GRC	**Grievance Redress Committee**
GRM	**Grievance Redress Mechanism**
GOSS	**Government of South Sudan**
ISS	**Integrated Safeguards System**
KIIs	**Key Informant Interviews**
MoL	**Ministry of Labour**
MoEF	**Ministry of Environment & Forestry**
NGOs	**Non-Governmental Organizations**
OSHA	**Occupational Health and Safety Authority**
PAPS	**Project Affected Persons**
PCN	**Approved Project Concept Note**
RAP	**Resettlement Action Plan**
SS	**South Sudan**
SSUWC	**South Sudan Urban Water Corporation**
ToR	**Terms of Reference**
TVET	**Technical Vocational Education and Training**
VCD	**Value Chain Development**

EXECUTIVE SUMMARY

Introduction: The Republic of South Sudan "Support Technical Vocational Education Training (TVET) for Value Chain Development (STVET -VCD)" is a government project proposed to be financed by the African Development Bank (AfDB) and executed by the Ministry of Labour, (MoL) with UNESCO as a UN third-party implementing agency. The project activities includes; **the construction of a Morden Building housing: offices, lecture rooms and equipped laboratories/ workshops, at University of Juba School of Food Science and Technology, and Construction of a girls' hostel, a perimeter wall and equipping the laboratory/workshop at MTC Juba.** The initiative is anticipated to build a skilled labor force required in value chain development and contribute to socio-economic development. The project will complement the Bank's initiatives in value chain development in agriculture and other sectors such as energy and water and sanitation. The Bank is funding Agriculture Markets Value Addition and Trade Development (AMVAT) project which aims to promote value addition in sesame, groundnuts, sorghum and maize. The overall goal is to increase access to quality technical and vocational skills development for value chains progress and employability. This will be achieved by investing in skills development infrastructure (TVET – Institutes), which will facilitate the building of a highly skilled labour force to support the value chain, strengthening the TVET sub-sector and as a result, enhancing youth employability. STVET-VCD constructions are Category II Project. In line with the Bank´s Environmental and Social Safeguards requirements, an Environmental and Social Impact Assessment (ESIA) must be conducted and the related reports approved and disclosed both by the Bank and the Government of Southern Sudan (GoSS), it is based on this, as well as the bank's commitment to environmental conservation that the client intends to undertake an ESIA for the proposed works.

Objectives for the assignment: is that prior to the commencement of activity implementation at the proposed project sites, there is a need to conduct an environmental and social impact assessments (ESIA) study to identify any adverse environmental and social impacts associated with the project construction/rehabilitation and propose mitigation measures to address those challenges. To achieve this, the Ministry of Labour, (MoL), South Sudan in collaboration with AfDB has engaged a consultant to conduct an environmental and social impact assessment prior to the approvals of the Project Execution.

Based on the outcomes of the environmental and social impact assessment, the assignment will develop an environmental and social management plan in compliance with the Southern Sudan regulations that will meet the African Development Bank's Environmental and Social Safeguards Policy requirements. The aim is to develop mitigation measures that will address any adverse environmental and social impacts the project activities may bring about, including the cost implications of implementing those mitigation measures, develop a monitoring timeframe, and assign responsibilities to implement the measures.

These Construction works has triggered the need for an ESIA on the two sites. The Construction works is a Category II Project. In line with the Bank´s Environmental and Social Safeguards requirements, an Environmental and Social Impact Assessment (ESIA) must be conducted, and the related reports approved and disclosed both by the Bank and the Government of South Sudan, it is based on this, as well as the client's commitment to environmental conservation that the proponent has undertaken an ESIA for the proposed works.

The development once completed, will have a state of the art science complex at the University of Juba and a premium Building – Dormitory for girls and well equipped laboratory at MTC Juba.

Purpose/Rationale for The Environmental and Social Impact Assessment: Although the project implementation sites have been selected and the project designs are also under development thus full details on nature design and scope of interventions is still being developed. The proposed project has two locations, each project activity required its stand-alone ESIA document as per the local laws. But because the project activities in all the sites are evidently similar both at mobilization & construction phase and operation phase, the consultant in

consultation with the client has prepared one detailed ESIA for the two locations of the project sites. To this end, Ministry of Environment and Forestry is in agreement about the proposed preparation of an ESIA. The ESIA is prepared for AfDB operations that finance multiple, subprojects with potentially same environmental and social impacts, but whose location, scope and designs may not be precisely the same.

This ESIA has been developed to ensure that these investments are carried out in an environmentally and socially sustainable manner. The rationale for preparing the ESIA for the STVET -VCD – is essentially to evaluate the project's potential environmental and social risks and impacts of its implementation. The process of the ESIA will examine ways of improving project site selection, planning, design, and implementation; it's also to prevent, minimize, mitigate, or compensate for adverse environmental impacts, and to enhance positive impacts throughout project implementation. The ESIA document will serve the following purposes: i) provide guidance to implementers to ensure the environment assessment process is carried out in compliance with national legislation (Republic of South Sudan) and AfDB safeguards policies. ii) Provide an environmental and social screening process to allow for identification, assessment and mitigation of potential impacts by proposed works at the time the detailed aspects are known. iii) Used as a reference document for assessing the potential environmental and social impacts of investment alternatives. iv) Serve as guidelines for the development of sub-project/site-specific Environmental Social Management Plans (ESMPs), due diligence reports, environmental audits, among others.

ESIA Specific Objectives i) Establishing clear procedures and methodologies for the environmental and social assessment, review, approval and implementation of subprojects to be financed under this project, ii) Identification of specific roles and responsibilities, and outlining the necessary reporting procedures for managing and monitoring environmental and social risks related to subprojects, iii) Establishing project funding required to implement the ESMP requirements and iv)providing lessons learned for application to future project.

Project Development Activities: "STVET-VCD PROJECT" development activities may be categorized into Three (3) phases of: a) design, mobilization and construction phase b) operational phase, and c) decommissioning phase. The mobilization and construction phase will take place subsequently to the issuing of Environmental Impact Assessment Certificate, building/construction permits and once a construction contract with a suitable contractor is signed. The mobilization and construction phase will involve different activities as summarized including: i) site clearance, earthworks and construction of campsite ii) installation of temporary security fence at the camp sites, site office and storage facilities iv)acquisition of materials from a reliable sources and storage; iii) testing of the construction materials; iv)acquisition of other permits such as water use permits; v) confirmation of data and accuracy of topographical survey; vi) mobilization of labour force, equipment and plant for construction works; vii)transportation of equipment, workers, materials and storage; viii)Abstraction and transportation of water to the construction site; ix) collection, storage, transportation, treatment and disposal of wastes generated from construction activities; xi) Actual construction works; xii)movement of heavy equipment and machines xiii)Occupational health and safety management;

In the project operation phase: Buildings and the state of the art equipment, offices, laboratories, workshops and training facilities, women Hostel as well as the roads, parking yards, walkways and recreational areas will start to operate to serve the intended purposes. The activities that are expected to be executed during operational phase include: Transportation, experiments, generation of ideas, training, workshop activities, student's activities and mobility in the corridor and recreational activities/Leisure among others.

Due to consistent use of the facility/buildings during operational phase there will be a routine housekeeping and maintenance as a result of wear and tear of the infrastructure that will affect its quality. Therefore, the Buildings will require maintenance throughout the project life. Among others, the maintenance works will include: i) Repainting of building ii) Repairing cracks on the structures iii) Routine maintenance of the building among others. Therefore, institution management will have to set aside funds to supported facilities, for operation and maintenance

this includes cleaning and repair, payment of water and electricity bills and buying necessary items for cleaning (e.g. detergent, disinfectant, gloves, hand wash soap etc.).

The project will obtain the construction materials *(*aggregates and borrow materials) by applying for the permit from relevant government departments. The management of waste generated (both solid and liquid waste) with the proposed projects will use the existing system during operation phase of the project. During construction and operation phases of the project, generation of sanitary waste is expected. Sanitary waste shall be handled through the existing system in the project areas. Collected storm water will be directed to the existing drainage patterns of the areas. Other important concerns include Air pollution: gaseous, dusts and particulates, increased pressure on utilities/services, traffic, public safety risks and noise generation.

Methodology: ESIA has been prepared in accordance with the requirements stipulated by the Government of the republic of south Sudan through South Sudan Ministry of Environment and Forestry. An interactive approach was undertaken between the project management team and the environmental and social assessment consultant. The methodology used is commensurate with the Environment Regulations, in South Sudan.The following methodological approaches were used to prepare the ESIA:
1. ***Scoping***. Specifically, the scoping enabled the ESIA team to: a) Identify study scope; b) identify data/information requirements c) develop effective methods of approaching the ESIA study and d) define terms of reference for the ESIA study. The study began with initial consultation with the Ministry of Environment and Forestry and the project team. The process identified relevant key environmental and social economic issues for detailed assessment as well as identify key stakeholders in the process. This culminated in the confirmation of the formulated ToR (See annex 1).
2. Desk review: done on relevant national and international policies, laws, proclamations, strategies, guidelines/manuals, related programs and Safeguard practice lesson learned from previous projects in similar context with **STVET-VCD PROJECT** as well as AfDB safeguards standards and relevant international procedures to ascertain the optimal management of impacts.
3. Field Visits: was made in the project implementing sites: in Juba (MTC and University of Juba). The field visits were done in the period: 3rd April 2023 to 6th April 2023. The consultant also made visits to some of the existing infrastructures within the target institutions. During the visits, key informant interviews and field observations regarding environmental and social context of the regions were undertaken and relevant information used to prepare the ESIA was collected.
4. Stakeholder consultative meetings*:* were held with government officials in their respective offices and project sites as well as students within the project institutions and other stakeholders interested/affected by the implementation of the project were identified.
5. Impact Identification and Evaluation**:** the ESIA identifies these impacts for the purposes of mitigating the adverse ones or enhancing the benefits. Impact identification is a process designed to ensure that all potentially significant impacts are identified and taken into account in the ESIA process.

Policy, Legislative and Regulatory Framework: the policies, National Plans/Strategies/Frameworks, Legislative and Regulatory Framework: relevant to the project and reviewed include; The Constitution of the Republic of South Sudan of 2011, South Sudan Vision 2040, South Sudan National Environment Policy 2015 to 2025, South Sudan Draft Environment Bill (2023), The Land Act of 2009: The South Sudan Forest Policy (2019), National Agriculture and Livestock Extension Policy, The Public Health (Water and Sanitation) Act (2008) The Labour Act (Act No. 64 of 2017), The Child Act (Act No. 10 of 2008): The South Sudan Education policy, General Education Act, 2012. The National General Education Policy, 2017-2027, Gender Policy and South Sudan National Women's Strategy 2016.

Institutional Framework for the implementation of the project ESIA includes the Ministry of Labour, UNESCO, University of Juba, MTC, Ministry of Agriculture and livestock development, Ministry of General Education, Ministry of Higher Education, Ministry of Environment and Forestry, Ministry of Infrastructure

Analysis of Relevant International Conventions: South Sudan is a signatory to and has ratified several international instruments on environmental conservation and management such as conventions and regulations are South Sudan is a signatory to and has ratified several international instruments on environmental conservation and management. Among such conventions and regulations are (i) African Regional Policy Instruments (ii) The African Convention on the Conservation of Nature (1968) (iii) The Ramsar Convention of 1971 on Wetlands of International Importance; especially as Waterfowl Habitats (RAMSAR) (iv) The Protection of World and Cultural Heritage Convention (1972); (iv) The United Nations Framework Convention on Climate Change (UNFCCC, 1992). (v) United Nations Convention on Biological Diversity (vi) Convention on the Rights of the Child

The AfDB Safeguard Policies: The. AfDB Safeguard Policies have been reviewed, considering that the project intends to be financed with AfDB. The Bank's policies prompted for this projected include: (1) Environmental Assessment (OS1); (2) Involuntary Resettlement including Land Acquisition, Population Displacement and Compensation (OS2)**;** (3) Biodiversity and Ecosystem Services (OS3); (4) Pollution Prevention and Control, Greenhouse Gases, Hazardous Materials and Resource efficiency (OS4); and, (5) Labour Conditions, Health and Safety (OS5).

Public Consultations and Stakeholder Analysis: The consultant conducted discussions with the client including; stakeholder analysis in order to determine and engage all the relevant stakeholders as well as determine their location, the project's impact, the stakeholder's degree of influence and/or dependence on the project; so that issues that are critical to them are identified and considered. The consultant with support from the project team conducted public consultation. Though Key informant interviews (KIIs), focused group discussion, and site meetings. The key issues raised by the stakeholders during consultation are as follows:

1. The environmental concerns raised include: Noise and Vibration during construction, air pollution from dust to be generated during construction; and solid waste production and littering the environment.
2. The socio-economic concerns raised include: Increased pressure on utilities/services, community health and safety concerns, socio cultural disruptions, among others.
3. Student potential relocation to another campus, avoiding disrupting normal businesses and leaning activities.

The Consultant responded to the stakeholders' concerns by reassurance that all the issues raised will be addressed as part of the mitigation measures proposed in the ESIA report and to be implemented and monitored during the project period.

Environmental and Social Impact Assessment: study identified a number of environmental and social impacts for the entire life cycle of the project. The potential environmental and social impacts considered in the ESIA process include impacts to the ***air*** quality, water resources, land resources, socio-economic/cultural, cultural heritage and transport conditions during mobilization, construction and operation of the project. The ESIA also presents mitigation measures to be employed to help prevent or minimize the environmental and social impacts of the project during the mobilization, construction and operation phases and decommissioning phase.

Measures recommended during the mobilization and construction phase include control of noise pollutions from heavy construction equipment, trucks and public transport through proper inspection and maintenance, limiting noisy activity on day time, use of noise suppressors and operation control of public transport; control of air pollution from construction works and movement of vehicles through proper inspection and maintenance to reduce exhaust emissions; control of water pollution through proper storage and handling of oil wastes and treatment of wastewaters at site; control of solid wastes through sanitary storage and frequent collection for appropriate disposal. Safety risks to pedestrians will be mitigated through providing designated walkway, use of appropriate signs to direct pedestrians and installation of physical barriers. Regarding spread of Sexual Transmitted Diseases and Gender Based Violence (GBV) will mitigated by implementing HIV/AIDS awareness and prevention program and integrating

measures for prevention and handling GBV and Sexual Harassment in the contractor's environmental and social management plan (C-ESMP).

At operational phase measures recommended includes regular monitoring air quality where noise will be measured periodically. In addition, pollution from generated wastewater and solid waste, will be mitigated by connecting to existing sewerage system and by disposal of solid waste in the landfill Emphasis has also been on the control of emission levels (from exhaust), which will be mitigated by regular maintenance of transport vehicles. A major concern for the laboratory and equipment at operational stage will be the availability of water, chemicals management and disposal of wastewater from the laboratory. Reduction of parking space will be mitigated through the promotion of off-street parking facilities and ensure smooth transition towards new parking facilities.

In all phases, occupational health and safety will be carefully considered and controlled through continuous inspection to prevent disease and accidents, and workers will undergo an environmental and safety briefing on safety, sanitation measures, and emergency rescue procedures before construction begins. Adequate sanitary facilities and garbage bins will be provided.

Environmental and Social Management Plan (ESMP): has been developed to implement the proposed environmental mitigation measures during mobilization, construction operation and decommissioning of the project. The plan focuses on measures to be applied in the field and management actions to minimize potentially adverse impacts and enhance positive impacts.

Table 9-1 Environmental and Social Management Plan (ESMP)

Component I: Construction of a Science complex: offices, lecture Rooms and an equipped laboratory at University of Juba					
Pre-Construction (Planning/ Design) Phase					
Aspect	**Anticipated Environmental and Social Impacts**	**proposed mitigation measures**	**Monitoring Indicators**	***Responsible Institutions***	***Cost estimate (USD)***
Design related	• Poor facility designs that may drive demand for raw materials • Designs that may increase greenhouse emissions • Designs that are out of character with the culture of the area	• Project designs to take cognizant of environmental best practices like energy and water conservation. E.g. project designs to promote natural aeration and lighting, use alternative energy like solar, propose fixtures that enhance water and energy efficiency • Design with Nature and culture in mind	• The energy efficiency the of building and the equipment installed • Building materials promoted • Environmentally sensitive designs	MoL University of Juba Architects and contractors	5000
Social Impacts	• Un managed community expectations that may lead to conflicts • Project activities that may not align with social, cultural and religious norms	• Public participation/sensitization on the project • Stakeholder view on project components and execution	No. of stakeholder sensitization sessions General awareness level on project	MoL to take lead through PMT	2000
SUBTOTAL					7000
Construction Phase					
Aspect	**Anticipated Environmental and Social Impacts**	**proposed mitigation measures)**	**Monitoring Indicators**	***Responsible Institutions***	***Cost estimate (USD)***
Land degradation	• Extraction of raw materials (sand, ballast, rocks, timber and poles) may lead to Loss, degradation or fragmentation of ecologically sensitive areas • Earthworks and clearance may lead to the loss of plant species and habitats • Potential for adverse effects from alteration of soil structure and increased runoff from paved surfaces leading to changes in water flow and drainage as well as soil erosion,	• Raw materials like sand, ballast and stones sourced from licensed quarries. • Rehabilitation of cleared areas with native species	• Proper sourcing of raw materials • Compliance with transportation rules • Land restoration and revegetation after construction and or rehabilitation works	***PMT& Contractor***	4000

Air Pollution	• Dust and Fugitive gases from transportation tracks • Emissions by machineries (NOx and Sox and fugitive dust from disturbed soil surfaces	• Loose materials to be covered during transportation to reduce fugitive gas • Transportation trucks to observe speed limits. Where possible put measures for traffic calming like bumps near settlements, around corners etc. • Reducing machinery idling times to cut on emissions	• Ambient air quality	***PMT& Contractor***	1000
Accident Risks during Transport	• Accident risks by transportation vehicles to and from site	• Erect adequate signage warning of different hazards: e.g. heavy trucks turning, observe speed limits among others • Transportation trucks to observe speed limits. Where possible put measures for traffic calming like bumps near settlements, around corners etc. • Sensitize the machine operators on need for safe practices • Machinery to be operated only by qualified personnel	• Observe speed limits • Traffic calming like erection of bumps on blind spots • Proper signage	***PMT& Contractor***	1000
Waste Management	• Pollution risks to soils and waterr due to poor disposal of construction waste • Generation of wastes (liquid and solid waste	• Waste must be disposed of in licenses sites only and in compliance with local laws and bylaws • Contractor to prepare a detailed waste management plan • Provision of adequate facilities for solid and liquid waste management at the sites. Sensitize workers on proper waste management including 3Rs • Facilitate programs/measures to ensure appropriate sanitary and medical facilities are available	• Solid waste separation and recycling/disposal measures adopted in camp settlements • Proper waste management practices related to construction works, • Solid and liquid waste management practices and status.	***PMT& Contractor***	4000
Occupational health and Safety Risks	• Poor construction management practices may lead to adverse effects on safety, human health and wellbeing. • Storage of materials, circulation of construction machinery leading to accidents, pollution risk etc.; •	• Fencing of construction areas to reduce unauthorised access • Proper signage warning of different hazards • Provide PPEs to all workers and visitors in the construction areas • Sensitize workers on health and safety	• Accident/incidence reports • Provision and use of PPEs • Presence of adequate signage	***PMT& Contractor***	5000

Noise and Vibration	• Noise and Vibration • Health and safety concerns	• Strict adherence to regulations on noise and vibration, including use of silencers and mufflers for loud equipment • Work to be carried out within stipulated hours to reduce nuisance • Proper PPE provision	• Compliance with laws and regulations on noise and vibration • Hours of operation by contractor • Compliance with the Environmental Guidelines • Environmental audits	Contractor PMT	1000
Chemicals Management	• Risk of oil spills, fires etc. from servicing of equipment • Fire risks	• Proper housekeeping within workshops for equipment to reduce fire and pollution risks • Prepare an emergency management plan	• Compliance with the Environmental Guidelines • Environmental audits	Contractor PMT	1000
Conflicts and Grievances	• Labour related disputes • Differences (Perceived or real) in working conditions between workers may lead to resentment, • Risk of gender related violence and crimes	• Development of transparent and culturally appropriate communication with communities an Employment Plan, with clear employment requirements, and procedures for the construction and operational /maintenance workforce, • Fair and transparent hiring and staff management procedures, • Staff training and awareness raising in communities, • Implementation of a Grievance Procedure, • Ensure the participation and benefit of marginalized and vulnerable part of the communities (poor, landless, minority groups, women, old and youth) throughout and after the project.	• Employment records • Grievance redress records • Level of awareness on gender issues, HIV, •	Contractor PMT UoJ Administration	2000
University Community and Worker health and safety	• Risk of exposure to COVID 19 • Risk of Occurrence of communicable diseases, including HIV/AIDS, COVID-19 and sexually transmitted diseases (STDs). • Social differences may lead to discrimination and harassment, • Real or perceived disruption to normal community life, through the physical presence of a workforce; in particular, potential for conflicts to occur over resources,	• Development of COVID 19 protocols including provision of adequate hand wash facilities • Training and awareness raising and Implementation of a health management for workforce and their dependents on HIV/AIDS and other STDs, and communicable diseases; health awareness raising campaigns for communities on similar topics, • Community grievance redress mechanism	• Observance of COVID 19 protocols • Provision of materials for sexual health awareness • Grievance redress records • Level of awareness on gender issues, HIV,	Contractor PMT UoJ Administration	6000

SUBTOTAL					**25000**
Operation Phase					
Aspect	**Anticipated Environmental and Social Impacts**	**proposed mitigation measures)**	**Monitoring Indicators**	***Responsible Institutions***	***Cost estimate (USD)***
Waste Management	• Generation of wastes (Liquid and solid) by student and staff population • Pollution risks from the generated waste • Waste waters from the laboratories • Management of hazardous chemicals for use in the laboratories	• Each institution to have infrastructure for solid and liquid waste management based on Best Available Technologies • Programs for promoting best environmental practices include adoption of 3Rs in waste management • Chlorination of laboratories waters • Pool water recirculation system: • discharged into the municipal sewer • substitute the hazardous chemicals with less hazardous	• Status of waste management • Quality of general environment	Institution administration	2000
Pressure on Resources	• Increased pressure on resources (water, energy) • Influx of population to capitalize on demand for laboratories as well as good services to support the student population • Increased use of water for the laboratories	• Sensitize students on resource efficiency measures like keeping taps closed, witching off lights • Use of resource efficient fixtures like energy efficient lighting and electronic appliances, water efficient fixtures among others • Programs for self-sustained within the TVETs including agriculture • Using an automatic pumping • Use of a pool cover.	• Presence of local development plans • Adoption of resource efficiency measures	UoJ Administration PMT	1000
Social Conflicts	• Potential for adverse effects if expectations not met and community relations are not well managed,	• Sensitize communities to utilize the facilities to enhance their access to education • Sensitize communities on opportunities from the facility • Favor local suppliers in procurement for goods and services • Develop a grievance management system	• Level of TVET enrollment by local communities • Local content in procurement processes • No of grievances reported and resolved	JoL administration MoL	6000

SUBTOTAL					**9,000**
Decommissioning Phase					
Aspect	**Anticipated Environmental and Social Impacts**	**proposed mitigation measures)**	**Monitoring Indicators**	***Responsible Institutions***	***Cost estimate (USD)***
Waste Management	• Construction waste containing ballast, rocks, timber, poles and roofing materials) that need disposal • Generation of wastes (liquid and solid waste •	• Usable materials like construction blocks, roofing, steel etc to be sold off to recyclers for recycling and re-use. • Remaining materials to be used for burrowing or disposed off in designated sites. Can also be used for backfilling access roads	• Safe disposal of construction waste • Solid waste separation and recycling/disposal measures adopted in camp settlements •	UoJ to take lead through PMT	*3000*
Air Pollution	• Dust and Fugitive gases from transportation tracks • Emissions by machineries (NOx and SOx and fugitive dust from disturbed soil surfaces	• Loose materials to be covered during transportation to reduce fugitive gas • Transportation trucks to observe speed limits. • Reduce machinery idling time	• Air quality during demolition •	PMT Contractor	1000
Accident Risks	• Traffic related accidents • Machinery related accidents	• Transportation trucks to observe speed limits. Where possible put measures for traffic calming like bumps near settlements, around corners etc. • Only Qualified personnel to operate machinery • Provide PPEs to all workers and visitors in the construction areas • Sensitize workers on health and safety • Fencing of construction areas to reduce unauthorised access • Proper signage warning of different hazards	• Accident/incidence reports	PMT Contractor	3000
Land degradation	• Pollution risks to soils and water due to poor disposal of construction waste • Earthworks and clearance may lead to loss of plant species and habitats • Potential for adverse effects from alteration of soil structure and increased runoff from paved surfaces leading to changes in water flow and drainage as well as soil erosion	• Waste must be disposed off in licenses sites only and in compliance with local laws and bylaws • Contractor to prepare a detailed waste management plan • Rehabilitation of cleared areas with native species	• Compliance with laws and regulations, • Proper waste management practices related to construction works, • Land restoration and revegetation after construction and or rehabilitation works, • Compliance with the Environmental Guidelines	Contractor MoL	2000

Noise & Vibration	• Noise and Vibration • Risk of oil spills, fires etc from servicing of equipment • Storage of materials, circulation of construction machinery leading to accidents, pollution risk etc; • Health and safety concerns •	• Strict adherence to regulations on noise and vibration, including se of silencers and mufflers for loud equipment • Work to be carried out within stipulated hours to reduce nuisance • Proper housekeeping within workshops for equipment to reduce fire and pollution risks • Proper PPE provision	• Noise levels at site • Hours of Operation • Ambient air quality around site	Contractor MoL	1000
General health and safety Risks	• Poor construction management practices may lead to adverse effects on safety, human health and wellbeing.	• Reducing machinery idling times to cut on emissions • Sensitize the machine operators on need for safe practices • Erect adequate signage warning of different hazards: e.g., heavy trucks turning, observe speed limits among others • Transportation trucks to observe speed limits. Where possible put measures for traffic calming like bumps near settlements, around corners etc.	• Proper use of PPES among workers • Accident/Incidence records	Contractor MoL	1000
Social Impacts	• Risk of Occurrence of communicable diseases, including HIV/AIDS, COVID-19 and sexually transmitted diseases (STDs). • Social differences may lead to discrimination and harassment, • Real or perceived disruption to normal community life, through the physical presence of a workforce; in particular, potential for conflicts to occur over resources, • Conflicts over land access	• Training and awareness raising and Implementation of a health management for workforce and their dependents on HIV/AIDS and other STDs, and communicable diseases; health awareness raising campaigns for communities on similar topics, • Community grievance redress mechanism	• No. of Trainings • Grievance reports		2,000
SUBTOTAL					13000
COMPONENT 1 SUBTOTAL					54,000

ESMP: Component II: Construction of: Girls Hostel, a Perimeter wall and equipping the laboratory /Workshop at MTC

Pre-Construction (Planning/ Design) Phase					
Aspect	**Anticipated Environmental and Social Impacts**	**Proposed Monitoring and Implementation including performance indicators**	**Monitoring Indicators**	***Responsible Institutions***	***Cost estimate (USD)***
Land Use Conflicts	• Improper site selection for the Hostel may lead to conflicts with other stakeholders • Un managed community expectations that may lead to conflicts, e.g. during relocation to pave way for the hostel	• Participatory site selection and site planning by all stakeholders • Good construction site "housekeeping" and management procedures (including site access), .	• Stakeholders engagement	PMT :MoL and MTC Ministry of Environment And Forestry and AfDB	1000
Design related	• Poor facility designs that may drive demand for raw materials • Designs that may increased greenhouse emissions • Designs that are out of character with the culture and them of the area	• Project designs to take cognizant of environmental best practices like energy and water conservation. E.g. project designs to promote natural aeration and lighting, use alternative energy like solar, a propose fixtures that enhance water and energy efficiency • Design with Nature and culture in mind	• Energy efficiency of buildings • Building materials promoted • Environmentally sensitive designs	MoL Architects and contractors	5000
Increased Pressure on resources	• Poor facility designs that may drive demand for raw materials and increased greenhouse emissions	• Approval of designs and plans by relevant authorities at all locations, • project designs to take cognizant of environmental best practices	• Approval of all development works • Level of Compliance with laws and regulations, Environmentally sensitive designs	PMT	5,000
SUBTOTAL					**11,000**
Construction Phase					
Aspect	**Anticipated Environmental and Social Impacts**	**Proposed Monitoring and Implementation including performance indicators**	**Monitoring Indicators**	***Responsible Institutions***	***Cost estimate (USD)***
Land degradation	• Extraction of raw materials (sand, ballast, rocks, timber and poles) may lead to Loss, degradation or fragmentation of ecologically sensitive areas • Earthworks and clearance may lead to loss of plant species and habitats • Potential for adverse effects from alteration of soil structure and increased runoff from paved surfaces leading to changes in water flow and drainage as well as soil erosion,	• Raw materials like sand, ballast and stones sourced from licensed quarries. • Rehabilitation of cleared areas with native species •	• Proper sourcing of raw materials • Compliance with transportation rules • Land restoration and revegetation after construction and or rehabilitation works	***PMT& Contractor***	3000

Air Pollution	• Dust and Fugitive gases from transportation tracks • Emissions by machineries (NOx and Sox and fugitive dust from disturbed soil surfaces •	• Loose materials to be covered during transportation to reduce fugitive gas • Transportation trucks to observe speed limits. Where possible put measures for traffic calming like bumps near settlements, around corners etc • Reducing machinery idling times to cut on emissions •	• Ambient air quality	***PMT& Contractor***	1,000
Accident Risks during Transport	• Accident risks by transportation vehicles to and from site	• Erect adequate signage warning of different hazards: e.g. heavy trucks turning, observe speed limits among others • Transportation trucks to observe speed limits. Where possible put measures for traffic calming like bumps near settlements, around corners etc. • Sensitize the machine operators on need for safe practices • Machinery to be operated only by qualified personnel	• Observe speed limits • Traffic calming like erection of bumps on blind spots • Proper signage	***PMT& Contractor***	5000
Waste Management	• Pollution risks to soils and waterr due to poor disposal of construction waste • Generation of wastes (liquid and solid waste	• Waste must be disposed off in licenses sites only and in compliance with local laws and bylaws • Contractor to prepare a detailed waste management plan • Provision of adequate facilities for solid and liquid waste management at the sites. Sensitize workers on proper waste management including 3rs • Facilitate programs/measures to ensure appropriate sanitary and medical facilities are available	• Solid waste separation and recycling/disposal measures adopted in camp settlements • Proper waste management practices related to construction works, • Solid and liquid waste management practices and status.	***PMT& Contractor***	1000
Occupational health and Safety Risks	• Poor construction management practices may lead to adverse effects on safety, human health and wellbeing. • Storage of materials, circulation of construction machinery leading to accidents, pollution risk etc.;	• Fencing of construction areas to reduce unauthorised access • Proper signage warning of different hazards • Provide PPEs to all workers and visitors in the construction areas • Sensitize workers on health and safety	• Accident/incidence reports • Provision and use of PPEs • Presence of adequate signage	***PMT& Contractor***	5,000
Noise and Vibration	• Noise and Vibration • Health and safety concerns	• Strict adherence to regulations on noise and vibration, including se of silencers and mufflers for loud equipment • Work to be carried out within stipulated hours to reduce nuisance • Proper PPE provision	• Compliance with laws and regulations on noise and vibration • Hours of operation by contractor, • Compliance with the Environmental Guidelines • Environmental audits	Contractor PMT	2000

Chemicals Management	• Risk of oil spills, fires etc. from servicing of equipment • Fire risks	• Proper housekeeping within workshops for equipment to reduce fire and pollution risks • Prepare an emergency management plan	• Compliance with the Environmental Guidelines • Environmental audits	Contractor PMT	2000
Conflicts and Grievances	• Labour related disputes • Differences (Perceived or real) in working conditions between workers may lead to resentment, • Risk of gender related violence and crimes	• Development of transparent and culturally appropriate communication with communities an Employment Plan, with clear employment requirements, and procedures for the construction and operational /maintenance workforce, • Fair and transparent hiring and staff management procedures, • Staff training and awareness raising in communities, • Implementation of a Grievance Procedure, • Ensure the participation and benefit of marginalized and vulnerable part of the communities (poor, landless, minority groups, women, old and youth) throughout and after the project.	• Employment records • Grievance redress records • Level of awareness on gender issues, HIV, •	Contractor PMT MTC administration	2000
MTC Community and Worker health and safety	• Risk of exposure to COVID 19 • Risk of Occurrence of communicable diseases, including HIV/AIDS, COVID-19 and sexually transmitted diseases (STDs). • Social differences may lead to discrimination and harassment, • Real or perceived disruption to normal community life, through the physical presence of a workforce; in particular, potential for conflicts to occur over resources,	• Development of COVID 19 protocols including provision of adequate hand wash facilities • Training and awareness raising and Implementation of a health management for workforce and their dependents on HIV/AIDS and other STDs, and communicable diseases; health awareness raising campaigns for communities on similar topics, • Community grievance redress mechanism	• Observance of COVID 19 protocols • Provision of materials for sexual health awareness • Grievance redress records • Level of awareness on gender issues, HIV,	Contractor PMT MTC Administration	1000
SUBTOTAL					**22000**

Operation Phase					
Aspect	**Anticipated Environmental and Social Impacts**	**Proposed Monitoring and Implementation including performance indicators**	**Monitoring Indicators**	***Responsible Institutions***	***Cost estimate (USD)***

Waste Generation	• Generation of wastes (Liquid and solid) from the market facilities • Pollution and nuisance risks from the generated waste	• Each market facility to have requisite infrastructure for management of solid and liquid wastes • Programs for promoting best environmental practices include adoption of 3Rs	• Status of waste management • Quality of general environment	Market Management committees	1,000
Traffic generation	• Increased traffic to the markets may lead to traffic congestion • Accident risks around the market	• Traffic Management plans for areas around market facilities • Encourage Non-Motorized Transport for market access • Redesign access points to and from markets	• Traffic management measures in place	Local Authorities	3000
Space Contestation	• Proliferation of hawkers along the area may lead to insecurity and challenges in access • Mushrooming of other support facilities like restaurants,	• Preparation of local development plans to take care of anticipated developments. The plans to include proposals for enhancing infrastructure services to cater for extra population • Market design to provide for mixed use • Where possible have themed market days	• Presence of local development plans • Level of order within markets	Local Authorities	1000
Social Conflicts	• Conflicts related to access and use of market space • Conflicts related to market management • Exclusion in access to markets	• Provide space to all qualified personnel based on agreed criteria during design • Establish market management committees • Ensure inclusivity in space allocation • Establish grievance redress mechanism	• Market management committees • Grievances records	Market management	1000
SUBTOTAL					**6000**
Decommissioning Phase					
Aspect	**Anticipated Environmental and Social Impacts**	**Proposed Monitoring and Implementation including performance indicators**	**Monitoring Indicators**	***Responsible Institutions***	***Cost estimate (USD)***
Air Pollution	• Dust and Fugitive gases from transportation tracks • Emissions by machineries (NOx and Sox and fugitive dust from disturbed soil surfaces	• Loose materials to be covered during transportation to reduce fugitive gas • Transportation trucks to observe speed limits. Where possible put measures for traffic calming like bumps near settlements, around corners etc • Reducing machinery idling times to cut on emissions	• Ambient air quality	***PMT& Contractor***	***1000***
Accident Risks during Transport	• Accident risks by transportation vehicles to and from site	• Erect adequate signages warning of different hazards: e.g. heavy trucks turning, observe speed limits among others • Transportation trucks to observe speed limits. Where possible put measures for traffic calming like bumps near settlements, around corners etc • Sensitize the machine operators on need for safe practices	• Observe speed limits • Traffic calming like erection of bumps on blind spots • Proper signage	***PMT& Contractor***	***2000***

		• Machinery to be operated only by qualified personnel			
Waste Management	• Pollution risks to soils and waterr due to poor disposal of construction waste • Generation of wastes (liquid and solid waste	• Waste must be disposed off in licenses sites only and in compliance with local laws and bylaws • Contractor to prepare a detailed waste management plan • Provision of adequate facilities for solid and liquid waste management at the sites. Sensitize workers on proper waste management including 3rs • Facilitate programs/measures to ensure appropriate sanitary and medical facilities are available	• Solid waste separation and recycling/disposal measures adopted in camp settlements • Proper waste management practices related to construction works, • Solid and liquid waste management practices and status.	***PMT& Contractor***	1,000
Occupational health and Safety Risks	• Poor construction management practices may lead to adverse effects on safety, human health and wellbeing. • Storage of materials, circulation of construction machinery leading to accidents, pollution risk etc.; •	• Fencing of construction areas to reduce unauthorised access • Proper signage warning of different hazards • Provide PPEs to all workers and visitors in the construction areas • Sensitize workers on health and safety	• Accident/incidence reports • Provision and use of PPEs • Presence of adequate signage	***PMT& Contractor***	2,000
Noise and Vibration	• Noise and Vibration • Health and safety concerns	• Strict adherence to regulations on noise and vibration, including se of silencers and mufflers for loud equipment • Work to be carried out within stipulated hours to reduce nuisance • Proper PPE provision	• Compliance with laws and regulations on noise and vibration • Hours of operation by contractor, • Compliance with the Environmental Guidelines • Environmental audits	Contractor PMT	1,000
SUBTOTAL					**7.000**
COMPONENT II SUBTOTAL					**37,000**

Social Impacts Management

General and Cross Cutting Impacts				
Anticipated Environmental and Social Impacts	**Proposed Monitoring and Implementation including performance indicators**	**Monitoring Indicators**	***Responsible Institutions***	***Cost estimate (USD)***

Construction work force Increased communicable diseases such as HIV/AIDS, STD	• Conduct education and awareness creation campaigns on the spread and transmission of STDs and HIV/AIDS for construction workers and local communities living close to the construction camp sites. • Provide free distribution and provision of condoms to construction workers by the Contractor to avoid the spread of STDs and HIV/AIDS. • Implement interventions on sexual and reproductive health including providing information regarding transmission and safer sex practices • Develop and implement HIV/AIDS awareness and prevention program. Develop mechanism which will allow employees to get information on HIV/AIDS alleviation programs.	• No of sensitization sessions • Trends in diseases	Project Management Unit Contractor AfDB	1000
Risk of Gender Based Violence	• Integrate measures for prevention and handling Gender Based Violence (GBV) and Sexual Exploitation and Abuse (SEA) in the contractor's environmental and social management plan (C-ESMP). • Record and report every Gender Based Violence (GBV)- related incident and take appropriate actions • Develop an induction programme, including a Code of Conduct, for all workers directly related to this project. A copy of the Code of Conduct should be presented to all workers and signed by each workers • Provide means for women workers and other community members to report abuse in the work place • Conduct monthly community leader's engagement meeting to discuss incidents related to violence against girls and women involving project workers	• Cases of GBV reported and solved	Project Management Unit Contractor AfDB	2,000
Potential Changes to social fabric	• Undertake broader community engagement before the commencement and during implementation of the project • Preference to locals for employment opportunities • Implement awareness campaign on the impact of labor influx •	• Level of cohesion	• • Contractor PMT	1000
Vulnerable Members of Community	• Employ more community women in skilled and clerical positions • Ensure fairness in allocation of stalls for the tourist markets	•	• • Contractor • PMT	2,000
SUBTOTAL				**6,000**
OVERALL TOTAL				**,000**

Project Alternative: The consideration of alternatives or options to a project proposal, which will achieve the project's objectives is a requirement of many ESIA systems. It lies at the heart of the ESIA process and methodology. During the scoping process, alternatives to a proposal can be generated or refined, either directly or by reference to the key issues identified. A comparison of alternatives will help to determine the best method of achieving project objectives while minimizing environmental impacts or, more creatively, indicate the most environmentally friendly or best practicable environmental option.

***1. The 'No Action Alternative'*:** environmentally speaking, not carrying out the development ("No Project Alternative") may be the best option, as the area would remain a relatively undisturbed area providing a habitat for the varied flora and fauna presently observed. Although this area will continue to be impacted, though minimally, by anthropogenic and natural factors but from a socio-economic perspective the "no action" alternative may not be the best alternative as the numerous benefits to be gained from the development both locally and nationally would not be realized and the resources in the area would continue to be underutilized.

2 Alternative Site: this option involves pursuing the proposal but on a different site meaning its impacts that are relevant to the proposed site or occur due it will be avoided. The avoidance of these *in-situ* and *ex-situ* regional impacts would be the main benefit of this option but there will also be other impacts specific to the alternative site and due to specifications of the proposed project, a different site away from the current sites, would also increase logistic costs. Alternative sites are also not readily available since availability of land is limited. Additionally, the selected sites are in government land and therefore no need to compensate the land owners as well as developing a relocation action plan. Both sites at MTC and UoJ developments are in line with the land uses within the institution.

3. Alternative Schedule: this option entails carrying out the proposal at a later time thereby offsetting its impacts to that time. Only benefit is if there are improvements in baseline conditions and technologies that may be involved with the proposal. However, in this case, there are no guaranteed and it may only lead delays in development, therefore carrying out the proposed project with mitigation would be a preferred option due to this uncertainty. In addition, carrying out the proposed project at later time may lead to more operational and logistic costs due to increasing inflation and standards of living.

4. Alternative Design: This option curtails undertaking the project but with different infrastructural designs that encompass: buildings, roads, power, water and sewerage etc. The project design will be achieved by considering the options available that would ensure cost-effectiveness and avoid or reduce environmental and social impacts as much as possible. Additionally, several of the other possible designs may result in higher building densities and less internal transport/path optimization. This would mean the project would use more energy and resources as compared to the preferred project option.

Recommended Alternative*:* After analysis of alternatives, taking into account environmental and social impacts including views from Stakeholders it was recommended, that the current sites selected were optimal in terms of minimizing environmental and social impacts from the project. Siting at alternative locations: the needs assessment carried out by the government of the Republic of South Sudan identified a need to build the facilities at MTC and the University of Juba Campuses. The women's Hostel will go a long way in supporting vocational training and technical skills upgrading. All the two will support the capacity of the technical and vocational training institutions to be able to train and produce skilled and semi-skilled man-power that will be required for effective leveraging of the country's Agriculture the based economy. As such there were no better alternatives, additionally the selected sites were in government/ institutional land and therefore no need to compensate the land owners as well as developing a relocation action plan.

The recommended Alternative considering the environmental and social impacts including views from Stakeholders alternative was the current identified sites.

Environmental Monitoring Plan: An Environmental Monitoring Plan has been developed to monitor the efficiency of the environmental mitigation measures and socio-economic initiatives specified in the ESMP. It supports the ESMP by maintaining a record of environmental performance and enabling adjustments to be made to mitigate environmental and socio-economic impacts during the lifetime of the project. The Monitoring Plan consists of the set monitoring parameter, and institutional measures to be taken during construction and operation of the project to eliminate, offset, or reduces adverse environmental and social impacts.

Table10-1 Environmental Monitoring Plan

Construction Phase							
Impact	Proposed mitigation measure	Implementation tool	Monitoring Indicators	Means of verification	Monitoring frequency	Responsibility	Estimated Cost USD
Air/noise pollution	• Use local routes away from sensitive areas • Site construction facilities away from sensitive areas • Use equipment fitted with abatement devices and good maintenance regime • Prohibit working at night working if possible • Observe seasonal sensitivities • Give due notices for settlements/sensitive receptors	Part of contract agreement with contractor Contractor's maintenance program or plan for equipment/ machinery	Contractors plan and report Grievances recorded	Independent checks by project engineers and ESS Maintenance records verified by project engineers and PMT Self-check by Contractor	Construction stage	Contractor (s) and PMT	3,000
Water Pollution	• Construction of a functional waste management infrastructure at each facility • Adoption of Best environmental practices in waste management • Good drainage system to reduce erosion • Proper siting of drainage outfalls • Water abstraction to adhere to the local laws so as to avoid over extraction of ground water	Industry-specific standards, for water quality monitoring Standards for drainage works construction AFDB's OS-4 Construction site management plans	Water quality analysis Visibility of oil and other pollution materials on water bodies	Incidences of pollution reported Water quality results	• Regular Monthly report • Occasional checks and observations by project engineers and PMT • Periodic reports on performance by Contractor	Contractor (s) and PMT	4,000

Solid waste generation and disposal	Develop waste management plan including for hazardous waste; construction waste, general waste and kitchen waste	Part of contract agreement with Contractor Contractor's waste management plan; Industry-specific standards, particularly the EHS Guidelines	Number of waste management infrastructure provided Final waste disposal records	Periodic reports	Monthly	Contractor(s) and PMT	6,000
Impact on flora, fauna and ecologically sensitive areas	• Demarcate and avoid areas of unique flora and fauna • In case of any identified ecologically sensitive areas, conserve them • Rehabilitate cleared areas with native species, and ecosystem restoration in habitats of conservation value	AfDB's OS-3	Presence of sensitive habitat	Activity reports Site remediation reports	Construction	Contractor/PMU	2,000
Marginalization of women and other vulnerable groups	• Provide women and vulnerable groups specific interventions Target the women and other vulnerable groups in the allocation of Project resources and benefits	ESMF	Number of women benefiting from Project activities Number of women and other vulnerable groups enrolled for training	baseline data and project implementation report	During Project implementation	PMT	2,000
Interaction between workforce and Student community communities	Carry out training and awareness training for the workforce and their dependents on COVID-19, HIV/AIDS and other sexually transmitted illnesses, and communicable diseases Carry out health awareness-raising campaigns for communities on similar topics	ESMF; Industry-specific standards, particularly the EHS Guidelines	Health and safety incident register Grievance records Number of training and awareness sessions held Number of women and other vulnerable groups that participated	Site visit and Observations by ESS/Contractor	Construction and operation	Contractor and PMT	1,000

Labor and working conditions	Employment practices and working conditions should conform to ILO standards and national regulations Institute a clear and comprehensive health and safety reporting and grievance procedure system freely available to all of the workforce	Industry-specific standards,	Comprehensive health and safety reporting and grievance procedure	Periodic reports by performance ESS/Contractor	Construction and operation	Contractor and PMT	1,000
Economic Development and Employment	Contractor to develop an Employment Plan, with clear employment requirements and procedures for the construction and operational/ maintenance workforce Institute fair and transparent hiring and staff management procedures	Industry-specific standards, and Guidelines ESMF	Employment Plan	Periodic reports by performance ESS/Contractor	Construction n and operation	Contractor and PMT	2,000
Total	**TOAL**						**21,000**
Operations Phase							
Impact	Proposed mitigation measure	Implementation tool	Monitoring Indicators	Means of verification	Monitoring frequency	Responsibility	Estimated Cost
Air/noise pollution	Facility fitted with equipment with abatement devices and good maintenance regime Prohibit operations at night if possible	Part of contract agreement with contractor Contractor's maintenance program or plan for equipment/ machinery	Contractors plan and report Grievances recorded	Independent checks by project engineers and ESS Maintenance records verified by project engineers and PMT Self-check by Contractor	Construction stage	Contractor (s) and PMT	1000

Water Pollution	Operation of functional waste management infrastructure at each facility Adoption of Best environmental practices in waste management Good drainage system to reduce erosion Water abstraction to adhere to the local laws so as to avoid over extraction of ground water	Industry-specific standards, for water quality monitoring Standards for drainage works construction AFDB's OS-4 Construction site management plans	Water quality analysis Visibility of oil and other pollution materials on water bodies	Incidences of pollution reported Water quality results	• Regular Monthly report • Occasional checks and observations by project engineers and PMT • Periodic reports on performance by Contractor	Contractor (s) and PMT	1,000
Solid waste generation and disposal	- Solid Waste Generation and Management - Regular inspection and maintenance of the waste disposal systems during operation phase - Establish a collective waste disposal and management system - Provide waste disposal bins to each house well protected from adverse weather and animals - Ensure waste materials are disposed of on Council and MININISTRY OF ENVIRONMENT AND FORESTRY approved sites - Use of the 3rs – Reduce, Re-use, Re-cycle	• Part of contract agreement with Contractor • Contractor's waste management plan; • Industry-specific standards, particularly the EHS Guidelines	• Number of waste management infrastructure provided • Final waste disposal records	Periodic reports	Monthly	Contractor(s) and PMT	2,000
Impact on flora, fauna and ecologically sensitive areas	Rehabilitate cleared areas with native species, and ecosystem restoration in habitats of conservation value	AfDB's OS-3	Presence of sensitive habitat	Activity reports Site remediation reports	Construction	Contractor/PMU	1,000

Marginalization of women and other vulnerable groups	Provide women and vulnerable groups specific interventions Target the women and other vulnerable groups in the allocation of Project resources and benefits	ESMP	Number of women benefiting from Project activities Number of women and other vulnerable groups enrolled for training	baseline data and project implementation report	During Project implementation	PMT	1,000
Interaction between workforce and local communities	Carry out training and awareness training for the workforce and their dependents on COVID-19, HIV/AIDS and other sexually transmitted illnesses, and communicable diseases Carry out health awareness-raising campaigns for communities on similar topics	ESMF; Industry-specific standards, particularly the EHS Guidelines	Health and safety incident register Grievance records Number of training and awareness sessions held Number of women and other vulnerable groups that participated	Site visit and Observations by ESS/Contractor	Construction and operation	Contractor and PMT	1,000
Economic Development and Employment	Innovators to develop products and services and investment opportunities maintenance workforce Institute fair and transparent hiring and staff management procedures Students to train and undertake swimming operations and utilizing the skills	Industry-specific standards, and Guidelines	Products and services developed	Periodic reports by performance ESS/Contractor	Institutions in operation	Contractor and PMT	2,000
Total	**TOTAL**						**9.000**
Decommission Phase							
Impact	Proposed mitigation measure	Implementation tool	Monitoring Indicators	Means of verification	Monitoring frequency	Responsibility	Estimated Cost

Air/noise pollution	Site demolition facilities Use equipment fitted with abatement devices and good maintenance regime Prohibit working at night working if possible	Part of contract agreement with contractor Contractor's maintenance program or plan for equipment/ machinery	Contractors plan and report Grievances recorded	Independent checks by project engineers and ESS Maintenance records verified by project engineers and PMT Self-check by Contractor	Construction stage	Contractor (s) and PMT	1000
Water Pollution	Adoption of Best environmental practices in waste management Good drainage system to reduce erosion Proper siting of drainage outfalls Water abstraction to adhere to the local laws so as to avoid over extraction of ground water	Industry-specific standards, for water quality monitoring Standards for drainage works construction AFDB's OS-4 Construction site management plans	Water quality analysis Visibility of oil and other pollution materials on water bodies	Incidences of pollution reported Water quality results	• Regular Monthly report • Occasional checks and observations by project engineers and PMT • Periodic reports on performance by Contractor	Contractor (s) and PMT	1,000
Solid waste generation and disposal	Develop waste management plan including for hazardous waste; construction waste, general waste and kitchen waste	Part of contract agreement with Contractor Contractor's waste management plan; Industry-specific standards, particularly the EHS Guidelines	• Number of waste management infrastructure provided • Final waste disposal records	Periodic reports	Monthly	Contractor(s) and PMT	1,000
Interaction between workforce and local communities	Carry out training and awareness training for the workforce and their dependents on COVID-19, HIV/AIDS and other sexually transmitted illnesses, and communicable diseases Carry out health awareness-raising campaigns for communities on similar topics	ESMP; Industry-specific standards, particularly the EHS Guidelines	Health and safety incident register Grievance records Number of training and awareness sessions held Number of women and other vulnerable	Site visit and Observations by ESS/Contractor	Construction and operation	Contractor and PMT	2000

			groups that participated				
Labor and working conditions	Employment practices and working conditions should conform to ILO standards and national regulations Institute a clear and comprehensive health and safety reporting and grievance procedure system	Industry-specific standards,	Comprehensive health and safety reporting and grievance procedure	Periodic reports by performance ESS/Contractor	Demolition and operation	Contractor and PMT	1,000
Accidents/Injuries	Securing the Site by fencing off	ESMP	Comprehensive health and safety reporting and grievance procedure	Periodic reports by performance ESS/Contractor	Demolition and operation	Contractor/Proponent	2000
Subtotal							**8000**
Overall Total							**38,000**

Grievance Redress Mechanism: The AfDB defines project GRM as a systematic process for receiving, evaluating and facilitating resolution of affected people's project-related concerns, complaints and grievances about the borrower's/client's social and environmental performance on a project. AfDB requires its clients to be aware of and respond to stakeholders' concerns related to the project in a timely manner. In OS 1, the Bank requires the borrower/client to establish a "credible, independent and empowered local grievance and redress mechanism to receive, facilitate and follow up on the resolution of the affected people's grievances and concerns regarding the environmental and social performance of the project.

The process by which the GRM is designed should be integrated into the overall approach to project preparation as prescribed in the Bank's ISS. The Bank ISS through its (IESIA) Guidelines Notes provides guidance on development and Implementation of GRM. It should also be included on a case by case basis, for Category 2 projects that exhibit specific potential social tensions.

The GRM in the AfDB-STVET -VCD- project will be established under the guidance provided in the ISS Bank ISS through its (IESIA) Guidelines Notes. The first step is to determine the primary goal of the GRM which would generally be to resolve specific grievances in a manner that meets both project management and community needs, but with important local variations. The scope of the grievances that may legitimately be brought forward by the communities and/or individuals affected shall be defined in advance.

The project will involve the formulation of GRCs at project level in the two islands, i.e. GRM staff, The GRM members should be qualified, experienced, and competent personnel who can win respect and confidence of the affected communities. It is also important to maintain a gender balance within the GRMs.

General Costs for ESMP Implementation and Monitoring: The ESMP implementation budget refers to all costs that will be incurred to implement the requirements or recommendations in this ESIA. In the ESMP the requirements are to ensure that implementation of the project integrates environmental and social issues for the sustainability of the project as well as its components and sub-components. ESMP recommends the following key issues; Preparation of site-specific ESIAs, training and capacity building, reviewing and monitoring mechanisms. The total cost for implementing Environmental Management Plan including the Monitoring Plan is tuned to **USD 135000**

Conclusion and Recommendations:
Conclusion: the ESIA study results show that, despite, some limited negative environmental implications of the project, STVET –VCD Project will have high socio-economic benefits to the people of South sin South Sudan and adjoining regions. The associated negative impacts will be minimized through good engineering design and envisaged construction practices. Specific mitigation measures have been suggested in this report to offset the inherent adverse impacts. In implementing these mitigation measures there would be an improvement of environmental soundness of the project.

It is, therefore, concluded that, implementation STVET -VCD will entail no detrimental impacts on the environment, social and physical cultural resources if the recommended mitigation measures are adequately and timely put in place. The identified adverse impacts shall be managed through the proposed mitigation measures and implementation regime laid down in this ESIA. MoL through PMT is committed in implementing all the recommendations given in the ESIA and further carrying out the environmental monitoring.

Recommendations: i). Aspect of the project will require a multi-sectoral and a multi-disciplinary approach in the overall implementation. Therefore, it is important that during the implementation, relevant stakeholders are effectively engaged. ii)The implementation of STVET -VCD-Addition

works is likely to have multiplier effects and proliferation of other economic activities hence engaging other stakeholders, and especially the private sector may help in addressing some of the cross cutting challenges. iii) The contractors and the project proponent should take into consideration all the legislative measures put in place so as to ensure the due process is followed. iv) The mitigation measures provided are based on the recommendations of this ESMP and they should be followed so as to address the environmental issues that may arise in the course of the implementation of this project. But contractors should enrich the ESMPs and develop their site specific ESMPs

CHAPTER ONE: GENERAL PROJECT INFORMATION

1 Introduction

1.1 Project Overview

The Republic of South Sudan Support to TVET for Value Chain Development (STVET -VCD) is a government project proposed to be financed by the African Development Bank (AfDB), and executed by Ministry of Labour (MoL with a UNESCO as a third-party implementing agency. The project activities includes: the construction/upgrading and equipping of laboratories, workshops, training classrooms in Juba (MTC and University of Juba School of Food Science and Technology), and construction of a girls' hostel at MTC. The initiative is anticipated to build a skilled labour force required in value chain development and contribute to socio-economic development. The project will complement the Bank's initiatives in value chain development in agriculture and other sectors such as energy and water and sanitation. The Bank is funding Agriculture Markets Value Addition and Trade Development (AMVAT) Project which aims to promote value addition in sesame, groundnuts, sorghum and maize. The overall goal is to increase access to quality technical and vocational skills development for value chains progress and employability. This will be achieved by investing in skills development infrastructure, building a highly skilled labour force to support the value chain, strengthening the TVET sub-sector, and as a result enhance youth employability.

Project Components

The project aims to build the skilled labour force required in value chain development and contribute to socio-economic development, particularly for the youth and women. It will support the government to provide employable vocational and technical training opportunities to the agriculture value chain. The broad area of support under the Project will include:

(a) Skills for value chain development which includes (i) training of middle level technicians in food safety, quality assurance and standards as well as food processing at the School of Applied and Industrial Sciences at University of Juba; (ii) training of agriculture extension technicians. Female youth will be encouraged and mentored to venture into male-dominated trades; (iii) training of low to intermediate-level technical and vocational skills aligned to value chain development which include carpentry and joinery; welding and metal fabrication, solar installation and maintenance, electrical installation, mechanical and plumbing and pipe fitting and food processing. These skills are also transferable to other sectors such as manufacturing, construction, and hospitality, (iii) Construction/upgrading and equipping of training facilities at MTC and University of Juba; (iv) construction of a girls' hostel at MTC in order to enhance inclusion and gender mainstreaming; (v) training of faculty staff and TVET instructors; (vi) curriculum review/development in partnership with private the sector. Gender mainstreaming and other life skills modules will be included in the curriculum and (vii) provision of day care facilities for young mothers.

(b) Sector capacity building which includes (i) strengthening TVET M&E; (ii) sector coordination; (iii) curriculum harmonization in partnership with the private sector; (iv) training of TVET instructors; (iv) development of TVET master plan and strategy; (v) labour market assessment/skills gap analysis; (vi) tracer studies and (vii) support for the implementation of the National Qualification Framework and capacity building of key TVET line ministries.

(c) Project management which will focus on (i) project governance; (ii) project coordination, management implementation, and monitoring; (iii) environmental and social safeguards functions; (iv) project management cost including the cost of the third-party implementing agency; (iv) capacity building of executing agency; and (v) analytical work in the sector.

1.2 The Need for an Environmental and Social Impact Assessment

The Support to TVET for Value Chain Development (STVET-VCD) has been rated Category 2 under the African Development Bank Operational Policy on Environmental Assessment (OS 1). Consequently, environmental and social assessment and other safeguarding measures can be confirmed during the environmental and social impact assessment exercise and updated during

the project implementation phase. To achieve this, the project management team will adapt rigorous process to assess potential Environmental and Social Impacts and develop Environmental & Social Impact Management Plan and at the same time assess environmental and social impact management capacities within the executing/implementing agency/agencies. The ESIA process will identify and assess the potential environmental and social impacts of the proposed construction/rehabilitation activities, evaluate alternatives, as well as design and implement appropriate mitigations, management, and monitoring measures. These measures will be captured in the Environmental and Social Management Plan (ESMP), which will be prepared as part of the ESIA process for each subproject. The ESMP ensures that throughout the programme implementation, the programme team continuously screens all of the activities proposed under the programme and monitors potential unintended environmental and social impacts properly and sufficiently as required. Where impacts and potential impacts are identified and if these are unavoidable, suitable mitigation measures will be properly planned so as to adequately compensate for residual impacts and to provide for restoration.
The Ministry of Labour, Public Services and Human Resources Development (MoLPSHRD) is committed to mainstream social and environmental sustainability in the project which will conduct continuous Environmental and Social Impact monitoring.

1.3 Assignments Objectives and ToR

The main objective is that prior to the commencement of activity implementation at the proposed project sites, there is a need to conduct an ESIA study to identify any adverse environmental and social impacts associated with the project construction/rehabilitation and propose mitigation measures to address those challenges. To achieve this, AfDB in collaboration with the Ministry of Labour, Public Services and Human Resources Development (MoLPSHRD) has engaged an Individual Environmental and Social Safeguards Consultant to conduct environmental and social impact assessment prior to the approvals of the Project activities.
Based on the outcomes of the environmental and social impact assessment, the assignment will develop an environmental and social management plan in compliance with the South Sudan EIA regulations and that will meet the African Development Bank's Environmental and Social Safeguards Policy requirements. The aim is to develop mitigation measures that will address any adverse environmental and social impacts the project activities may bring about, including the cost implications of implementing those mitigation measures, develop a monitoring timeframe and assign responsibilities to implement the measures.
The Consultant working closely with a counterpart E&S support team comprising: Environmental and Social Safeguards experts from GOSS who will provide local knowledge on the context, regulatory issues, approval processes and guidance on stakeholder engagement protocols. The consultant; in consultation with The STVET -VCD Task Manager, the Banks ESIA experts and with the GOSS Ministry of Labour, (MoL) and the Southern Sudan Environmental Management Agency: will prepare ESIA for STVET -VCDs. These assessment team must be consulted by the consultant and engaged throughout the assessment initially to identify regulations and guidelines that will govern the conduct of the assessment, specify the content of the reports as well as during the assessment activities; including site visits, stakeholder engagement, data collection processes (structured KII, FGDs surveys, as well as literature review). The guidelines will include all of the following: (i) SS National laws and/or regulations on environmental and social Impact assessments; and (ii) Integrated Safeguards System (ISS) of the African Development Bank Group. (iii) Relevant International Conventions where GOSS is a signatory to and has ratified.

Hence, African Development Bank financed the engagement of an Individual Environmental and Social Safeguards Consultant to conduct the ESIA in the two sites for the client (The Government of the Republic of South Sudan). The Consultant working closely with the Project management team who provided local knowledge on the context, regulatory issues, approval processes and guidance on stakeholder engagement protocols. The consultant; in consultation

with The STVET -VCD Task Manager, and Guidance from the Banks ESIA experts and with the South Sudan Ministry of Labour: prepared this ESIA for STVET -VCDs – Works and project activities.

1.2 Purpose/Rationale for the Environmental and Social Impact Assessment:

Infrastructure developments impact the environment and societies in several ways during the different phases of their project life cycles. This involves construction which would requires building material (quarrying, mining and processing of metals, cement production), land clearing erection of the buildings (noise, dust, hazardous materials) and during operation generation of both solid and liquid wastes etc. Following the approval of the Terms of Reference (ToR) as per Ministry of Environment And Forestry regulations, this Environmental and Social Impact Assessment report (ESIA) seeks to examine both the positive and negative effects that the proposed project is likely to have on both the ecological, physical and socio-economic environment in order for sound decision making, to promote human activities that align synergistically with the natural environment within a sustainable development framework. Thus this study involved extensive stakeholder participation and will serve as an important planning tool for the project proponent as it will outline any significant project impacts and clearly define mitigation measures to avoid or curb any adversities. The proposed mitigations have taken into consideration the concerns of various stakeholders and residents. As advocated in the study ToRs, the proponent of the project is the Ministry of labour (MoL) South Sudan, on behalf of the Government of the Republic of South Sudan (RSS).

The overall purpose of the ESIA is to carry out an assessment of constructing and operation and decommissioning of the 2 infrastructures at the two sites (taking into account biophysical, social, cultural, legal and economic considerations), to ensure sustainable construction, operation and associated activities of the project.

In order to make sure that the implementation of the proposed project is not done at the expense of environment, the consultant was required to conduct an Environmental and Social Assessment and prepare an ESMP. The ESIA will guide the program implementers to make sure sub-projects financed under this project remain in Category II based on their environmental and social impacts. These risks are expected to be addressed satisfactorily through available mitigation and management measures implemented at the sub-project level. Where subprojects have environmental or social issues that cannot be addressed accordingly, the ESIA provide for additional technical assistance to prepare more detailed plans to be implemented at the subproject level such as an ESMP. In overall implementation of the project, the project units will work closely and consult with environmental and social expert of the project management team to ensure that the proposed subprojects have minimal environmental and social issues.

The specific objectives of the ESIA are to:

(a) describe the nature of construction to be undertaken;
(b) verify compliance with environmental laws, policies and regulations as well as industry best practice and standards;
(c) identify and analyze alternatives to the envisaged project;
(d) Identify, analyze and propose mitigation measures for positive and negative impacts and enhancement measures for positive impacts to be undertaken during and after the implementation of the project including; recommending cost effective measures to be used to mitigate against the anticipated negative impacts;
(e) seek the views of affected persons;
(f) Identification of specific roles and responsibilities, and outlining the necessary reporting procedures for managing and monitoring environmental and social risks related to subprojects,
(g) Establishing project funding required to implement the ESMP requirements and
(h) Providing lessons learned for application to future projects.
(i) Prepare an Environmental and Social Management Plan (ESMP) report compliant with the Environment Assessment Regulations, of 2015.And in line with the Bank Environmental and Social Safeguards Requirements.

1.3 The Approach

The ESIA has been prepared in accordance with the requirements stipulated by the Government of South Sudan (GoSS) through South Sudan Ministry of Environment And Forestry. An interactive approach was undertaken between the project management team and the environmental and social assessment consultant. The approach used is commensurate with the Environment Assessment Regulations of the Government of South Sudan. The approach mainly involved an understanding of the project background, technology and processes, implementation plan, operation activities. In addition, baseline information was obtained through detailed physical and biological investigation of the proposed project and its surrounding areas, stakeholder consultations (which included discussions with students, the institutions administration, Government departments and Agencies), photography and continuous discussions with the proponents. The key activities undertaken during the various stages of the ESIA were as follows:

- Describing the project and establishing environmental baseline condition
- Scoping the issues and establishing the boundaries of the assessment;
- Assessing the potential environmental effects of the project, including residual and cumulative effects;
- Identifying potential mitigation measures to eliminate or minimize potential adverse effects; and Developing environmental and Social Management and Monitoring Plan.

This approach emphasized key elements of the ESIA i.e.: scoping; stakeholder engagement; baseline data collection; project description; assessment of impacts and identification of mitigation measures.

1.4 Terms of Reference

The EIA study was conducted as per the approved ToR, pursuant to Environment Assessment Regulations in Southern Sudan. The study conducted an in-depth evaluation of potential impacts in order to create harmony with the affected and interested stakeholders. It also aimed at ensuring that the proposed project/infrastructure would be constructed based on applicable building standards of South Sudan and other international building codes i.e. ISO standards etc. The construction should, in addition, incorporate environmental guidelines, and health and safety measures. While the environmental expert provided the technical understanding on the baseline environmental status, potential impacts, management options and legal framework, the client was expected to provide the following:

- Site map(s) showing roads, service lines, buildings layout and the actual size of the site,
- Full details of proposed operations and activities, input materials, site operational outline, products and by-products and any wastes to be generated,
- Measures to be put in place for handling wastes and hazardous materials on the site,
- Land ownership and site history.

The output from the consultant was an ESIA project report comprising of an executive summary, study approach, baseline conditions, existing and anticipated impacts and potential mitigation measures for anticipated negative impacts and a comprehensive Environmental and Social Management Plan (ESMP).

1.5 Methodology

Various data collection and analyses techniques were used in the assessment:

1.5.1 Desk Review

Deskwork provided a detailed description of the project with respect to spatial coverage, preliminary design layout, magnitude, implementation schedules and costs as well as human

resources. Relevant documents were reviewed to obtain information on the baseline information in general but specifically at the project site. land use, local micro-environmental conditions, and data on demographic trends, land use practices, development strategies and plans (local and national) as well as the policy and legal documents among others. Others included area maps, Development Plans of the South Sudan and Juba, in particular. National Development and Economic Surveys, relevant legislations, regulations and guidelines and standards.

1.5.2 Field Assessment

Physical evaluation of the project area was carried out with specific focus on landform trends, land use patterns, biodiversity, natural resources, hydrology and climatic variations. This was also an evaluation of the current environmental status with respect to physical, biological and socio-cultural perspectives. It was a systematic field inspection backed with available documentation and direct interviews. Field evaluation was planned to enable determination of the exact physical environmental features to be affected within the proximity of the project site. In addition to identifying the potential positive and negative impacts, field assessments contributed understanding the proposed works to be undertaken.

The field work adopted various techniques of baseline data collection on the existing environmental conditions, namely:

- Field observations and recordings including photography the project site and its vicinity.
- Use of checklists for determining potential environmental impacts of the proposed project.
- Consultations and public participation within the neighborhood of the project site.

1.5.4 Observations

Detailed field observation assessment was undertaken to enable determination of the exact socio- economic activities within the proximity of the project site. Among the broad focal areas for which observation was done included settlement patterns, land use, commerce, trade and industry among others. Checklists were used along with observations to check on possible environmental impacts of the project would have on the environment during both construction and operational and decommissioning phases. In this assessment, checklists were utilized to: facilitate identification of potential environmental impacts; provide a means of comparing the predicted environmental impacts; indicate the magnitude of both positive and negative environmental impacts; indicate possible adverse environmental impacts that are potentially significant but about which sufficient information can be obtained to make a reliable prediction; and Indicate negative potential environmental impacts in the project area, which merit mitigation measures and monitoring during project implementation.

1.5.5 Public and Stakeholders Engagement

Structured stakeholder engagement was undertaken in the neighborhood of the proposed project site to capture the views and concerns of interested and affected parties. The engagement process entailed face to face meetings / interviews.

1.5.6 Data Collection, Analysis

The process of data collection was undertaken as follows:

- **Preliminary assessment of the site**: where the experts visited the site to know the location.

- **Screening**: This is the initial phase of any ESIA process. It involves the determination of whether or not an EIA assessment is required for a particular development activity.

Determination in the proposed project depended on the following aspects but not limited to:

- The sensitivity of the area likely to be affected;
- Public health and safety;
- The possibility of uncertain, unique or unknown risks;
- The possibility of having individually insignificant but cumulatively significant impacts;
- Whether the proposed activity affects protected areas, endangered or threatened species and habitats;

From the above, the proposed project was seen to require an Environmental and Social Impact Assessment since construction activities of such magnitude are expected to give forth both negative and positive effects to the environment and ultimately contribute to an increased waste generation both in the construction, operational and decommissioning. This stage also involved activities such as:

a) Getting a comprehensive site description that includes: Location of the proposed project, the soils and geology of the proposed site, water resources available on site, drainage system evident on site, climatic conditions of the proposed location and its vicinity, vegetation on site, land use systems on site and its vicinity, population characteristics of the region holding the proposed site, infrastructure at the site and justification for selection of the site.

b) Getting detailed information on: The nature of the proposed construction activities, the materials to be used in the construction activities on site and the expected project outputs including waste generation

- **Collection of Baseline Data**: Data collection involved activities such as desktop assessment and discussion with the proponent, observation, detailed physical inspection of the proposed site and the surrounding areas to determine the present and anticipated impacts of the proposed project. The data obtained was used to assess potential impacts on health, safety, environment and the community surrounding the proposed site location. From the obtained data, environmental, health, safety and social concerns were identified in relation to the proposed project location and mitigation measures proposed for the negative impacts, while enhancement measures proposed for the positive impact. Photography was used to capture salient features and baseline conditions in the project site and its neighborhood. The photos were used to define existing features in the project area and identify soils and floral species in the area.
- **Data Analysis and Evaluation of Alternatives:** use of checklists and the threshold limits were used in data analysis; while the proposed site location, scale of construction, potential environmental impacts, capital and operating costs, suitability under local conditions, and institutional, training, and monitoring requirements were considered in the evaluation of alternatives. The proposed project's impacts were identified using a developed checklist, public consultation information, literature and professional knowledge. Impacts were first distinguished as either positive or negative. The proposed project's negative impacts were analyzed to denote their significance based on their characteristics and this was also impacts per project phase. Significance was judged based on their capacity to change baseline conditions beyond acceptable standards or legislative provisions. A qualitative scoring matrix was used to give a value/score of each impact on the environment

- **Consultation and Public Participation:** here, stakeholders, that include the institution management Team, students, neighbors to the proposed site were interviewed, in order to get their views, expectations, projected economic and social effects regarding the proposed project activities and location. The findings were then analyzed and incorporated in this report.
- **Preparation of the Project Report:** this ESIA project report was then prepared by approved and registered by Ministry of Environment and Forestry. ESIA expert, who is familiar with the provisions of the Environment Assessment Regulations and other relevant regulations and laws of South Sudan as well as several ratified international instruments on environmental conservation and management and AfDB Environmental and Social Safeguards as indicated in the Legal framework chapter.

1.6 Limitations of the Study

Most of the baseline information for the study relied on secondary information.

1.7 Assumptions of the Study

The study assumes that the respondents provided information that are reliable on the implementation of the project; the study also assumes that the project team and contractors will fully adhere to ESMP.

1.8 Organization of the ESIA Report

This Environmental and Social Impact Report is organized in 11 chapters; including

Cover Page
Table of Content
Table of Abbreviations
Table of Figures
Executive Summary
Chapter 1: General project information and Introduction to ESIA
Chapter 2: The Project Description
Chapter 3: Administration Policies, Legal and Regulatory Framework
Chapter 4: Baseline Information of the Project Area
Chapter 5: Project Alternatives
Chapter 6: Potential Environmental and Social Impacts of the Project
Chapter 7: Consultations and Public Participation
Chapter 8: Mitigation and Enhancement Measures
Chapter 9: The Environmental and Social Management Plan and Monitoring including Institutional capacities for environmental and social management as well as monitoring and capacity building and training needs
Chapter 10: The estimated ESMP implementation budget
Chapter 11: Conclusions and recommendations
Bibliography/References
Annexes

CHAPTER TWO: THE PROJECT DESCRIPTION

2.1 Introduction

This ESIA project report is based on information and consultations with the project proponent, the planners, Engineers, institution administrators and environmental scientist. The project aims to build a skilled labour force required in value chain development and contribute to socio-economic development. (New structure for the South Sudan TVET training). The project activities includes: the construction/upgrading and equipping of laboratories, workshops, training classrooms at University of Juba, School of Food Science and Technology), and construction of a girls' hostel, Perimeter wall and equip the laboratory/ Workshop at MTC. It is anticipated that this development will enhance and improve access, quality and relevant Technical and Vocational Education Training and entrepreneurship training for youth employment so as to contribute to the Republic of South Sudan efforts to increase the supply of skilled labour in the areas of agriculture value chain development and other sectors such as energy and water and sanitation. The developments are all in Juba.

2.1.1 Land Tenure, Use, Ownership and Management

The properties under reference are to be at the University of Juba: a higher education facility and the MTC campus in Juba. Both sites are facilities with offices, lecture theaters, laboratories, workshops, staff quarters single dwellings and student residential buildings therefore the proponent does not need to apply for a change of user as sites will have closely similar activities and the land in each case belongs to the institution.

The proposed building at the university is a multipurpose infrastructure and will house high tech facility, lecture theaters offices and laboratories. The Building is intended to facilitate; equipping learners with skills to apply the proper techniques, scientific principles, methods and innovations to improve traditional processing, package and storage of food products in south Sudan. While at MTC the project intends to build a Hostel to house 300 female students and equip the workshop/laboratories with high tech equipment.

The project sites will have temporary fence during the construction and no utility relocation activities and/or rehabilitation of access roads are envisaged under the project

2.1.2 Project Design

The Construction at UoJ will be a modern building housing the following; Offices, lecture halls and equipped laboratories. While MTC a hostel housing 300 female students and kitchenette facilities as well as perimeter wall and thereafter equip the workshops/laboratories. Each of the project site, will also include internal roads for vehicles that will be for the workforce, students, lecturers' customers, services and ancillary operations which will also include access for fire brigade services. There will also be paved paths for human movement within the facilities.

2.1.3 Processes, Equipment, Materials, Output and Expected Waste

For the purposes of better understanding the proposed project and the identification and analysis of impact, the proposed project is categorized in terms of its processes, equipment, materials, outputs and expected wastes. These have been pigeonholed in terms of the project phase (design, construction, operation and decommissioning) in which they will occur.

2.1.4 Utilities

In order for the project to achieve its objectives varying quantities of utilities will be necessary as ancillary and primary inputs. These utilities and facilities, whose sources are described in this subsection, include; Water, Electricity, Sewerage, Storm Water Drainage, Transport and Traffic, and Fire Reticulation.

Water: There will be demand for potable water for the development there it is anticipated that South Sudan Urban Water Corporation (SSUWC) a public utility will allow the development to connect to their main line feeding the current establishment. Therefore, a feed from this to the project will be maintained and the residual volume and pressure will be available for the development from this main line and will be determined in liaison with SSUWC. However, the project should also consider other sources of water due to the known high demand on water infrastructure. Thus the following are some of the sources of water that the project may considered

- ***SSUWC main Line***
- ***Borehole supply:*** The proponent may drill a borehole prior to the development to supply daily demand for the development. Alternatively, the borehole supply could be used for non-potable uses such as construction, in which case treatment will not be required.
- **Rainwater Harvesting** This water could be used to reduce the volume of water extracted from the borehole during times of rainfall, thus conserving the underground aquifer supply. Harvested rainwater may be used for potable uses or for irrigation of soft landscape areas

Electricity There is an existing overhead line at both sites, currently lies adjacent to the sites. Therefore, Offsite Power Supply by **The Juba Electricity Distribution Company Ltd (JEDCO)** will supply the facilities. There is adequate power infrastructure within the vicinity of the proposed sites. Although the project should consider to opportunity to utilize. ***Renewable Electricity Supply Options*** as an Alternative sources of on-site energy generation (e.g. photovoltaic) should be in the project consideration if sufficient supporting funding can be sourced. However, the project will be mostly reliant on JEDCO supply.

Sewerage: There is no existing trunk sewer line in both the project areas. Therefore, the development will have to consider a system for discharging sewage water subject to necessary design reviews by SSUWC. Therefore, the sewerage discharge from the development may be taken offsite, on site retention or on-site sewerage treatment. This will be confirmed with the relevant authorities.

Storm Water Drainage: The topography of both the development sites is generally flat It may be assumed that the entire development site will be impermeable, whether through building development or hard landscape areas and roads. The extent of future soft landscaping will reduce the runoff volumes but it may be anticipated that these areas will be small (10-15% maximum) of the development areas and therefore not significant for the initial consideration, therefore a need to consider provisions for the storm waters management. The choice of storm water drains will include having open storm water drains alongside the roads, although cheaper to construct than buried pipes; they affect the aestheticism of the site.

On-site Drainage

The current topography on site generates flat therefore on-site drainage can be dealt with by reshape the site with bulk earthworks. The cost of this in terms of earthworks and environmental aspects must be considered.

Transport and Traffic

The traffic loads and peaks have to be considered as the primary access to the developments will be through the existing roads.

Fire Reticulation

The proponent and his insurers' standards for fire protection are likely to be higher than the statutory minimum as required by Juba city council Central Equatorial State of South Sudan and the fire brigade. Access for fire brigade vehicles will be provided around the site, with fire hydrants spaced to give adequate coverage to the perimeter of all buildings. If the hydrants are served from a SSUWC water main, the pressure within the main is usually adequate as the fire

engines have an in-built booster pump. In this case SSUWC would take over the fire reticulation system and hydrants at the end of the defects liability period, having already approved the design of the entire water reticulation system before construction.

2.2 Project Development Activities

2.4.1 Project Mobilization & Construction Phase

The mobilization and construction phase will take place subsequently to the issuing of Environmental Impact Assessment Certificate, building/construction permits and once a construction contract with a suitable contractor is signed. The mobilization and construction phase will involve different activities as summarized below:

- Site clearance, earthworks and construction of campsite
- Installation of temporary security fence at the camp sites, site office and storage facilities
- Acquisition of materials from a reliable sources and storage;
- Testing of the construction materials;
- Acquisition of other permits such as water use permits;
- Confirmation of data and accuracy of topographical survey;
- Mobilization of labour force, equipment and plant for construction works;
- Transportation of equipment, workers, materials and storage;
- Abstraction and transportation of water to the construction site;
- Collection, storage, transportation, treatment and disposal of wastes generated from construction activities;
- Actual construction works;
- Movement of heavy equipment and machines
- Occupational health and safety management;

2.4.2 Campsite and Mobilization of workers

The Contractors' campsite will be temporary in nature (for the duration of the construction phase) and will include site offices, laboratory and other temporary facility for the contractor. It will be located within project site area. Once the location of the campsite is determined, the contractor will have to comply with ESMF requirements including developing site specific environmental and social management plan (ESMP) for prevention, minimizing and mitigating likely impacts including gender-based violence. The campsite area will thereafter be rehabilitated (i.e. returned to its pre-construction condition) at the end of the construction phase. All efforts will be made to ensure that all construction work will be undertaken in compliance with local and national legislation, local and international best practice, as well as the Environmental and Social Management Plan (ESMP), which is included in this ESIA Report.

During the construction phase, both skilled and unskilled temporary employment opportunities will be created. It is difficult to specify the actual number of employment opportunities that will be created at this stage; however approximately over 500 direct and indirect employment opportunities are expected to be created during the construction phase at each site. It should however be noted that employment during the construction phase will be temporary, whilst being long-term during the operational phase.

2.4.2.1 Equipment and machinery requirements

Use of heavy construction equipment is expected for this project. At construction phase the project will employ various types of construction equipment and machineries for successful implantation of project activities.

2.4.2.2 Delivery of equipment and machineries

All construction equipment and machineries will be delivered by specialized trucks. They will use the existing road network in Juba. It will be the responsibility of the contractor to take necessary measures to ensure safety for the community and workers this includes proper scheduling delivery and obtain appropriate transportation and safety permits.

2.4.3 Storage at Campsites

Sites will have specific storage area for materials that are sensitive to weather. Materials such as cement and oil will be stored in the campsite. Other materials, such as sand, stones, aggregates etc., will be stockpiled at the site. Hazardous materials such as explosive and inflammable will not be stored at the campsite unless special measures are taken and permit issued by the authority. Refueling for some equipment such as compactors and generators will be done on site whereas for vehicles and trucks will be done outside the project area in existing fuel stations in Juba.

2.5 Project Operation Phase

Once the construction phase is completed, the offices, classrooms Workshops and accommodation facilities as well as the roads, parking yards, walkways and recreational areas will start to operate to serve the intended purposes. The activities that are expected to be executed during operational phase include: Transportation, classroom training, workshop activities, student housing activities and mobility in the corridor and recreational activities/Leisure among others.

2.5.1 Building and Facilities Maintenance

Due to consistent use of the buildings during operational phase there will be a routine housekeeping and maintenance as the results of wear and tear of the infrastructure that will affect its quality. Therefore, the Buildings will require maintenance throughout the project life. Among others, the maintenance works will include: o repainting of building.

o Repairing cracks on the structures

o Routine maintenance of the buildings

2.5.1.1 Project Supported Sewerage maintenance

In All the project sites there will be sewerage network servicing Most of the Buildings. Therefore, institution management will have to set aside funds to supported facilities, for operation and maintenance this includes cleaning and repair, payment of water and electricity bills and buying necessary items for cleaning (e.g. detergent, disinfectant, gloves, hand wash soap etc.).

2.6 Utilities

2.6.1 Water and Energy Supply

Water supply in project areas is obtained from South Sudan Water Authority. The project will use existing water sources. Therefore, main source of water for construction and operation phases will be from SSUWC as the authority responsible for development and maintenance of infrastructure for water supply.

The power supply in the project areas is likely to be from South Sudan Electrical Company (SSEC) through an overhead line. Power supply for the project will be provided by (SSEC) and supplemented by standby generators for performing hot works, lighting etc.

Installation of Solar Heaters at the laboratories infrastructure: A solar pool heater should be used to replace the traditional pool heater. A traditional heater uses substantial amounts of power to keep the pool warm, which translates into higher emissions and cost. A solar heater, on the other hand, works by utilizing solar panels on the roof; with a heating element as a backup is a cost-effective and environmentally conscious way of managing the laboratories.

2.6.2 Construction Materials

Aggregates, and Borrow Materials Construction materials in South Sudan are regulated and controlled by the government. All the quarry, borrow pit and sand mining sites are owned and operated by government through the department of forestry to ensure equal access to the materials and control overexploitation. The project will obtain the aggregates and borrow materials from these sources by applying for the permit from forestry department.

2.7 Waste Management

2.7.1 Solid Wastes

The operation of the Training Institution is not expected to generate huge quantity of solid waste. It is likely; most of the waste will be generated due to Training /business activities that will be undertaken in the areas. In view of this, food waste and packaging waste such as paper and boxes will be the main type of waste generated in the areas. Thus, the management of waste generated with the proposed projects will use the existing system during operation phase of the project.

The system will have waste management infrastructures to include waste bins (outdoor bins and skip buckets) which will be placed in strategic locations throughout the project areas and waste trucks for transportation to treatment or disposal site. Solid wastes management could be a concern during construction phase as there will be construction related wastes as well as additional wastes due to presence of construction workers at site. In this regard waste management plan shall be developed and implemented accordingly by the contractor.

2.7.2 Liquid Waste

During construction and operation phases of the project, generation of sanitary waste is expected. Sanitary waste shall be handled through the existing system in the area.

2.7.4 Storm Water Storm

Water in the project sites is currently collected though constructed drains or natural channel to the sea. Existing storm water drainage will be rehabilitated and improved to accommodate storm water from the project site. Collected storm water will be directed to the existing drainage patterns of the area.

2.8 Project Decommission Phase

Decommissioning is an important phase in the project cycle and comes last to wind up the operational activities of a particular project. It refers to the final disposal of the project and associated materials at the expiry of the project lifespan. If such a stage is reached, the proponent needs to remove all materials resulting from the demolition/ decommissioning from the site. The following should be undertaken to restore the environment.

- Remove all underground facilities from the site
- The site should be well landscaped by flattening the mounds of soil and Planting indigenous trees and flowers
- All the equipment should be removed from the site
- Fence and signpost unsafe areas until natural stabilization occurs
- Backfill surface openings if practical

Demolition waste includes: paper, polythene, metal shavings, cement, concrete, welding particles, plastics, sand, grey water, adhesives, paints, soil, cloth, rubber).

Air emissions from burning fossil fuels (COx and SOx).

Particulate emissions (dusts, metal, wood and cardboard shavings);

Sewerage, **Hostel, Office and Laboratory waste**, all will need to be managed and disposed off.

Table 2-1: Construction Phases Process, Equipment, Materials, Wastes & Output

Processes
Site Preparation, land clearing and decommissioning the existing structures |Digging trenches for the perimeter wall | Erecting the perimeter wall, access gates and constructing a security office/post | Installing construction firef ighting equipment |Soil compaction for the parking, loading areas and Paths | Building the site foreman's office | Digging the internal sewerage network trenches and laying the network pipes | Building a materials' storage |Soil Excavation for the foundations | Filling the foundations | Lining the foundation with PVC |Erecting Construction pillars | Erecting the walls for the buildings Constructing the roofs and water tanks| Fitting and plumbing the water network around the buildings |Electrical fittings in the buildings Plumbing and piping the office and storage units | Installing Emergency Generators and Water pumps| Erecting a fence around the site | Landscaping the site and facilities |installing Facility waste management equipment e.g. bins Painting the internal roads and placing signs around the site |
Equipment
Chainsaw | Earth mover | Compactor | Spades | Wheelbarrow | Hammers and bolt and nut fasteners | Handsaw | Bolts, nut, screws and nails | Ropes | Ladders | Electric and Gas Welders | Electric saws and grinders | Gas cutters | Spirit Level | Road Roller | Trucks | Hand drills and drill bits | Glass cutters | Wire cutters | Shears | Cranes | Mobile Electric Power Generators | Concrete mixer trucks | Wheel loader | Fork lift & Telescopic Fork lift | Tractor | Excavator | Asphalt Paver | Dump truck |
Materials & Energy
Sand | Fuel and Oil | Electricity | Water | Cement and ceramic Tiles | Concrete |Polythene |Bricks and Gravel |Water | Steel |Concrete pipes | Steel pipes | PVC pipes | Polyfilla, Adhesives and paints | Ceramics tiles |Copper wires | Plastic | Electricity | Gas (acetylene & oxygen) | Cardboard | PVC | Glass | Bricks |Asphalt | Bitumen
Expected Wastes
Construction waste: (paper, polythene, metal shavings, cement, concrete, welding particles, plastics, sand, grey water, adhesives, paints, soil, plants, cloth, rubber). **Air emissions** from vehicles engines and burning and friction operations (COx and SOx). Oil and fuel spills from vehicles and storage of oil and fuel. Dust from movement of vehicles and excavation activities. Sewerage and Domestic/Municipal Waste.
Outputs
Primary and Ancillary Project Facilities (swimming pool office Units, common Area, Perimeter Wall, and Access gates, Storage facilities etc. innovation incubation center

Table 2-2: Operational Phase Processes, Equipment, Materials, Wastes and Outputs

Processes
Start-up: Pumping the project with water from the borehole and mains; Connecting the project to electricity main and turning on the power; Acquiring in house amenities, Office and commercial operations | Ancillary project operations (deliveries, loading and unloading materials, storage, transport to and from project of staff and customers) | Logistic Operations and storage of equipment and materials |Procurement | Operation and Maintenance | Occupying and Dwelling in the residential area | Commercial operations in the retail and commercial areas (shops, businesses, restaurants, cinemas etc.) |
Materials & Energy
Water; Electrical Energy; Fuel and Oil; Foodstuffs and beverages; Plastics, Paper, Metals, chemicals
Expected Wastes
Water vapour; **Office and Domestic waste** (paper, garbage, cloth, rubber, paper clips, plastics such as pens and plastic bags etc.); **Electronic Waste**; **Air emissions** from trucks and vehicles (COx, NOx, SOx etc); Oil spills from vehicles and storage; Dusts from movement of vehicles and operation and maintenance; **Sewerage** and sludge, waste chemicals
Outputs
Commercial activities of the project from its facilities (Residence, Business, Entertainment and Recreation); Goods and Services traded in the retail areas.

Table 2-3: Decommissioning Phase Processes, Equipment, Materials, Wastes and Outputs

Processes
Shut down: Stopping the flow of water and Switching off power | Clearing the Commercial and Residential, Storage Buildings | Sealing the borehole | Draining the ponds | Pulling down the Structures | | Clearing the Tarmacked parking area | Transportation of the debris and gravel | Re-vegetation of the site to restore it to its initial
Equipment
Chainsaw | Earth mover | Compactor | Spades | Wheelbarrow | Hammers and bolt and nut fasteners | Handsaw |Ropes | Ladders | Electric and Gas Welders | Electric saws and grinders | Gas cutters | Trucks | Glass cutters | Wire cutters | Shears | Cranes | Mobile Electric Power Generators | Wheel loader | Fork lift & Telescopic Fork lift | Tractor | Excavator | Dump truck |
Materials & Energy
Electricity | Fuel and Oil | Gas (Acetylene, Oxygen) | Water | Plants (Trees, Grasses) | Soil
Expected Wastes

Demolition waste (paper, polythene, metal shavings, cement, concrete, welding particles, plastics, sand, grey water, adhesives, paints, soil, cloth, rubber). **Air emissions** from burning fossil fuels (COx and SOx). **Particulate emissions** (dusts, metal, wood and cardboard shavings); **Sewerage**, **laboratory, Office** and **Domestic wastes.**
Outputs
Recyclable building, Office and Domestic materials. Environmental Restoration of the project site

CHAPTER THREE: ADMINISRATION, POLICIES, LEGAL &REGULATORY FRAMEWORK

3.1 Relevant National Policies

The Government of The Republic of South Sudan (GoRSS) is committed to follow sustainable development pathway through the sustainable use of her natural resources base and to incorporate measures that safeguard the environment in any development activities. In this pursuit, the government of South Sudan has in place policies, laws and regulations in order to mainstream environmental management. This is also being driven by the fact that it is a constitutional right of every South Sudan citizen to dwell in a clean and safe environment.

ESIAs are carried out in order to identify potential positive and negative impacts associated with the proposed project with a view to taking advantage of the positive impacts and developing mitigation measures for the negative ones. Therefore the proponent will need to observe the provisions of the various policies that are aimed at maintaining a clean, healthy and sustainable environment**.**

Since attaining Independence in July 2011, the Government of the Republic of South Sudan has adopted a new constitution, as well as policies and legislation related to environmental and social standards. Some legislation from the previous 'Southern Sudan' remains in place. At the same time, other laws and regulations are still being drafted, with the ultimate aim of enhancing sustainable socio-economic development. The policies and laws provide procedures to be followed in the planning and implementation of activities in order to utilize resources and execute programs to maximum benefit.

Several policies, laws and regulations addressing specific environmental management in the sectors within which this project falls under. Therefore, this section discusses the relevant sectoral policies and legislation, which are relevant to environmental and social issues pertaining to the proposed Project "Support **TVET for Value Chain Development (STVET-VCD) Project" Juba, South Sudan Project**.". The policies that address environmental management as far as this project is concerned and which form the corner stone of the present study include inter alia.

3.1.1 The Constitution of the Republic of South Sudan of 2011

The Transitional Constitution of the Republic of South Sudan of 2011 includes numerous provisions that have a bearing on the environment. Article 41 (1) provides that the people of South Sudan shall have a right to a clean and healthy environment and (2) that every person shall be obliged to protect the environment and (3) that future generations shall have the right to inherit an environment protected for the benefit of present and future generations. Specific measures to ensure the objectives above include: The prevention of pollution and ecological degradation, the promotion of conservation and the securing of ecologically sustainable development and the use of natural resources while promoting rational economic and social development to protect the bio-diversity of South Sudan. Furthermore, Article 166 (6) expects local governments to involve communities in decision-making in the promotion of a safe and healthy environment.

3.1.2 South Sudan Vision 2040

The foundation document guiding the future development of South Sudan is the entitled "Towards Freedom, Equality, Justice, Peace and Prosperity for All". The overarching goals of Vision 2040 are to create a vibrant, competitive and diversified economy driven by agriculture,

industry, mining, tourism and services that attracts investors. The Vision does also promise the Government of South Sudan's commitment to sustainable environmental management alongside limiting environmental pollution due to other development programmes such as industrialization. The Vision emphasizes the need to minimize greenhouse gas emissions as a measure against climate change while building on traditional knowledge and supporting community based resilience.

Medium-term development plan (Revised National Development Strategy for South Sudan - 2021-2024) includes;

(i) Establish and/or strengthen institutions for transparent, accountable and inclusive governance
(ii) Foster macroeconomic stability and lay foundations for the diversification of the economy
(iii) Build critical infrastructure for sustainable development, including roads, public buildings and broadband capability
(iv) Increase support to the social sector for human capital development and protect the vulnerable population, to leave no one behind
(v) Mainstream gender in all development policies and programmes and empower women and youth as drivers of growth and nation-building.

3.1.3 South Sudan National Environment Policy 2015 to 2025

The South Sudan Environmental Policy 2015. Provides framework for making the essential changes that are needed to bring consideration of the environment into the mainstream of the decision-making processes in the country. This policy introduces a national environmental response framework and strategies to be implemented by all key actors in the public, private, and community domains.

The foundation of the National Environmental Policy is to protect and improve the environment in a manner which contributes to the quality of life of both present and future generations. The policy attempts to harmonize environmental protection with other factors such as occupational safety and health. In particular, the Environmental Policy aims to guide economic activities in ways that will be sustainable and will not harm the environment in the long term. The policy is a response to the challenges posed by existing environmental problems, such as pollution and depletion of natural resources. It recognizes the essential links between sustainable development and sound environmental management and takes account of the special limitations of island ecosystems. The proposed project has the potential to cause environmental pollution during the construction and operation phases and these issues are addressed in the ESIA document. Also by undertaking the ESIA, the Ministry of Labour has observed one of the requirements of the national environmental policy and will continue to observe the requirements of the policy during the whole life cycle of the project.

Statement 15 of the Policy states that "The Government will ensure incorporation of environmental assessment into procedures for designing and implementing development programs, plans, policies and projects". This will be achieved through:

(i) Promoting application of Environmental Assessment Tools (Environmental Impact Assessment - EIA, Strategic Environmental Assessment – SEA, etc.) to all investment and development projects before their establishment.
(ii) Strengthening public awareness and outreach programs on the application of the Environmental Assessment Tools.
(iii) Enhancing monitoring programs and assessment for the state of the environment.

The policy aims at minimizing land degradation caused by excavation of non-renewable natural resources and rehabilitation of the excavated lands. In this regard, the Government will promote the rational use of non-renewable natural resources and rehabilitation, with minimal damage to the environment.

This policy is adopted in this ESIA because it provides general guidelines and principles to be followed in environmental management during the implementation of the proposed project and other projects in the agriculture sector.

3.1.4 South Sudan Draft Environment Bill (2023)

The purpose is to protect the environment and to promote ecologically sustainable development that improves the quality of life for both the present and future generations. Section 18 of the South Sudan Draft Environmental and Protection Bill introduces the requirement for Environmental Impact Assessments. An Environmental Impact Assessment (EIA) is defined as a systematic examination conducted to determine whether or not a project will have any adverse impact on the environment and prescribe mitigation measures. The objective of the EIA is to ensure that environmental considerations are explicitly addressed and incorporated into the development decision-making process and to anticipate and avoid, minimize or offset the adverse significant biophysical, social and other relevant effects of development proposal, among others.

In addition, Section 32, Cap 5, intends to introduce the requirement for Environmental Audits. An Environmental Audit is defined as the systematic, documented, periodic and objective evaluation of how well environmental organization, management and equipment are performing in conserving the environment and its resources. The main objectives of an Environmental Audit are to: Assess how far project activities and programs conform with the approved environmental management plans as well as with the required environmental quality standards. To provide mechanisms for coherent implementation procedures of a project so as to mitigate adverse environmental impacts and provide regulatory bodies with a framework for ensuring compliance with, and the performance of an environmental management plan.

Section 20, Cap 5, intends to introduce the requirement for Environmental Monitoring. Which is defined as the continuous determination of actual and potential effects of any activity or phenomenon on the environment, whether short or long term. The bill mandates the line ministries to: Monitor environmental phenomena with a view to assessing possible changes in the environment and their possible impacts. In addition, they must monitor the operations of any industry, project or activity with a view to determining its immediate and long-term effect on the environment. They need to compel the proponent to carry out a baseline survey to identify basic environmental parameters in the project area before implementation (except where a baseline survey has been carried out) Finally, they have to determine the parameters and measurable indicators to be used in monitoring of projects and conduct measurement of environmental changes that have occurred during implementation.

3.1.5 The Land Act of 2009 (State of Southern Sudan):

One of the key objectives of the Land Act is to promote a land management system, which can protect and preserve the environment and ecology for the sustainable development of South Sudan. It also provides for fair and prompt compensation to any person whose right of occupancy, ownership or recognized long-standing occupancy or customary use of land is revoked or otherwise interfered with by the Government.

The Land Act reinforces the Government's recognition of customary land tenure: 'Customary land rights including those held in common shall have equal force and effect in law with freehold or leasehold rights.' Community land can be allocated to investors as long as investment activity 'reflects an important interest for the community' and 'contributes economically and socially to the development of the local community'. It also requires that state authorities approve land acquisitions above 250 feddans (105 hectares) and create a regulated ceiling on land allocations.

The Land Act requires the Government to consult local communities and consider their views in decisions about community land. The Act also gives pastoralists special protection: 'No person shall without permission to carry out any activity on the communal grazing land which may prevent or restrict the residents of the traditional communities concerned from exercising their grazing rights'. Project proponents must also conduct environmental and social impact assessments (ESIAs) before undertaking any activity that might affect people or the environment.

3.1.6 The South Sudan Forest Policy (2019)

The Forest Policy of South Sudan was launched in 2019. The Policy is broadly intended to protect the roles forests play in stabilizing the global systems including the hydrological balance, the carbon balance, atmospheric systems, etc. The policy broadly aims to achieve ecological stability of river systems, the lakes, swamps, agricultural production and other natural ecological systems. It is also meant to ensure that there are optimal benefits from forestry and agro-forestry activities for food security and poverty alleviation among our rural communities through provision of woody and non-wood forest products. The policy integrates forest sector actions with rural development efforts to ensure that the rural population of South Sudan has access to basic needs which include sustainable household food security, shelter, wood fuel, safe clean water, as well as sanitation and health facilities.

The resources derived from forest resources are important in supporting primary education, local governance and community empowerment. The guiding principles of the Forest Policy include: (i) sustainable management of all forests and tree resources of South Sudan to ensure continuous accrual of benefits to the present and future generations; (ii) Establishment and management of permanent forest estates (PFE) to ensure conservation of biodiversity and steady flow of benefits; (iii) forests and tree resources will be managed in accordance with set criteria and indicators for sustainable management; (iv) regular development of appropriate policies, legislation, institutional reforms that will be implemented to support growth and sustainability of the forest sector; (v) establishment of industrial and other plantations for sustainable supply of forest resources to meet the increasing demands; (vi) increased community participation in forest management through collaborative management schemes while the community sustainably benefit from forest resources; (vii) development of forest products based industrial development (forest products processing) to promote and support increased economic benefits from forest resources; (viii) strengthening of forestry management institutions increase productivity, achieve household food security, alleviate poverty and contribute to the macro-economy of South Sudan; (ix) sustained commitment to forest related regional and international agreements and conventions; and, (x) human capacity development in the management of forests and tree resources.

3.1.7 3National Agriculture and Livestock Extension Policy

The National Agriculture and Livestock Extension Policy (NALEP) and its Implementation frame work emphasizes the need to transform agriculture from a traditional/subsistence system to achieve food security through a science-based, market oriented, competitive and profitable agricultural system without compromising the sustainability of the natural resources for generations to come. In order to achieve the above, it developed key strategic objectives that include: Priority policies that quickly boost agricultural production, the availability of agricultural inputs (including a credit facility at affordable cost) the rehabilitation and expansion of rural infrastructure including feeder roads and markets, the development and provision of research and extension services and market linkages.

3.1.8 *The Public Health (Water and Sanitation) Act (2008)*

Emphasizes the prevention of the pollution of air and water and also encourages improvement in sanitation. Key provisions include the protection of the sanitation of the environment and it encompasses the measure to address the pollution of water and air. The following are measures geared towards control of pollution of water: Measures to prevent pollution of water for consumption; Measures destined to prevent pollution of potable water; Anyone who offers the public water to drink or human food, and which includes frozen food should ensure that the water conforms to the portability regulations; Management and disposal of hazardous wastes; and storage of wastes on the premises of waste generators. The Public Health Act (2008) also provides the need for the protection of pollution of water through the enforcement of regulations and measures necessary to combat all elements of pollution and protect the natural level of the environment and public health.

3.1.20 The Labour Act (Act No. 64 of 2017)

The Act establishes a legal framework for the minimum conditions of employment, labor relations, labor institutions, dispute resolution and provisions for health and safety in the workplace. It further reinforces the right to equal remuneration for work of equal value as guaranteed by the constitution. Section 6(1) of the Labour Act provides that 'No person shall discriminate, directly or indirectly, against an employee or job applicant in any work policy or practice'. Section 6(2) also forbids discrimination by any Trade Union, Employers Association or Federation. Section 6(3) defines discrimination as 'any distinction, exclusion or preference with the effect of nullifying or impairing equality of opportunity or treatment in employment or occupation' based on a series of grounds including sex and pregnancy or childbirth.

While the Labour Act provides additional protections for children, it lacks clarity on prohibitions on the worst forms of child labor. The national army continues to recruit, sometimes forcibly, children to fight opposition groups. Children are further engaged in other worst forms of child labor, including in commercial sexual exploitation. The government has failed to bring any perpetrators to justice. Children between the ages of 10 and 14 are further employed in agriculture and industry and services, including in rock-breaking, construction (building and transporting materials) and brick-making.

3.1.21 The Child Act (Act No. 10 of 2008):

The Child Act regulates the prohibition on child labor, the protection of children and young persons and hazardous child labor.

3.1.22 The South Sudan Education policy

The vision of the Higher Education Policy Framework 2021-2025 is to provide accessible quality, relevant, inclusive education, training, and research for prosperous, productive, and innovative nation

3.1.23 General Education Act, 2012.

The National General Education Policy, 2017-2027, and The
The Strategic Plan is aiming to achieve four important national priorities: to increase equitable access to general education; to improve the quality of general education; to enhance the management capacity of senior staff of the Ministry, State Ministries, the County Education Department and affiliated institutions; and to promote Technical and Vocational Education and Training (TVET) to improve the employability of youth and adults in the next five years.

Set out a broad vision and framework for the medium- and long-term development of education system. The policy document translated the broader vision of the Government of South Sudan set out in vision 2050, The South Sudan Growth and Poverty Reduction Strategy as well as

international commitments on education such as Education for All by the year 2015 and Sustainable Development Goals (SDGs).

3.1.24 *Gender Policy*

The Government of South Sudan has committed to gender equality for women and men, girls and boys and to protect women and girls from harmful social norms. The Government has endorsed pledges to end female genital mutilation (FGM) and child marriage and prevent and respond to gender-based violence (GBV).

3.1.25 South Sudan National Women's Strategy 2016

The South Sudan National Women's Strategy document is a tool that is designed to be used by women and men from different sector, institutions and organizations, which are committed to mainstream gender and provide for gender equality in different sectors of the society. Thorough this document, the women of South Sudan seek to emphasize and shade more light on the existing opportunity for women based on the gender competence among the women and women's rights as equal citizens of South Sudan. The objective of this strategy document is to ensure that women participation and contribution in decision making at national level is seen beyond the limitation of the 25% thresh hold of gender quota which is enshrined in the Constitution of Republic of South Sudan (2011) amended 2015.

3.2 Institutional Framework for ESIA

Ministry of Environment and Forestry has the mandate to enforce compliance process of EIA and management of all environmental issues in South Sudan. The ministry determine whether a proposed project should be subjected to an EIA and provide directives on the proper action to be taken for the effective environmental management, issue a stop order for any activity to any person who violates the Act; invites public comments and also has the statutory authority to issue the certificates of approval. Ministry of Environment and Forestry is currently the designated authority to carry out the review of ESIA including site visit, monitoring and auditing of environmental performance of the project (periodic and independent re-assessment of the undertaking). However, given the fact that **STVET -VCD** cuts across different sectors, monitoring environmental issues of the project becomes a responsibility shared by several institutions. Below is the description of institutions that will be involved in the implementation of environmental and social management plan.

3.2.1 Ministry of Labour

Ministry of Labour Project Implementation team (PMT) is responsible for the overall management of STVET -VCD. It provides overall coordination and technical support to all participating institutions. The MoL has established a dedicated Project Management Team consisting of various specialists for the implementation. PMT and respective contractors will be responsible for coordinating and monitoring implementation of ESMP.

3.2.2 UNESCO

The Project will adopt a hybrid model. The Ministry of Labour (MoL will be the Executing Agency and UNESCO, the Third-Party Implement Agency (TPIA). The TPIA will have overall responsibility for coordination and reporting to the Bank.

3.2.3 University of Juba and MTC

Will partner with the MoL and UNESCO to implement and manage the project by proving the land and eventually owing and managing the facilities respectively.

3.2.3 Ministry of Environment and Forestry)

Ministry of Environment and Forestry overall responsibility for screening (decide on appropriate level of the impact assessment), undertaking scoping in collaboration with project proponent and reviewing ESIA report of projects. Ministry of Environment and Forestry constitutes multi-disciplinary, multi-sectoral Technical Review Committees to review adequacies of environmental impact assessment reports. And approves the ESIA report and issuing ESIA certificate. Ministry of Environment and Forestry has also a function of providing directives on the proper action to be taken for the effective environmental management in South Sudan.

The proposed team composition to include: a Project Coordinator, Education/skills expert, Accountant, Procurement Officer, Civil Engineer, Monitoring and Evaluation Officer, Environmental and Social Safeguard Expert and Gender Expert. The Project management structure will be firmed-up at appraisal.

3.3 Analysis of Relevant International Conventions

South Sudan is a signatory to and has ratified several international instruments on environmental conservation and management. Among such conventions and regulations are (i) **African Regional Policy Instruments** (iii) **The African Convention on the Conservation of Nature (1968)** (ii) **The Ramsar Convention of 1971** on Wetlands of International Importance; especially as Waterfowl Habitats (RAMSAR) (iii) **The Protection of World and Cultural Heritage Convention (1972);** (iv) **The United Nations Framework Convention on Climate Change (UNFCCC, 1992).** (v) ***United Nations Convention on Biological Diversity*** **(vi)** ***Convention on the Rights of the Child*** **(vii)**. ***Basel Convention*** (viii) ***Vienna Convention on the Protection of the Ozone Layer***

3.3.1 The African Convention on the Conservation of Nature (1968)

This is aimed at encouraging individual and joint action for the conservation, utilization and development of soil, water, flora and fauna for the present and future welfare of mankind, from an economic, nutritional, scientific, educational, cultural and aesthetic point of view

3.3.2 Ramsar Convention on Wetlands.

The Convention's mission is "the conservation and wise use of all wetlands through local and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world". Wetlands are among the most diverse and productive ecosystems. They provide essential services and supply all our fresh water. The Convention uses a broad definition of wetlands. It includes all lakes and rivers, underground aquifers, swamps and marshes, wet grasslands, peatlands, oases, estuaries, deltas and tidal flats, mangroves and other coastal areas and all human made sites such as fish ponds, rice paddies, reservoirs and salt pans. Under the "three pillars" of the Convention, the Contracting Parties commit to work towards the wise use of all their wetlands; designate suitable wetlands for the list of Wetlands of International Importance (the "Ramsar List") and ensure their effective management; cooperate internationally on Trans boundary wetlands, shared wetland systems and shared specie. The Convention recognizes the fundamental ecological functions of wetlands and their economic, cultural, scientific and recreational value. South Sudan has been party to the Convention since 10 October 2013. South Sudan has currently one site designated as Wetlands of International Importance.

3.3.3 The World Heritage Convention.

The Convention defines the kind of natural or cultural sites which can be considered for inscription on the World Heritage List. The Convention sets out the duties of States Parties in identifying potential sites and their role in protecting and preserving them. By signing the Convention, each country pledges to conserve not only the World Heritage sites situated on its territory, but also to protect its national heritage. The Convention stipulates the obligation of States Parties to report regularly to the World Heritage Committee on the state of conservation of their World Heritage properties.

3.3.4 The United Nations Framework Convention on Climate Change (UNFCCC)

The UNFCCC's goal is to prevent "dangerous" human interference with the climate system. The ultimate objective of the Convention is to stabilize greenhouse gas concentrations at a level that would prevent dangerous anthropogenic (human induced) interference with the climate system." It states that "such a level should be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened, and to enable economic development to proceed in a sustainable manner.

3.3.5 Basel Convention

The overarching objective of the Basel Convention is to protect human health and the environment against the adverse effects of hazardous wastes. Its scope of application covers a wide range of wastes defined as "hazardous wastes" based on their origin and/or composition and their characteristics, as well as two types of wastes defined as "other wastes" - household waste and incinerator ash. The provisions of the Convention Centre around the following principal aims:

- the reduction of hazardous waste generation and the promotion of environmentally sound management of hazardous wastes, wherever the place of disposal;
- the restriction of transboundary movements of hazardous wastes except where it is perceived to be in accordance with the principles of environmentally sound management; and
- The regulatory system applying to cases where trans boundary movements are permissible.

3.3.6 United Nations Framework Convention on Climate Change Convention

. The primary purpose of the Convention is to establish methods to minimize global warming and in particular the emission of greenhouse gases. The Convention was adopted in 1992 and came into force in 1994. The main authority for the implementation is the Ministry of Environment and Forestry.

3.3.7 United Nations Convention on Biological Diversity

The Convention has three main goals which are: The conservation of biological diversity (or biodiversity); the sustainable use of its components and the fair and equitable sharing of benefits arising from genetic resources. South Sudan acceded to the Convention on 17 February 2014.

3.3.8 Vienna Convention on the Protection of the Ozone Layer

Vienna Convention was an intergovernmental negotiation for an international agreement to phase out ozone depleting substance in March 1985. It ended in the adoption of the Vienna Convention for the Protection of the Ozone Layer. The Convention encourages intergovernmental cooperation on research, systematic observation of the ozone layer, the monitoring of CFC production and the exchange of information. The GoSS acceded to the convention on 12 January 2012.

3.3.9 Convention on the Rights of the Child

The Convention on the Rights of the Child from 1989 is the most comprehensive compilation of international legal standards for the protection of the human rights of children. It acknowledges children as individuals with rights and responsibilities according to their age and development, as well as members of a family or community. This includes non-discrimination, the best interest of the child, the right to life, survival and development and the right to participation. South Sudan has been party to the Convention since 23 January 2015.

3.3.10 ILO 182 Worst Forms of Child Labor Convention (1999).

The convention calls for immediate action to prohibit and eliminate the worst forms of child labor. The predefined forms of child labor include all forms of slavery, trafficking of children, debt bondage or any other form of bonded labor, forced or compulsory labor, and commercial sexual exploitation of children, prostitution and the production of pornography, as well as work that is likely to harm the health, safety or morals of children. South Sudan ratified the convention in 2012.

3.3.11 Convention on the Elimination of all forms of Discrimination against Women:

CEDAW places explicit obligations on states to protect women and girls from sexual exploitation and abuse, among other issues. South Sudan ratified the CEDAW in 2014. The accession to CEDAW enabled the country to address issues of customary law involving women's right to inherit and own productive assets, as well as their lack of voice and decision making in family and community matters and the denial of their right of choice to found a family especially in rural settings.

3.3.12 ILO Convention 111 on Discrimination:

. The convention calls upon states to enable legislation prohibiting all forms of discrimination and exclusion on any basis, including race, sex, religion, etc. South Sudan ratified the convention in 2012.

3.4 ESIA Process in South Sudan

Screening: by submitting the ToR, together with a concept note explaining the scope of the project. Based on this information, the Ministry of Environment and Forestry will make a decision on the level of environmental assessment that needs to be undertaken, and which procedure applies, as follows:

a. Direct clearance – for proposed projects with insignificant or no social and environmental impacts
b. Environment Report – for proposed projects with limited social and environmental impacts
c. Environmental and Social Impact Assessment – for proposed projects with potential significant social and environmental impacts
d. Pre-audit – for existing projects with limited social and environmental impacts
e. Audit – for existing projects with potential significant and environmental impacts

Direct clearance will be granted to any person or company whose activity or project has been proven to cause an insignificant or no impact on the biophysical or social environment. In this case, no assessment is required.

Environmental Report (ER); prepared for Projects or activities that are expected to have low or minor impacts on the environment and society. The Environment Report must be prepared by recognized experts or firms who are authorized to conduct such a study in South Sudan. The ER is Prepared once the screening decision is made. During this process, the concerns and comments of affected stakeholders are taken on board. Once the ER study is

completed, the proponent, must submit 6 hard copies and one soft copy of the report to Ministry of Environment and Forestry for review. Site verification takes place before the review meeting is held. Its objective is to allow Ministry of Environment And Forestry officials to familiarize themselves with the project by physically observing the project area. The project proponent will have to pay the fees for the site verification visit as well as for reviewing the documents. The review exercise is carried out by a technical committee, in order to determine the strengths and weakness of the ER. The outcome of the review could be ER approval, ER rejection or a request for further information. In the case where the ER is approved, an Environmental Clearance Certificate will be issued, with conditions attached to it.

Environmental and Social Impact Report: EIA must be carried out by recognized experts or firms, authorized to conduct an ESIA in South Sudan. After the project has been registered and screened (see above) and the environmental consultant(s) has been selected, the procedures for conducting an ESIA are described below:

a) **Scoping:** crucial because it determines how the ESIA study will be carried out. It also identifies and takes into consideration major concerns of stakeholders and identifies likely impacts of the project. The scoping exercise establishes the terms of reference (ToR) and boundaries of the ESIA study, which are submitted to the Ministry of Environment and Forestry for approval.

b) **Preparation of the ESIA Report**: The ESIA commences once the ToR have been approved by Ministry of Environment and Forestry). The aim of the study is to describe the nature of the project as well as to analyze the possible environmental and social impacts of the project or activity and identify the mitigation measures to minimize the negative impacts and enhance the benefits. Public consultation should take place during this assessment. The ESIA Report must be completed within 6 months from the date of approval of the scoping report and ToR

c) **Submission of the ESIA Report to Ministry of Environment and Forestry**: Once the ESIA study is completed, the proponent, must submit 18 hard copies and one soft copy of the report to The Ministry of Environment and Forestry for review.

d) **Circulating the report to other stakeholders**: Ministry of Environment and Forestry will circulate the EIA Report to the relevant stakeholders to obtain their views and comments. This must be done not more than 5 working days from the date of submission. The stakeholders must submit their views to the Ministry of Environment and Forestry in writing before the review meeting is held. The comment period shall be between 20-30 working days from the date of ESIA Report submission.

e) **Site verification:** This takes place before the review meeting is held. The objective is to allow the Ministry of Environment and Forestry officials to become familiar with the project by physically observing the project area, and to confirm what is written in the report. The project proponent will have to pay the fees for site verification, as well as for reviewing the document.

f) **Review of the ESIA Report**: This is conducted to evaluate the strengths and weakness of the ESIA report, based on the review criteria set by Ministry of Environment And Forestry. The review must take place within 30 days after the comment period has ended.

g) **Decision-making:** The outcome of the review could be ESIA approval, ESIA rejection or a request for further information. If further information is required, the request should be sent to the proponent by Ministry of Environment and Forestry.

h) **Issuing of the ESIA Certificate**: If the ESIA Report is accepted, the EIA Certificate will be issued, with conditions attached within 10 days from the completion of the review. The Certificate will be valid for five years.

An ESIA Report should include the following elements.

- Description of the proposed activity;
- Description of the environment that could be affected;
- Description of real and practical alternatives;
- Assessment of likely/potential environmental impacts of the activity and alternatives (including direct, indirect, cumulative, short- and long-term effects);
- Assessment of measures to mitigate adverse environmental impacts and enhance environmental benefits of the activity and alternatives;
- Explanation of methodology and data interpretation;
- Citation of available data and documents, and indication of knowledge gaps;
- Lists of affected persons and contacted communities;
- Summary of the above information in Kiswahili (the language most widely understood by the inhabitants of South Sudan); and
- Any other relevant information as may be prescribed. The EIA (Procedures) Regulations 2002 contain further requirements for the ESIA Report:

It should be analytic and specific to the project location; Highly significant impacts should be explained in detail, less significant impacts should be briefly mentioned; It should be concise and no longer than absolutely necessary - depending on potential environmental problems and project size; It should indicate to what extent the selected project option is or is not the best among the various alternatives and how it corresponds with other environmental laws and policies; ▪ Alternatives and mitigation options discussed in the report should include those to be considered by the ultimate decision-maker;

3.5 The African Development Bank (AfDB) Environmental and Social Safeguards

South Sudan's **"Support to TVET for Value Chain Development (STVET-VCD) Project" Juba, South Sudan,** will be developed and implemented according to the requirements of the African Development Bank Operational Environmental and Social Safeguards. This ESMP has been prepared to forestall environmental and social impacts that will arise during the development and operational implementation of this project as per Operational Safeguard Policies of the AfDB and all the applicable environmental policies, laws and regulations of the national laws of The Government of South Sudan; with due consideration of other international environmental requirements. The AfDB's 5 Operational Safeguard Policies as outlined and summarized in in the table below informed the development of this report. The AfDB Safeguards Policies include: (1) Environmental Assessment (OS1); (2) Involuntary Resettlement including Land Acquisition, Population Displacement and Compensation (OS2)**;** (3) Biodiversity and Ecosystem Services (OS3); (4) Pollution Prevention and Control, Greenhouse Gases, Hazardous Materials and Resource efficiency (OS4); and, (5) Labour Conditions, Health and Safety (OS5)

Table 3.1 Summary of AfDB Operational Safeguards objectives including when they are triggered

OPERATIONAL SAFEGUARD	OBJECTIVE	TRIGGER FOR THE POLICY
OS1- Environmental Assessments	-To identify and assess the environmental and social impacts (including gender) and climate change vulnerability issues of Bank lending and grant financed operations in their area of influence -To avoid or if not possible minimize, mitigate and compensate for adverse impacts on the environment and on affected communities; -To ensure that affected communities have timely access to information in suitable forms about Bank operations and are consulted meaningfully about issues that may affect them	This OS is elicited through the Environmental and Social Screening Process. It assists in the categorization of the project in a Category based upon its potential environmental and social risks and impacts. These potential risks and impacts include physical, biological, socio-economic, health, safety, cultural property, trans boundary impacts and global impacts including Greenhouse Gas (GHG) emissions and vulnerability to climate change effects.
OS2 Involuntary Resettlement: Land Acquisition, Population Displacement & Compensation	-To avoid involuntary resettlement where feasible, or minimize resettlement impacts where involuntary resettlement is unavoidable through project design; -To ensure that displaced people receive significant resettlement assistance, preferably under the project, so that their standards of living, income earning capacity, production levels and overall means of livelihood are improved beyond pre-project levels; -To set up a mechanism for monitoring the performance of involuntary resettlement programs in Bank operations and remedying problems as they arise so as to safeguard against ill-prepared and poorly implemented resettlement plans	This OS is triggered if projects require the involuntary acquisition of land, involuntary acquisition of other assets or restrictions on land use and on access to local natural resources which result in: Relocation or loss of shelter by the people in the project area; Loss of assets or restriction of access to assets including national parks, protected areas or natural resources; or Loss of income sources or means of livelihood due to the project, whether or not the PAPs are required to move.
OS3 Biodiversity and Ecosystem Services	-To preserve biological diversity by avoiding, or if not possible, reducing and minimizing impacts on biodiversity; -In cases where some impacts are unavoidable, to endeavor to reinstate or restore biodiversity including, where required, the implementation of biodiversity offsets to achieve “not net loss but net gain” of biodiversity; -To protect natural, modified and critical habitats; -To sustain the availability and productivity of priority ecosystem services to maintain benefits to the affected communities and to sustain project performance. -To inhibit introduction of new organisms into a local environment	This OS is triggered if a project is to be located in a habitat where there may be potential biodiversity impacts or in areas providing ecosystem services upon which potentially affected stakeholders are dependent for survival, sustenance, livelihood or primary income, or which are used for sustaining the project. It is also triggered if the project is designed to extract natural resources as a main purpose (e.g. plantation forestry, commercial harvesting, agriculture, livestock, fisheries and aquaculture). It is also triggered where there is extensive interference with the ecosystem including introduction of new organisms not endemic to the locality

OS 4: Pollution Prevention and Control, Greenhouse Gases, Hazardous Materials	-To manage and reduce pollutants likely to be caused by a project so that they shall not pose harmful risks to human health and the environment, including hazardous, non-hazardous waste and GHG emissions. -To set a framework for efficiently utilizing all a project's raw materials and natural resources especially focusing on energy and water.	This OS is triggered if the project is likely to cause significant adverse environmental or social impacts owing to the emission of pollutants, waste or hazardous materials covered by national legislation, international conventions or internationally recognized standards or by unsustainable resource use. It is also triggered by potentially significant levels of GHG emissions.
OS 5 Labour Conditions, Health and Safety	-To protect the workers' rights and to establish, maintain, and improve the employee – employer relationship; -To promote compliance with national legal requirements and provide due diligence in case national laws are silent or inconsistent with the OS; -To provide broad consistency with the relevant International Labour Organization (ILO) Conventions, ILO Core Labour Standards and the UNICEF Convention on the Rights of the Child in cases where national laws do not provide equivalent protection; -To protect the workforce from inequality, social exclusion, child labour and forced labour; and -To establish requirements to provide safe and healthy working conditions	This OS is prompted if the project involves the establishment of a temporary or permanent workforce.
Operational Safeguards Triggered By STVET -VCD	**YES**	**NO**
OS1	**X**	
OS2		**X**
OS3	**X**	
OS 4:	**X**	
OS 5	**X**	

The OS 1: Environmental and Social Assessment: Policy is triggered by the project through if the project requires mandatory Environmental and Social Screening Process through which the project is assigned a Category based upon its environmental and social risks and impacts. Environmental Assessment (EA) in view of project being proposed for Bank financing to help ensure that the project is environmentally sound and sustainable, and thus to improve decision making. The EA is a process whose breadth, depth, and type of analysis will depend on the nature, scale, and potential environmental impact of the proposed investments and leads to the Categorization of the project hence determining the level of EA required. The EA process takes into account the natural environment (air, water, and land); human health and safety; social aspects (involuntary resettlement including disruption of livelihoods, indigenous peoples, and cultural property) and transboundary and global environmental aspects.

Operational Safeguard 1 further requires that the ESIA report must be disclosed as a separate and stand-alone document by the GoSS and the AfDB as a condition for Bank finalization of the project development. The disclosure should be accessible by the general public and local communities and at the Banks website and the date for disclosure must precede the date for appraisal of the program/project. The policy further calls for any project as a whole to be environmentally screened to determine the extent and type of the EA process. The Africa Development Bank system assigns a project to one of the three project categories.

STVET -VCD is currently confirmed as a Category II Project. In line with the Bank´s Environmental and Social Safeguards requirements, an Environmental and Social Impact Assessment (ESIA) must be conducted and the related reports approved and disclosed both by the Bank and the Government of South Sudan, 30 days before the Project Team can proceed from the Project Concept Note to Appraisal.

The OS 2: Involuntary Resettlement: Land Acquisition, Population Displacement and Compensation is triggered if a project requires the involuntary acquisition of land, involuntary acquisition of other assets or restrictions on land use or access to local natural resources. Impacts may include relocation or loss of shelter by the people or a section of the people in the project area, loss of assets or restriction to livelihood assets or loss of income. This project will not trigger this Operational Safeguard because not involuntary resettlement will be involved at all.

The OS 3 Biodiversity and Ecosystem Services: This Operational Safeguard is intended to preserve biological diversity. It is usually triggered if a project is located in a habitat where it is likely to affect biodiversity or hinder exploitation of certain ecosystem services depended on by the stakeholders. It is also triggered if the project is designed to extract natural resources as the main purpose.

The OS 4: Pollution Prevention and Control, Greenhouse Gases, Hazardous Materials and Resource Efficiency: The Operational Safeguard is intended to prevent or reduce pollutants likely to be caused by the project so that they don't pose harmful risks to human health and the environment or to set a framework for efficient utilization of the project's raw material or natural resources. OS 4 is triggered if the project is likely to cause significant adverse environmental or social impacts due to emission of pollutants, wastes or hazardous materials. The proposed project will produce solid and liquid wastes including hazardous wastes; therefore, OS 4 will be triggered, amend accordingly.

OS 5: Labour Conditions, Health and Safety: This Operational Safeguard Policy is intended to protect the workers' rights and to establish, maintain, and improve the employees-employer relationship. It provides due diligence in case the national legal requirements are silent or inconsistent with international requirements such as the International Labour Organization requirements or UNICEF's Convention on the Rights of the Child. This OS will be triggered because the project will require establishment of temporary employment especially during the construction works.

4 CHAPTER FOUR: BASELINE ENVIRONMENTAL AND SOCIOECONOMIC CONDITIONS

4.1 Introduction

This chapter presents the baseline environmental, socioeconomic and cultural conditions of the project site and its environs. The scope of this chapter covers the project's area influence, the immediate neighborhood around the project site, across the subjects of:

- Physical Environment,
- Ecological Environment, and
- Socio-cultural and Economic Environment.

Project Area at two sites University of Juba and MTC. All within the city of Juba, Therefore, the environmental and social Baseline context is Juba.

Juba, South Sudan's capital comprises three of the 16 payams of Juba County: Juba, Kator and Munuki. UN-OCHA (2007) estimated Juba as covering 336 km2 and however the city has been is expanding over the years, with majority of growth happening westwards and southwards.

Population

Juba's population has increased steadily over the years, expansion further accelerated in the post-CPA period. More than 2 million IDPs were said to have returned to Southern Sudan, Reports in 2007 and 2008 put Juba's population as high as one million people. Other studies estimated Juba's population during the 2005 – 2010 period at between 406,000 and 600,000.

Employment, poverty trends and quality of life

Data from the International Labour Organization indicates that the unemployment1 rate in South Sudan remained relatively stable since the country gained independence, with estimated values of 12.6 % in 2010 and 12.7 % in 2020 (ILO, 20212). Significant variations are reported between age groups and gender categories, with the highest unemployment rate observed among youth aged 15-24 (18.6 %) and women (13.2 %) compared to male (10.9%) in 2019 (ILOSTAT database, 2020). The high unemployment rate due to slowdown in economic activity and low literacy rates is likely to further undermine South Sudan's economic prospects in the medium to long term

South Sudan has low levels of development and social equality. Human Development Index HDI is low standing at 0.433 in 2019 and ranking the country at 185 out of 189 countries and territories). The poverty headcount ratio was at 76.4% in 2016, suggesting that 7 out of 10 people were living on less than $1.9 a day at 2011 international prices (World Bank, 2021). As a measure of the depth of poverty. Food insecurity in the population is considerably high in South Sudan, with a reported value of 84.9% in 2018 (FAO, Faostat 2020). The high level of food insecurity could possibly be attributed to massive displacement of populations that have disrupted agriculture crop production and market systems, resulting from economic crises and the effects of years of conflict. In 2018, the percentage of people who lived in households classified as severely food insecure3 was 63.7 % indicating that most households were not able to meet their basic food needs (FAO, Faostat 2020).

In terms of health conditions, life expectancy at birth for the total population was estimated at 57.6 years in 2018. Women generally live longer than males (life expectancy at birth: females 59.1 being their male counterparts and 56.1 years) (UNDESA, 2018).

Electricity and access to technology

According to the World Bank data, less than half of South Sudan's urban population (46.8 %) had access to electricity in 2018. progress in increasing access to the electric grid has been slow and the country is striving for a system that runs primarily on renewable energy and reaches more homes (World Bank, 2021). In 2017, only about 8 % of South Sudan's population used the internet (International Telecommunication Union (ITU), World Telecommunication/ICT Indicators Database, 2020).

Water and sanitation

As the urban population of South Sudan continues to rapidly expand, basic services such as sanitation have failed to keep pace with the change has produced regular estimates

According to the 2017 The WHO/UNICEF Joint Monitoring Programme for Water Supply, Sanitation and Hygiene (JMP); the urban population with access to at least basic drinking water services was 64.8 % (WHO & UNICEF, 2017). About 20.4 % of the urban population in South Sudan used improved basic drinking water services that require collection time of more than 30 minutes and are therefore classified as having access to limited drinking water services. In 2017, it was estimated that the urban population with access to at least basic sanitation services was 36.8 %,

4.2 Site specific site Baseline information

All the sites general topography of the area is flat and the terrain has slight undulations with pronounced depressions forming the drainage of the general area. Soils are typical for South Sudan black loamy soils with poor drainage.

Table 4-3 Description of site specific baseline information

	Project activity	Soil characteristic	Land use/land cover type	Ecological sensitivity	Livelihood activities on site
1	Construction of a modern building (Offices, lecture theaters and Laboratory at University of Juba	Black Loamy Sandy soils (Appendix 4)	Built up area within Campus Characterized with planted trees and grass Has access road and water & electricity supply	*Non*	Part of the institutions land (college land
2	Construction of Hotel for women and Equipping the laboratory	Red sandy agricultural Soils Appendix 6)	Has access road and water & electricity supply	Non	Part of the institutions land (college land)

CHAPTER FIVE: PROJECT ALTERNATIVE

5.1 Overview

The consideration of alternatives or options to a project proposal, which will achieve the project's objectives is a requirement of many ESIA systems. It lies at the heart of the ESIA process and methodology. During the scoping process, alternatives to a proposal can be generated or refined, either directly or by reference to the key issues identified. A comparison of alternatives will help to determine the best method of achieving project objectives while minimizing environmental impacts or, more creatively, indicate the most environmentally friendly or best practicable environmental option.

Environmentally speaking, not carrying out the development ("No Project Alternative") may be the best option, as the area would remain a relatively undisturbed area providing a habitat for the varied flora and fauna presently observed. Although this area will continue to be impacted, though minimally, by anthropogenic and natural factors but from a socio-economic perspective the "no action" alternative may not be the best alternative as the numerous benefits to be gained from the development both locally and nationally would not be realized and the resources in the area would continue to be underutilized.

In order to enable the proposed project to seek different ways of minimizing its impacts on the environment and at the same time achieve its objectives several alternatives were assessed. This not only justifies the course of action (base case) but also enables the risk management to follow a hierarchy of:

1. Avoidance: Temporal and spatial;
2. Elimination and minimization: non-structural *ex-ante* mitigation
3. Elimination and minimization: structural *ex-ante* mitigation
4. Elimination and Response: structural *ex-post* mitigation
5. Elimination, Recovery and Development: non-structural *ex-post* mitigation

The proceeding subsections review these alternatives in the subjects of: location, time, design, inputs, existence and the base case with mitigation. The approaches include simple checklists, overlay maps, complex matrices, mathematical models descriptions of the main impacts and the reasons for their rejection. In this ESIA consultations with stakeholders and site visits have provided basis for identifying alternatives.

5.2 Alternative Site

This option involves pursuing the proposal but on a different site meaning its impacts that are relevant to the proposed site or occur due it will be avoided. The avoidance of these *in-situ* and *ex-situ* regional impacts would be the main benefit of this option but there will also be other impacts specific to the alternative site and due to specifications of the proposed project, a different site away from the current sites, would also increase logistic costs. Alternative sites are also not readily available since availability of land is limited. Additionally, the selected sites are in government land and therefore no need to compensate

the land owners as well as developing a relocation action plan. While both construction and building usage are in line with the land uses within the institution.

5.3 Alternative Schedule

This option entails carrying out the proposal at a later time thereby offsetting its impacts to that time. Only benefit is if there are improvements in baseline conditions and technologies that may be involved with the proposal. However, in this case, there are no guarantee and it may only lead delays in development, therefore carrying out the proposed project with mitigation would be a preferred option due to this uncertainty. In addition, carrying out the proposed project at later time may lead to more operational and logistic costs due to increasing inflation and standards of living.

5.4 Alternative Design

This option curtails undertaking the project but with different infrastructural designs that encompass: buildings, roads, power, water and sewerage etc. The project design will be achieved by considering the options available that would ensure cost-effectiveness and avoid or reduce environmental and social impacts as much as possible. Additionally, several of the other possible designs may result in higher building densities and less internal transport/path optimization. This would mean the project would use more energy and resources as compared to the preferred project option.

5.5 The 'NO Action Alternative'

This alternative involves leaving out the STVET -VCD. The "No Project" alternative implies the project does not proceed thereby maintaining the status quo. The status of the environmental resources neither improves nor worsens since the state of the resources is not interfered. In order for South Sudan to develop and benefit from increased capacity of training Technical training. The labour demand assessment in the Agribusiness subsector showed that there will be very rapid demand of qualified labour in the near future as the country is focused on utilizing these resources to grow her economy. A skilled and semi-skilled labour force with vocational training background will be on demand to drive the investment in the Agribusiness subsector. While the Hostel will allow the female gender to access high quality training at MTC incubation center has high potential to support innovators and generate products and business ideas to support wealth creation**.** As such the "No Project" alternative means limited support for business development and innovations. There will be no training of the skilled and semi-skilled craftsmen and artisans that are critically required in the country.

The advantages of 'No Action Alternative' include:

- Minimum environmental and social disturbance

Disadvantage of 'No Action Alternative' include:

- Unresolved prevailing skills training for the youth.
- Enhancement and improvement of socio-economic environment will not be achieved.
- No employment opportunities as there are no construction activities.
- Failure to effectively implement the Agribusiness strategy and grow the economy.

5.6 Recommended Alternative

After analysis of alternatives, taking into account environmental and social impacts including views from Stakeholders it was recommended, that the current sites selected were optimal in terms of minimizing environmental and social impacts from the project. Siting at alternative locations: the needs assessment carried out by the Government of South Sudan identified a need to build a science complex at UOJ and Female hostel, a perimeter wall and equip the laboratory / workshop at MTC, All the two will support the capacity of the technical and vocational training institutions to be able to train and produce skilled and semi-skilled man-power that will be required for effective leveraging of the country's economy on Agribusiness. As such there were no better alternatives, additionally the selected sites were in government land and therefore no need to compensate the land owners as well as developing a relocation action plan.

The recommended Alternative considering the environmental and social impacts including views from Stakeholders alternative was the current identified sites.

6. CHAPTER SIX: STAKEHOLDER ANALYSIS AND PUBLIC CONSULTATIONS

6.1 Introduction

This chapter describes the stakeholder identification process, the consultation methodology used, identified stakeholder issues and concerns regarding STVET -VCD- project activities at the Two sites; construction of a modern building – offices, lecture rooms, and equipped laboratories at University of Juba and construction of women hostel and equipping laboratory/ Workshop at MTC. Consultation was conducted according to the requirements of **AfDB OS 1** and ESIA ToR as guided by South Sudan Ministry of Environment and Forestry. Ongoing consultation will continue during the disclosure of this ESIA report and throughout the implementation of the project in Juba, South Sudan. Therefore, the proponent/ contractor (Ministry of labour) is expected to engage community and the other stakeholders at the project sites to update them regarding construction activities. Community engagement will also be used to provide stakeholders an opportunity to submit grievances that could result from project activities in relation to environmental, social and safety impacts throughout the project implementation.

The disclosure of this ESIA will be according to **AfDB OS 1** to enable the community access project specific information in timely manner and understand expected project activities. The ESIA report and non-technical executive summary (hard copy) will be available at the Ministry of Labour offices – Juba, University of Juba and MTC. ESIA report will also be disclosed through Ministry of Labour website and AfDB website.

Public engagement is also emphasized by the Environmental and Social Impact Assessment Guidelines issued by Ministry of Environment and Forestry. The engagement process for this study started by the ESIA Project team, with support from the client, identified initial stakeholders. Thereafter stakeholder's analysis was conducted in order to determine:

- The relevant stakeholders
- How they are affected by the project
- Their spatial location
- Their degree of influence over, and dependence on the project; and
- Key issues critical to them

6.2 Stakeholders Identification

ESIA Project team used initial list of stakeholders to identify key stakeholders of STVET -VCD, project including those who are directly or indirectly likely to be affected by the project (Project Affected Persons - PAPs), authorities and the interested or concerned parties. This list was expanded based on field work analysis considering the needs, wants and expectations of stakeholders.

Table 6-1 Stakeholder Identification and Analysis Key Stakeholders Interest, Role and Influence.

Key Stakeholders	Interest, Role and Influence
Development Partner (AfDB)	Funding the projects
Ministry of labour	Facilitates planning, support and coordination of Project implementation issues. Negotiating and administering major project construction and management issues.

University of Juba	Provide land for the construction of the Science Complex
MTC	Provide land for the construction of women Hostel
Ministry in charge of Finance and Planning; South Sudan	Facilitates planning, support and coordination of national financial and development issues. Negotiating and administering financial arrangement with donors for proposed project implementation
Ministry of General Education, Agriculture and livestock development, Higher Education, general education	Project information dissemination and awareness Policy guidance for planned activities, and investment in the agriculture value chain subsector
Youth, Women Job seekers and contractors	labour and employment during construction and implementation of project, particularly on labour employment
Ministry of Land, Water, Energy, and Environment	Providing policy guidance for planned activities on land, water, energy and environmental management
The Ministry Regional Administration, Local Government and Special Units	Coordination and administration of the connection between different tiers of government: Regional Administration and Local government and Municipal Council.
Students Community	Create awareness and raise any concerns
Ministry of Environment And Forestry	Enforcement of laws and regulations for environmental management and protection. Advisor to the government on all environmental matters, and technical arbitration in environmental Audits and ESIAs.
UNESCO	Periodic monitoring to ensure that no adverse impacts result from implementation of development projects. Act as an environmental advisor to all stakeholders involved in environmental management
South Sudan Water Authority (SSUWC).	Management of water resources and water supply for urban areas including in the project sites
South Sudan Electrical Company and JETCO	Provide and maintain electricity utility in the project sites
Commissioner for Lands, Chief Government Valuer Department of Lands and Registration Department of Survey and Urban Planning	Issuing right of occupancy on land, oversees land use planning and issues related to compensation and resettlement. Streamline Procedures for Land Acquisition, Valuation, Compensation and Allocation Regularization of Informal Settlements. Preparation of legal Framework for Land Valuation Approval of compensation schedule
Department of Forestry	Management of forestry including identifying the type of trees to be planted in the project sites
Other stakeholders: These are identified as those with ability to influence the project either as regulators or because they have special knowledge that can contribute to its design and implementation. These stakeholders include:	
South Sudan Chamber of Commerce Department of Lands and Registration Information ministry, Radio Stations Department of Land and Registration Department of Land Administration Department of Survey and Mapping South Sudan Agricultural Research Institute MPs and Representatives Directorate of Occupational Health and Safety (DoSH) users Land/building Occupiers	

Constructors Association Suppliers. Students and Potential students

6.3 Stakeholders Consultation and Stakeholder Engagement Plan

Consultation with the public and stakeholders is considered as an important activity of the environmental assessment study for the project. It provides valuable input to bring about sustainable and acceptable project design as well as ease of implementation and operation to user community. Consultation with the public in the project area were made at the project site and through key informant interview and focused group discussions.

The main objectives of the public and other stakeholder consultation were:

- Disseminate information about STVET -VCD- project activities
- To provide stakeholders with an opportunity to assure that the benefits of the project are maximized and major adverse impacts are taken care of in the project planning;
- To develop and increase public confidence as well as develop a better transparency and accountability in administration and decision making;
- To obtain information to improve the baseline environmental data and key area of social and environmental concerns;

The methodology adopted for the purpose includes: -

- Arrange meeting and undertake discussion and data consultation with relevant sector offices through prepared consultation and data collection environmental checklist
- A brief information about the proposed rehabilitation work was provided at the start of every consultative meeting, followed by relevant discussion regard to the natural resource use.

Consultations were conducted with various relevant sector offices in South Sudan.

6.3.1 Meetings to initiate contact, schedule project presentations and start to build alliances.

The consultant with support from The Ministry of Labour during preparation of Stakeholders Engagement Plan (SEP) initiated relationships with key stakeholders identified, through initial meeting with stakeholders for the purpose of collecting information of stakeholders, including institution, reference person, telephone number and email address which were used to develop a Contact Database.

6.3.2 Meetings with strategic stakeholders to gain support, advice

There were Key Informant meeting which served to collect preliminary concerns and needs and is likely to develop strategic alliances to gain support, advice or prepare/schedule engagement activities with other stakeholders.

6.3.3 Meetings to present project and benefits, educate on project concepts, collect inputs, inspire and build coalition.

The meetings were focused group discussion with; MoL, the University of Juba administration MTC administration, current students at the faculty and MTC, Ministry of Environment and Forestry, South Sudan Construction Authority, Bureau of standards . The intention was to raise awareness, inform the Undersecretary and Directors of the different departments about the project's vision, and discuss environmental and social impacts of the project both negative and positive. This was to inform build consensus, collect needs, ideas and input from the state holders. Session includes the following:

- Introduce the basic concepts of Sustainable development.
- Create momentum for the project.
- Introduce and gain support for mobility concepts in the project.
- Obtain information, opinions and suggestions about the project Environmental and social Impacts as well as a framework for environmental management and monitoring plans.

Government agencies are a key group of stakeholders, fundamental for the feasibility of the project and the efficiency of its development. The complexity of the STVET -VCD plan will affect different areas, requires acknowledgement and coordinated implication of several departments of the administrative corpus. Some relate directly to the project implementation, other should review and inform from different perspective to assure compliance with environmental and social safeguards, in addition to those from which collaboration benefits project's development.

The following agencies representatives participated in the consultation meetings: (table below

- Ministry of Labour
- University of juba
- MTC
- Bureau of standards
- Ministry of Environment and Forestry
- Ministry of General education
- Ministry of Higher education
- Student Community members

6.4 Key Issues for Stakeholder Engagements

The comments stakeholders raised were collated and analyzed to see which issues are of concern and should be addressed through this ESIA. The following subsections list these stakeholders and the comments they raised. This was done in respect to the fact that public concern is fundamental to the delineation and management of the project's significant risks. A number of issues were identified that were useful during stakeholder engagements.

I. ***Identification of environmental impacts***

These include both negative and positive environmental impacts of the programme. These cover issues such as environmental degradation, vegetation clearing, potential increase in level of levels of pollution – noise pollution, water pollution, air pollution, issues such as oil spills, generation of wastes, etc. All this issues have been identified, analysed and remedial measures proposed to address the concerns.

II. Socio-economic and socio-cultural issues

These include both negative and positive socioeconomic and socio-cultural impacts that will be associated with the project were discussed. What are the potential positive impacts which are likely to emanate from the project implementation? How is the project going to negatively influence social cultural well-being as well as economic well-being? etc. These were analysed and adequately addressed in this ESMP.

III. Occupational health and safety

Possible occupational health and safety of workers as well as community health challenges during the project development phase as well as operational phase were discussed and analysed.

Table 6-2 Summary of consultation events and timeline

TIME	INSTITUTION	Objective/Key issues for discussion (Stephen to complete)
MONDAY – 3 April 2023		
9:00-10:00	Courtesy call on Country Manager, COSS	Introducing the purpose of the mission and seeking the support of the Country Office.
10:30 – 12:30 am	Introductory meeting with the Ministry of Labour, UNESCO, MTC and University of Juba	Objective of the mission, discussion on the draft programme and confirmation of scheduled appointments with various stakeholders Introduction to the Relevant Officers and making Consultations with key personnel regarding Environmental and Social Issues of the Project. Hold discussions with the project management and implementation team.
14:00-16:00pm	Meeting with the Ministry of Environment and Natural Forestry	Consultation on the ESIA processes, regulatory and legal requirements as per GoSS
2:00-4:30	Meeting with Management of Juba Multiservice Training Centre (MTC) - Site visit, assessments and consultation with stakeholders	Site visit and stakeholder engagement. Identify key areas of environmental and social safeguards concerns.
TUESDAY – 4 April 2023		
9:00-12:00	Continue with stakeholder engagement at MTC	Site visit and stakeholder engagement
2:00-4:30 pm	Meeting with the management of the University of Juba - Site visit, Assessments and consultation with stakeholders	Site visit and stakeholder engagement Identify key areas of environmental and social safeguards concerns.
WEDNESDAY - 5 April 2023		

TIME	INSTITUTION	Objective/Key issues for discussion (Stephen to complete)
9:00-12:00	Con't stakeholder engagement at the University of Juba	Site visit and stakeholder engagement
2:30-4:30	Joint meeting with E&S Technical staff of relevant Ministries (Ministry of Labour, Ministry of Environment and Forestry, Ministry of Gender and Social welfare, Ministry of Land, Housing and Urban Development)	Broad Stakeholder Engagement with the relevant government departments focusing on environmental and social safeguard issues and concerns.
THURSDAY – 6 April 2023		
9:00-10:00	Debriefing with CM, COSS	Debriefing and informing the CM COSS on the preliminary findings and ironing out any Challenges
10:30-12:30	Joint debriefing meeting with Ministry of Labour, Management of MTC, University of Juba and Ministry of Environmental and Forestry and UNESCO	Debriefing and informing on the preliminary findings and ironing out any Challenges
2:00-4:00 pm	Wrap up with Under-Secretary, Ministry of Labour and UNESCO	Final debriefing meeting with the project Management team and charting way forward

CHAPTER SEVEN: IMPACT IDENTIFICATION, ANALYSIS AND MITIGATION MEASURES

7.1 Introduction

The development of projects usually causes a wide range of environmental and social impacts. The impacts may be direct or indirect and may be short-term or long-term in duration. Many constructions related impacts will be short-term. Long term impact would persist after construction and include those that are resulting from the operation of the project. Direct impacts are physical impacts caused by construction and operation of the project. Indirect impacts are those, which may be encouraged or enabled due to the presence of the project or, during construction, due to the presence of construction works, facilities, jobs, and other construction-related features. The main impacts associated with the anticipated improvement of the proposed project include socio-economic, physical resources (hydrology, surface water quality, soils, air quality and noise); ecological resources (eco-system); material assets, public health and safety, aesthetics and landscape.

In order to assess the significance of the proposed project's impacts, the impacts were first identified from their source which are the project's activities/equipment/processes/materials and then the impact receptor which are the baseline environmental and social conditions. This was carried out through the use of the Impact Checklist, which only identifies an impact. This process was also informed by the public participation exercise.

The impacts were then classified as either positive or negative and the project phase whence which they will occur and then they were discussed individually in the later subsections of this chapter. The impacts were lastly analyzed in terms of their characteristics on the aforementioned baselines to define their significance by using a matrix and this was also informed by the public participation exercise to identify the acceptable risks.

Lastly through literature reviews, professional knowledge, engagements with the proponent and engagements with stakeholders, mitigation measures were developed commensurate to the significance of impacts. This facilitated the development of the Environmental and Social Management Plan in this report. This entire process is illustrated through Figure 7-1.

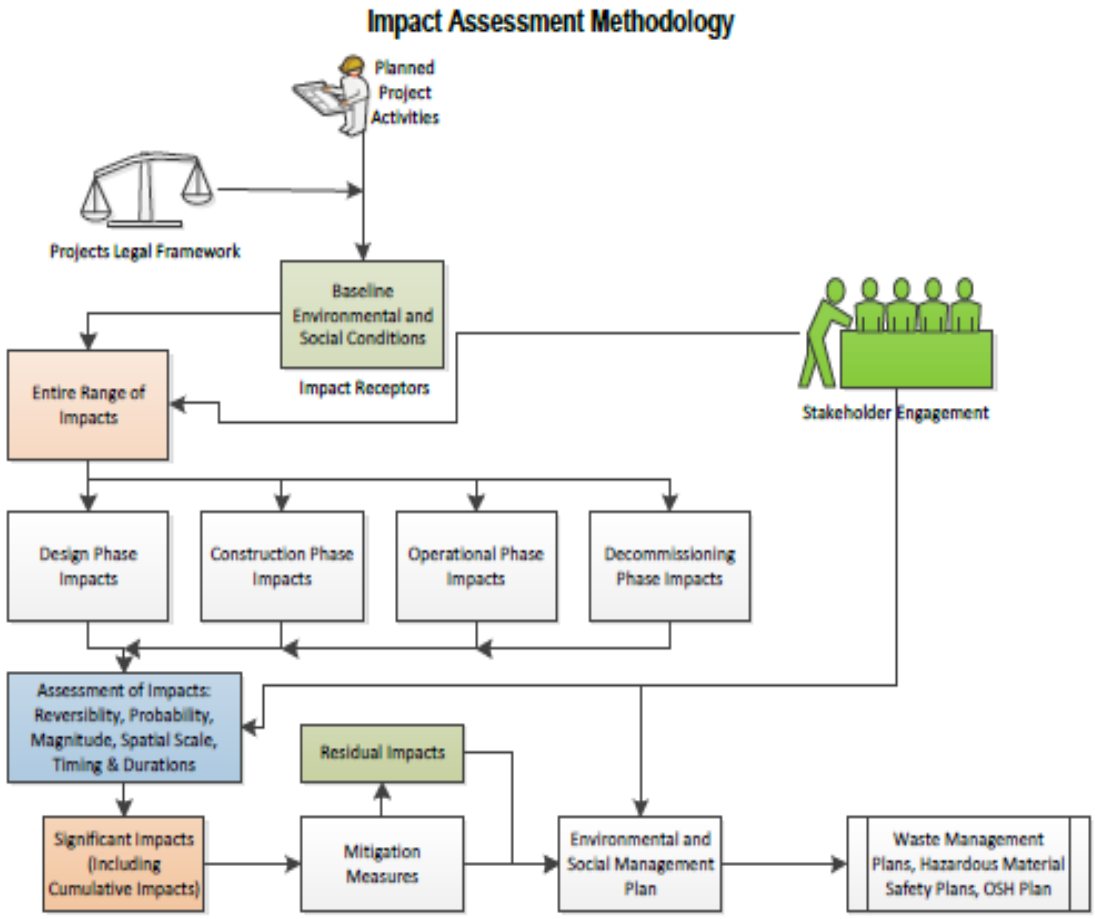

Figure 7-1 the process of Impact Assessment

7.2 Identification of impacts

Impact identification is a process designed to ensure that all potential significant impacts are identified and taken into account in project design and implementation. The Impacts identified were classified into two major groups i.e., Positive impacts and Negative impacts. The impacts have been assessed through the project cycle i.e. mobilization phase/construction phase, operation phase and decommissioning phase

7.3 Positive Impacts –

Among the positive impacts identified include:

a) Design and Construction Phase

(i) The project is anticipated to contribute to local employment for both skilled and unskilled labours. Creation of Employment and Business opportunities: the project will create employment and business opportunities for various professionals/consultants who will be involved in the planning stages of the project. They will include: project managers, engineers, architects, building economists, land surveyors, environmentalists, economists, planners among others.

(ii) In addition, procurement of materials from local sources will be a positive aspect of the project, as it will reduce the cost of the project and benefit local producers and suppliers'

(iii) Environmental opportunities: the project will also present opportunities for green/sustainable designing of the project, which support the minimization of environmental impacts whilst fortifying the project to achieve its intended objectives. It's at this stage that the opportunities which will enable the project achieve a sustainable development are discovered, explored and integrated into the project.

(iv) Increased Economic Activities and Government Revenue: the project will also increase the economic activities that will be carried in the area through those that will be primarily as a result of: the project's internal and ancillary activities; its supply chain; its value chain, and those that will be formed as a result of the project to support its occupants. The latter includes businesses that may form around the project site such as shops, kiosks and transport.

(v) Increased commercial viability: The establishment of the project in the two sites, will increase the commercial viability of the goods and services offered in the areas.

(vi) Improved Roads: the improvement and development of the project's access road

as part of the project will increase the amount and quality of roads in the areas. This will improve access to the neighborhoods and commercial establishments lying in the region of the project and therefore increase their business activities.

This will also be in line with local and national development policies that recognize the importance of roads and infrastructure towards development.

(vii) Impetus to Improve Amenities and Services: An increase in population to the area will provide an impetus for the municipal council to improve the much needed amenities and infrastructure to the area. The influx will also provide an impetus to develop shared facilities i.e. schools, hospitals, shops. This will have the indirect effect of creating job opportunities in the area. Companies also in the business of providing services such as telecommunication will also be encouraged to extend their networks to the areas, since it will be a ready and capable market for their services.

b) Operational Phase: The project will contribute to

(i) increased pool of domestically certified local swimmers and Divers through improved quality and demand driven competence based training delivery;

(ii) enhanced institutional capacity for innovation and product development to deliver high quality demand-driven products through accreditation and certification with international accrediting bodies; and,

(iii) Increased number of locally developed products and investment opportunities Agribusiness and other related Agribusiness sub sectors employability. The project will directly benefit around 1000 youth annually and about 12,000 will be benefited indirectly Thus contribute towards Agribusiness which is anticipated to be the engine of the future of South Sudan Economy.

(iv) New Business will be created bringing employment opportunities for people in the community and enhance the income of participants across the different business value chains.

(v) The attendant rehabilitation /Construction of support infrastructure such as feeder roads in the new institution sites will enhance market and information access for the local communities.

(vi) Construction of incubation centre will enhance alternative income generating enterprises and bring positive impact in terms of socio- economic empowerment of the households.

(vii) Support to South Sudan ’s National local content desire in the Agribusiness (tourism, marine, maritime and offshore oil and gas) therefore promote active participation of young people in the Agribusiness enterprises

(viii) Diversification of local economy and promotion of investment at the project sites: apart from opportunities for self-employment, there will be increased income-generating activities like selling food and other merchandise to the construction workforce during construction and increased student and other visitors population during operation.

(ix) Promotion of employment opportunities and poverty reduction: the project will attract employment during construction and operation. The employment will increase income to local communities as most of the casual laborers and some skilled workforce will be sourced from the project sites

(x) Enhance industry partnership with the institutions after acquiring advance technology equipment, which the industry may utilize and build partnership.

(xi) Improved innovation environment that attracts local and international talents as well as opening up numerous opportunities for and spur innovation and investments in the country

(xii) Opportunities to diversify livelihood options thus enhanced resilience of the communities from various shocks.

(xiii) Likelihood of stimulating economic activities and social development considering new skills and knowledge.

(xiv) Increased property values: especially land around the project sites.

(xv) Participation and mainstreaming different groups (women, boys, girls and men's) will have impact in minimizing disparity among vulnerable parts of the community (elders, women, children and youth). Livelihood will be more diversified by participating on improved business opportunities in Agribusiness, and ecotourism will improve income of households, diversified livelihood and income cumulatively builds the capacity of households for resilience to sector shocks.

7.4 Negative Environmental and Social Impacts

The anticipated sub-projects to be financed by the program including new infrastructure (laboratories, workshops, offices, water supply systems, waste management systems, access and internal roads among others. Some of the activities may have potentially adverse effects on biophysical and socio-economic environment if not properly managed. Different impacts are likely to arise at different times during the project's activity phases particularly during construction and operation phases. The overall potential negative impacts are remained as Category II and expected to be site- specific and mostly reversible. These impacts will be minimized by incorporating the required mitigation measures. The potential negative impacts of the project are highlighted as follows:

a) Construction Phase

i. .

i. **Loss of Flora and fauna:** vegetation has a great on the general and localized environment assists in maintaining the structure of the soil by holding the particles together. This enables the soil microorganisms to flourish as their habitat; the soil is stable. This in turn allows the organisms easily convert the dead leaves and plans to humus which helps enrich the

soil as well as preventing soil erosion. Converting the land area into a mostly built environment will minimize the natural process of the existing vegetation consequently, the de-vegetation during construction may result to negative effects on the flora and fauna by creating a disturbance.

ii. **Removal of top soil and landscape alteration, l**and requirement for construction purpose, loss of vegetation including trees, impact on air quality due to dust emission, impact on flora environment, nuisance noise, compaction of soil and work place accidents

iii. **Solid waste generation:** Moreover, temporal camp construction in the project areas in order to undertake construction activities, the contractor will need to set up site facilities or camps for worker's accommodation, offices, stores and parking in the project area. It is estimated that some amount of area of land will be needed temporarily for such purposes. If proper waste management facilities lack in the camping site, the waste generated from employed construction staff members and from machineries /temporal garage for machine maintenance.

iv. **Pollution from liquid waste generation** Wastewater generated from campsite will increase liquid waste generation in the area eventually impose more loading to sanitation facilities to handle. Wastewater generated from campsites, may be contaminated by fuel, oils and/or other chemical spills. If unattended, such wastewater generation would cause pollution to the environment and may result the outbreak of water borne diseases. Therefore, this impact is considered negative, of medium term duration and of high significance**.**

v. **Fuel and oil spillage accidental** spillage of fuel, lubricants and other chemicals used in the construction process would likely be a source of water contamination, / will pollute the surrounding environment.

vi. **Air pollution:** during construction phases air pollution from suspended particulates such as dust particles and emissions /from vehicles movement, during loading and quarrying could be substantial. Due to existence of settlements around some of the areas where construction works are carried out there could be air pollution through dust emission from excavation works more likely/will be carried out in the dry season, and it can be expected that these will lead for dust emission to the local surrounding environment.

vii. **Soil Erosion:** increase in soil erosion related to construction activities particularly in areas with loose soils. Risk of soil contamination from fuel, lubricants and oil spills, soil layer disturbance and compaction due to the entrance of heavy machinery and trucks, disturbance to topsoil created by earthmoving works and heavy vehicle traffic at construction phase, limited loss of flora and fauna;

viii. **Impacts on Archaeological, Cultural, Religious and Historical Sites**: review of previous surveys in the region, there are no any known or documented sites of archaeological, cultural, religious or historical value along the proposed project sites. But a due emphasis should be given at specific construction sites, for each subproject that involve construction of structures and demands land acquisition, to clear that the area has no any conflict of interests with any cultural, archaeological, historical or religious purposes and this should be cleared prior to the start of any activities.

ix. **Change in behavior, life style and livelihood**
Potential Changes to social fabric due to urbanization. The current cultural landscape in the project area has shaped the social fabric and is now woven into the daily lives by the various groups in the society. The daily cultural life and activity are likely to unconsciously designed around the existing landscape. Changes to the existing landscape will potentially have a negative impact on the richness and quality of social fabric in this area. This is the negative impact.

x. **Occupational Health and Safety** Occupational Health and Safety Risks
The construction workers will be exposed to respiratory diseases due to dust, fumes and cement. During construction, the workers may be at high risks of injuries due to construction machine operations. Construction workers may fall from the construction equipment and be injured or causing death. Among others, the occupational Health and Safety problems include: Injuries or death due to lack or poor separation of working areas and traffic area; the construction activities will expose workers, visitors and the general public to different physical hazards (e.g. from falling into trenches or being hit by falling objects, striking against object, overexertion, electric shock, fire and explosion, etc.), chemical hazards (contact with skin, inhalation of harmful chemical etc.), etc. This is predicted to be negative, short term and of high significance.

xi. Potential threats from spread of Sexual Transmitted Diseases and GBV/SEA
During construction, it is likely migrant workers will be attracted resulting into high interaction with the locals. Interaction with locals can provoke higher rates of violence, injury, alcohol and drug consumption and sexually transmitted diseases in the local population. This may cause a high risk of spread of HIV/AIDS and other sexually transmitted infections if the migrant workers and the local residents are not well informed, educated, or protected. Vulnerable residents of the host communities, such as youth and women, may be subject to exploitative behaviors as well. Besides, there could be high social interaction between community members, casual laborers and some skilled workforce who are coming from different places during construction phase, which may result in gender-based violence (GBV), sexual

exploitation and abuse (SEA) as well as attitude and behavior changes among local people. This is negative impacts, medium term and of high significance

b) Operation Phase

i. **Impact on water quantity and quality:** Water pollution can be caused by improper management of solid and liquid waste. Increased paved areas due to construction can also lead to increased runoff thus erosion risk that may further contaminate surface water resources. However, the greatest risk is from poor management of sewer from the learning institutions.

ii. **Solid waste management and waste water from the pool.** The activities during operations will generate considerable solid waste in the form of papers plastic bottles, glass, plastics and other debris as well as drained water.

iii. **Increased Water Demand:** Increased enrolment of students would generate additional demand for portable water to support the student and staff population.

iv. **Increased water demand for the laboratories** Because of evaporation and leaks, laboratories waste a significant amount of water each year. Water evaporation rates are high. To compensate, they constantly add more water to replace the water that has evaporated thus increasing water demand in the campus. While some evaporated water is certainly expected, the chemicals being released into the air surrounding the pool. These evaporated chemicals contribute to the production of greenhouse gases.

v. **Change in behavior, life style and livelihood**: influx of people in the project area in search of employment may leads to conflicts with local's communities. Increased income may directly encourage risky social behavior and disruption of traditional lifestyles; transmission of disease including HIV and COVID-19 may increase due to frequent visit of project based temporary employees and job seekers (outsiders) from other regions. Moreover, continuous interaction with outsiders throughout the project may create negative impact on morals, and local culture and traditions of the local communities, increased opportunities for tourism may further lead to mixing of people with different cultural backgrounds which may lead to interference in traditional lifestyles.

    i. **Resettlement/Gradual Displacement**: Rising land values due to the developments may lead to gradual displacement of natives as people with higher purchasing power move in to acquire land. The implementation of the project will require land, which earlier was being used for other activities. The details of land acquisition, resettlement and relocation may not be necessary, very few people are affected.

    ii. **Resource Depletion:** the presence of migrant workers is likely to increase demand for scarce freshwater resource and energy, which may result into competition of the same resources with hosting community. In addition, the institutions will attract student populations, as well as other service

providers, driving the demand for resources (water, land, timber etc.). This may exacerbate the engagement in illegal fishing and/or cutting of mangroves for human consumption and firewood. If the competition is uncontrolled might cause conflicts with local communities in the utilization of scarce natural resources and/or basic services.

iii. **Child protection, GBV, Sexual exploitation and abuse, Gender inequality**

Discrimination against women, unequal pay, sexual harassment, service interruptions, drug abuse, crime, liability for loss of life or destruction of properties etc.). This may be due to influx of migrants.

c) Decommissioning Phase

i. landscape alteration, demolition of building or change of user of the buildings impact on air quality due to dust emission, impact on flora environment, nuisance noise, compaction of soil and work place accidents.

ii. Solid waste generation: waste generated as a result of change of use of the facilities and from machineries /temporal garage for machine maintenance. The waste generated from employed construction staff members, if not well managed may result into environmental damage.

iii. **Pollution from liquid waste generation** Wastewater generated from decommissioning operations will increase liquid waste generation in the area eventually impose more loading to sanitation facilities to handle.

iv. **Air pollution: during the decommissioning phases:** includes air pollution from particulates and emissions /from vehicles movement, during loading and quarrying could be substantial.

v. **Occupational Health and Safety Occupational Health and Safety Risks**

The construction workers will be exposed to respiratory diseases due to dust, fumes etc. The workers may be at high risks of injuries due to decommissioning operations. Workers may fall from the construction equipment and be injured or causing death

7.5 Summary and Analysis of Impacts

The identified impacts of the proposed project are presented in Table 7-1 below follows in terms of the project phase where they occur.

Table 7-1 Summary of Potential Impacts

Phase	Potential Impacts	Significance
Mobilization /Construction	Rremoval of top soil and landscape alteration	+++
	Solid waste generation	+++
	Pollution from liquid waste generation	++
	Fuel and oil spillage accidental	++
	migrant workers: Increase demand for scarce freshwater resource and energy	+++
	Immigrant workers may exacerbate the engagement in illegal fishing and/or cutting of mangroves for human consumption and firewood.	++
	Air pollution	++
	Occupational Health and Safety Risks	+++
	Community Health and Safety Impacts	++
	Pollution due to poor solid waste management	++
	Impacts on Archaeological, Cultural, Religious and Historical Sites	+
	Potential threats from spread of Sexual Transmitted Diseases and GBV/SEA	++
	Land Acquisition, Resettlement and Relocation of Alternative Livelihood	+
	Socio cultural change/ culture shock	++
	Environmental Impacts Pollution	++
	Occupational Health and Safety	+++
	Community Health and Safety Impacts	++
	Social Impacts Potential threats from spread of Sexual Transmitted Diseases and GBV/SEA	++
	Impact on water quantity and quality	++
	influx Resettlement/Gradual Displacement	++
	Change in behavior, life style and livelihood	++
	Resource Depletion	+++
	influx Resettlement/Gradual Displacement	++++
	Child protection, GBV, Sexual exploitation and abuse, Gender inequality	++
Decommissioning	Solid waste generation	+++
	Air pollution	++
	Socio cultural change	+
	landscape alteration	++

	Noise pollution	+++
	+ not significant ++ Significant +++ Very significant	

CHAPTER EIGHT: MITIGATION MEASURES FOR IDENTIFIED IMPACTS

8.1 Introduction:

This section proactively identifies opportunities to improve the lives of the population in the area of project influence. The section outlines Safeguard measures that should be put in place to mitigate against negative impacts identified under this ESIA process. The measures include proposals for grievance redress mechanisms; enhancing of existing structures for environmental management, as well as provision for public participation through the project cycle. When properly implemented, safeguard measures proposed will not only reduce adverse impacts but also enhance the development potential of projects, contributing to sustainability and overall viability of the projects.

ESIA for 2 activities of South Sudan Support to TVET for Value Chain Development (STVET-VCD) project that will be implemented by the Ministry of Labour (MoL) with a third-party implementing agency. Construction/upgrading and equipping of laboratories, workshops, training classrooms in Juba (MTC and University of Juba School of Food Science and Technology), and construction of a girls' hostel at MTC. is pre classified as Environment Category 2. This ESIA is specifically covering the two project activities, the mitigation measures include:

The development of this project will have a number of significant positive impacts both locally and nationally.

8.2 Mitigation Measures During Construction:

I. **Disposal of construction waste:** contractor should submit a comprehensive waste management plan that details how all the wastes will be managed from waste segregation, reducing, recycling and reusing. The plan will also identify hazardous wastes and aid in developing MDS. It must be in line with in Country waste management regulations)

II. **Sourcing of Construction Materials**: All construction material (sand, ballast, stones) to be sourced from the country including licenced quarries in the country.

III. **Management of Vegetation**: Ensure minimal disturbance of flora and limit this to the specific construction sites. Upon completion of construction, contractor should have a landscaping plan that details measures for replanting trees as well as managing vegetation within the education facilities. In order to reflect project concept of sustainable development and environmental conservation, specific tree planting activity will be included in the biding document. In collaboration with PMT, all areas without trees will be planted with tree of indigenous species.

IV. Put in place program for strict monitoring of construction vehicles to ensure they only work in the area to be disturbed.

V. **Erosion Reduction:** Implement Soil erosion appropriate mitigation measures during construction and operational phase. This includes provision for adequate drainage systems, as well as planting vegetation on unpaved surfaces. In addition, control of the water flow speeds, especially for side drains by constructing erosion checks. Lined drainage channels at sensitive terrains shall be provided to control speed and volumes of storm-water. The discharge points must be carefully chosen to avoid erosion of arable land and creation of gullies. Nevertheless, all cuts in sloping grounds shall be refurbished firmly and provided with the vegetation cover to reduce the effect of soil erosion. For cleared land, it will be re-vegetated to slow down the movement of storm water. It is a requirement of the Contractor to control water during construction to minimize chances of erosion before the permanent works are completed will part of the specifications in the bidding documents.

VI. **Archaeological Site:** siting of project components must not be done within any sensitive site or archeologically significant site

VII. **Waste Management:** To mitigate the impacts from solid wastes an efficient collection and disposal system based on the principles of reduction, re-use and recycling of materials, shall be instituted at the construction sites, and construction camp. The solid wastes produced especially from the camp sites as well as at the construction sites will be collected and disposed of at designated landfill/ waste disposal site. The following specific measures will be implemented:

- Introduction of waste disposal bins, warning notices, "Dos &Don'ts" etc. posted at strategic points, through the campsite and construction sites
- No, on site burial or open burning of solid waste shall be permitted
- Instructions to contractor to put on his/her methodologies for handling hazardous waste such as oils, lubricants and non-combustible waste during bidding process will be provided
- The waste generation will be avoided and reduced prior to reusing materials on-site in order to minimize the off-site waste disposal as far as practicable.

VIII. Air Pollution Prevention and Control

- Observe speed limits for construction vehicles to reduce dust during transportation of materials into and out of the construction areas. Construction trucks transporting materials to the site, delivering sand and cement to the site must be covered to prevent dust emissions into surrounding areas;
- Sensitize the Drivers of construction to reduce vehicle idling so as to reduce emissions from exhaust. All machinery and equipment should be well maintained and kept in good working condition to ensure minimum emissions of carbon monoxide, NOX, SOX and suspended particles,

- To mitigate dust emissions, the construction area should be fenced to reduce the effect of dust on surrounding populations, scarves should be folded correctly to minimize dust emissions to the public; sprinkle soil surfaces with water to reduce dust levels;
- Proper PPES including masks should be provided to all personnel in areas prone to dust emissions during construction;
- Piles of excavated soil should be closed / covered / watered in dry or windy weather to reduce dust emissions.
- Project management unit to ensure all contractors and their sub-contractors have Occupational Safety and Health (OSH) training which may include hazard awareness, safe work practices, and emergency preparedness for their employees. The workers must be properly oriented to ensure that they are well informed about site work rules, personal protection and prevention of injury to co-workers
- The project management unit must require that contractors and subcontractors commit to adhere to Environmental, Health and Safety (EHS) plan. This will be achieved by making this aspect a component of a contractual agreement;

IX. Noise & Vibration Management

- All equipment's utilised should have measures for noise reduction to meet relevant noise standards. The activities must adhere to Tanzania Standard TZS 932:2007 which stipulates maximum permissible i.e. 70 dBA for industrial area and 60dBA for residential and industry/small scale production and commerce for daytime. The project will also mitigate, the nuisance of noise and vibration by adhering to the measures as required by Standard Specification for Road Works 2000 and Special Specifications. Where this is not possible, erect noise shield to protect populations that are at highest risk of exposure
- Activities that will cause noise will be scheduled at times where the impact on businesses/ schools and the nearby hospital is minimal. To achieve this, the construction work should not be permitted during the nights, the operations on site shall be restricted to 07.00hrs -19.00hrs. No noise generating works will be allowed at night especially in areas with settlements/public services like hospitals and religious buildings.
- All workers in noise environment to be supplied with proper PPEs
- The vehicles that are excessively noisy due to poor engine adjustment or damage of noise abatement equipment shall not be operated until corrective measures have been taken.
- The local residents will be kept informed of the planned works and advised in advance of noisy works of the location of noisy equipment will be chosen as far

as possible away from sensitive receptors (houses, workplaces, schools, mosques, churches and hospitals).

- The Contractor will ensure that equipment and vehicles are well maintained and properly fitted with exhaust mufflers.

x. Chemicals Management

- All chemicals should be stored in budding areas and clearly labelled, specifying the nature and amount of chemicals in individual containers;
- Entry into hazardous storage point is limited to authorized personnel only.
- The Contractor shall avoid oil and fuel spills into the storm water to control these chemicals to flow into forested habitats, wildlife and biodiversity. This can be avoided by:
- The liquid wastes used oils will be filled in the drums and containers for disposal to the authorized dumping places. Domestic effluents at the campsite or generated by the increase population will be treated in public sewerage system or soak away pits and septic tanks.
- No re-fueling of plant or transfer of materials near watercourses, o Placement of enough sanitary facilities/toilets e.g., septic tanks and soak pits at the campsite depending on the number of workers present; o Immediate clean-up of local spillage to soil;
- Good housekeeping required within material storage compounds and vehicle maintenance yards;
- Wash areas to be constructed in such a manner to ensure that surrounding areas are not polluted
- All construction vehicles to be washed in the designated wash areas

XI. Management of Social Risks:

Social risks are linked to the influx of labor and will be mitigated through

- Provision of cultural awareness training for workers regarding engagement with the local community;
- Preference for local labor; to deter influx of workers from outside of South Sudan .
- Provision of drug prevention and management programs;
- Iimplementation of public education programs on HIV / AIDS, COVID-19 and education on disease transmission. For COVID 19, this will include provision for adequate hand wash stations or sanitizers for all workers, as well as observing the physical distance of 1.5 metres to avoid congestion as per the WHO COVID 19 Protocols.

- Mandatory and regular training for workers on legal behavior required in the host community and the legal consequences for non-compliance with laws and provision of casual employment for both men and women throughout the implementation cycle/.
- Contractor will integrate measures for prevention and handling Gender Based Violence (GBV) and Sexual Exploitation and Abuse (SEA) in the contractor's environmental and social management plan (C-ESMP). Every Gender Based Violence (GBV)-related incident should be reported and appropriate actions taken.
- The contractor will develop an induction programme, including a Code of Conduct, for all workers directly related to this project. All employed workers for the project will sign code of conduct, among other, it will prevent illegal utilization of natural resources, prevent gender related violence. Breach of code of conduct my result into suspension or termination of the contract.

XII. **Occupational Health and Safety**

- The first step is to develop and occupational health and safety plan that would detail how all the project will handle OSH issues. It will also include emergency preparedness, internal and external trainings, when to undertake OSH audits. Also, it has to be in line with the Country's OSH regulations
- Contractor should conduct training for construction workers on occupational health and safety for his employees
- The Contractor should ensure that the project employees are comply with Occupational Health and Safety requirements.
- Contractor to provide Appropriate working gear (such as nose and ear mask and clothing) and enforce their proper use
- Contractor to ensure good housekeeping and ensure that the campsite is fenced and hygienically kept with adequate provision of facilities including waste disposal facilities, sewage, firefighting equipment and clean and safe water supply as required. A well-stocked First Aid shall be maintained at each work site and campsite.

XIII. **Grievance Management System**

Monthly institutions administrative engagement meeting will be organized, among others, to discuss incidents related to violence against girls and women involving project workers in each. The contractor will develop an internal grievance redress mechanism for construction workers.

8.3 Mitigation Measures During Operation Phase

I. **Waste Management:** All the institutions must have adequate facilities for liquid and solid waste management within the project designs. The waste management systems must comply with the environmental regulations of the country. To mitigate the impacts from solid wastes an efficient collection and disposal system based on the principles of

reduction, re-use and recycling of materials, shall be instituted at the institutions and markets. The solid wastes produced will be collected and disposed of at designated landfill/ waste disposal site. To ensure adequate waste management during Operation, the following specific measures will be implemented:

- Introduction of waste disposal bins, warning notices, "Dos &Don'ts" etc. posted at strategic points, through the campsite and construction sites o No, on site burial or open burning of solid waste shall be permitted
- The waste generation will be avoided and reduced prior to reusing materials on-site in order to minimize the off-site waste disposal as far as practicable.

II. **Mitigation Measures for increased Water and Energy Demand**

Use of a pool cover is essentially a large plastic or vinyl sheet that is placed over the pool. It keeps debris that would otherwise end up in the pool away, this translates to less time, effort, and chemicals required to clean the pool. Covers are also great at preventing water evaporation and boosting heat retention in the winter, both of which will help reduce environmental resources impact and costs.

III. **Management of Social Risks:** Social risks are linked to the influx of student population will be managed through

- Provision of cultural awareness orientation for students regarding engagement with the local community;
- Provision of drug prevention and management programs;
- Iimplementation of public education programs on HIV / AIDS, COVID-19 and education on disease transmission. For COVID 19, this will include provision for adequate hand wash stations or sanitizers for all students and staffs, as well as observing the physical distance of 1.5 metres to avoid congestion as per the WHO COVID 19 Protocols.
- Institutions to integrate measures for prevention and handling Gender Based Violence (GBV) and Sexual Exploitation and Abuse (SEA) in the student's code of conduct. Every Gender Based Violence (GBV)-related incident should be reported and appropriate actions taken.
- The Institutions will develop an induction programme, including a Code of Conduct, for all students and staff. All students and staff will sign code of conduct, among other, it will prevent illegal utilization of drugs, prevent gender related violence. Breach of code of conduct my result into suspension or expulsion from the institution.

IV. **Competition for natural resources due to Population increase:** There are expected effects of "spin-off "actions such as increased student's numbers/ movement access into high functional areas such as library/ Kitchen/ market place etc. may add to the cumulative effects. The construction phase will involve the transportation of personnel, construction

materials and equipment to the active construction sites for the proposed physical investments.

- The institutions to sensitize students and staff on resource conservation such as water and energy conservation measures (e.g. switching off lights when not in use, shutting taps etc.)
- The institutions to utilise energy efficient appliances such as energy saving lighting, low discharge toilet cisterns, Push taps among others.
- The government to develop local land use and develop plans for the project areas to manage the spin off effects that will come with the establishment of the education institutions
- The GoSS through the PMT should undertake broader community engagement in order to sensitize and raise awareness of the public before the commencement and during implementation of the project. Different approaches and communication media such as multimedia outlets e.g. Radio, TV, newspaper, social media, workshops and meetings will be used to reach different target groups.

V. **Occupational Health and Safety**

- The first step is to develop and occupational health and safety plan for the institution. This would detail handling of health and safety issues. It will also include emergency preparedness, internal and external trainings, when to undertake OSH audits, fire safety audits among others, in line with the Country's OSH regulations
- The Institution management should ensure that the all staff and students comply with Occupational Health and Safety requirements.
- Institutions to ensure good housekeeping and ensure that the facilities are fenced and hygienically kept with adequate provision of facilities including waste disposal facilities, sewage, firefighting equipment and clean and safe water supply as required. A well-stocked First Aid shall be maintained as appropriate.

8.4 Mitigation Measures during decommissioning

The activities in this phase are similar to the construction phase this similarity in mitigation measures. Key ones will include

I. **Land Related Conflict**: To reduce the risk of land conflicts, any cases of acquired land should revert to the government or the original ownership in case of decommissioning.

II. **Disposal of construction waste:** contractor should submit a comprehensive waste management plan that details how all the wastes will be managed from waste segregation, reducing, recycling and reusing. The plan will also identify hazardous wastes and aid in developing MDS. It must be in line with in Country waste management regulations)

III. **Management of Vegetation**: All decommissioned sites should be restored to near original state through site clearing, rehabilitation and replanting of indigenous vegetation.

IV. **Erosion Reduction:** Implement Soil erosion appropriate mitigation measures during decommissioning phase. This includes provision for adequate drainage systems, as well as planting vegetation on unpaved surfaces. In addition, control of the water flow speeds, especially for side drains by constructing erosion checks. Lined drainage channels at sensitive terrains shall be provided to control speed and volumes of storm-water. The discharge points must be carefully chosen to avoid erosion of arable land and creation of gullies. For cleared land, it will be re-vegetated to slow down the movement of storm water. It is a requirement of the Contractor to control water during decommissioning.

V. **Pollution Prevention and Control**

- Observe speed limits for construction vehicles to reduce dust during transportation of materials into and out of the construction areas. Construction trucks transporting materials out of the site, delivering restoration materials must be covered to prevent dust emissions into surrounding areas;
- Sensitize the Drivers of construction to reduce vehicle idling so as to reduce emissions from exhaust. All machinery and equipment should be well maintained and kept in good working condition to ensure minimum emissions of carbon monoxide, NOX, SOX and suspended particles,
- To mitigate dust emissions, the area being decommissioned should be fenced to reduce the effect of dust on surrounding populations, scarves should be folded correctly to minimize dust emissions to the public; sprinkle soil surfaces with water to reduce dust levels;
- Proper PPES including masks should be provided to all personnel in areas prone to dust emissions during construction;
- Piles of excavated soil should be closed / covered / watered in dry or windy weather to reduce dust emissions.
- Project management unit to ensure all contractors and their sub-contractors have Occupational Safety and Health (OSH) training which may include hazard awareness, safe work practices, and emergency preparedness for their employees. The workers must be properly oriented to ensure that they are well informed about site work rules, personal protection and prevention of injury to co-workers
- The project management unit must require that contractors and subcontractors commit to adhere to Environmental, Health and Safety (EHS) plan. This will be achieved by making this aspect a component of a contractual agreement;

VI. Noise & Vibration Management

- All equipment's utilised should have measures for noise reduction to meet relevant noise standards. The activities must adhere to Tanzania Standard TZS 932:2007 which stipulates maximum permissible i.e. 70 dBA for industrial area and 60dBA

for residential and industry/small scale production and commerce for daytime. The project will also mitigate, the nuisance of noise and vibration by adhering to the measures as required by Standard Specification for Road Works 2000 and Special Specifications. Where this is not possible, erect noise shield to protect populations that are at highest risk of exposure

- Activities that will cause noise will be scheduled at times where the impact on businesses/ schools and the nearby hospital is minimal. To achieve this, the construction work should not be permitted during the nights, the operations on site shall be restricted to 07.00hrs -19.00hrs. No noise generating works will be allowed at night especially in areas with settlements/public services like hospitals and religious buildings.
- All workers in noise environment to be supplied with proper PPEs
- The vehicles that are excessively noisy due to poor engine adjustment or damage of noise abatement equipment shall not be operated until corrective measures have been taken.
- The local residents will be kept informed of the planned works and advised in advance of noisy works of the location of noisy equipment will be chosen as far as possible away from sensitive receptors (houses, workplaces, schools, mosques, churches and hospitals).
- The Contractor will ensure that equipment and vehicles are well maintained and properly fitted with exhaust mufflers.

CHAPTER NINE: ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)

9.1 Introduction

This ESMP is developed with an aim to outlines actions necessary to prevent, mitigate and control possible negative impacts or disadvantages during the different phases of the project onto the environment and to analyze steps that could be taken in eliminating or minimizing this negative impacts. This chapter sets out an ESMP through which the proposed project will manage its Health, Safety and Environmental risks commensurate to the significance and magnitude of these risks. The purpose of this management plan is not only to ensure that the project complies with the relevant legislation and guidelines but also that it avoids (where possible), reduces or minimizes its risks. The Environmental actions proposed in the ESMP will synergistically enable the project to set environmental performance objectives, goals and targets and achieve them. This Management Plan is guided by both national Health Safety and Environment (HSE) /Occupational Safety and Health Act. And The Banks Environmental safeguards as well as the WHO Guidelines on indoor and outdoor Air Pollution.

The ESMP also fulfils the African Development Bank's environmental and social safeguards policy on borrower requirements to prepare a framework for Environmental and Social Management Plan (ESMP).

This ESMP sets out, in general, the mitigation and monitoring measures and institutional arrangements to address adverse environmental and social impacts. It provides the project implementers with an environmental and social management plan that enables them to mitigate potential environmental and social impacts. It covers all aspects that the project proponent has an influence over and all activities in the project's area of influence. This area of influence includes:

a. The project's main and ancillary activities in the project site;
b. Any works financed as part of the project that will be carried out outside the project's site;
c. Any works carried out by third parties or employees of the project, and
d. The areas where the project's direct impacts will be felt and will cause a Health safety and environment risk.

This area of influence delineates the proponent scope of liability as legally defined and the measures proposed will assign adequate management control over these aspects and activities in order to manage risks.

Based on the assessment undertaken as part of the ESIA, a series of mitigation measures have been identified which aim to reduce and / or eliminate the predicted impacts of the project. It is important that these mitigation measures are appropriately applied to the project mobilization, construction and operation phases, and decommissioning phase. This management plan provides a strategic framework for their implementation. Some of the mitigation measures related to engineering aspects, will be included in the detailed engineering design as appropriate and related costs will also be included in the engineering costs. The proposed environmental and social mitigation

measures should be incorporated in the detailed engineering design and be part of the Bidding documents. The estimated costs for implementing the mitigation measures are just indicative to enable project proponent budget the necessary funds.

9.2 Objective of the ESMP

The objective of this ESMP is to describe the measures that should be implemented by the Contractor, PMT and implementing partners during the implementation of the project to eliminate or reduce to acceptable levels key potential impacts i.e. environmental, social and health impacts related to project activities. The specific measures set out in the ESMP must be fully adhered to by all the project parties. In particular, the project must strive to avoid significant impacts on the bio-physical, social and cultural heritage, or health aspects during implementation. Avoidance through good detailed design of site-specific works and through preparation of the **detailed site-specific contractor's ESMPs** will be key to success of the overall plan. Where impacts cannot be avoided they must be minimized using appropriate measures. The ESMP has been developed to:

- Bring the project to comply with Government of South Sudan applicable national environmental and social legal requirements as well as AfDB environmental and social safeguards standards;
- Outline the mitigating, monitoring, consultative and institutional measures required to prevent, minimize or compensate for adverse environmental, social and cultural heritage impacts.
- Provide an operational reference and tool for environmental management during project construction as well as operation activities.

All contractual and legal obligations relating to the ESMP apply to the main Contractor and any Sub-Contractors appointed to undertake the project activities. It is the responsibility of the construction contractors to provide adequate resources to ensure effective implementation and control of the ESMP. Sub-contractors are responsible to its respective contractor for compliance with the measures presented in the ESMP. It is also the responsibility of the construction contractors and their sub-contractors to ensure that all project workers are trained and procedures are understood and followed.

9.3 Institutional Capacity and Implementation

PMT has overall responsibility of implementing this ESMP. PMT in collaboration with Ministry of Labour (MoL)- Technical Implementation Agency (MoL -TIA) Will supervise and monitor all components implemented by the contractor and operators. PMT shall provide the necessary supervisory oversight to ensure the mitigation measures are implemented. In order to ensure effective implementation of the ESMP, it important to identify and define the responsibilities and authority of the various persons and organizations involved in the project. The following entities will be involved on the implementation of this ESMP:

I. MoL an UNESCO
II. UoJ

III. MTC- Juba
IV. Consultants;
V. Contractor;
VI. Ministry of Environment and Forestry)
VII. Funding Institution (AfDB)

9.3.1 Ministry of Labour

The overall project implementation will be coordinated by MoL through project implementation team (PMT). Who has the responsibility for ensuring that mitigation measures specified in this ESMP and the contract documents are implemented. **The Environmental and Social Safeguards Team** from PMT and where possible, representatives from Ministry of Environment and Forestry will undertake monitoring during construction and operation phases of the project. PMT should also appoint an Environmental and Safety Officer/Consultant and Social Officer/Consultant who will be responsible for the following tasks:

- Recommending solutions for specific environmental problems;
- He /She shall facilitate the creation of liaison group with the stakeholders and shall monitor the compliance with ESMP;
- Organizing consultations at key stages of the project with the stakeholders and interested parties;
- She/he will be required to liaise with the Ministry of Environment and Forestry and OSHA on the level of compliance with the ESMP achieved by the project on a regular basis for the duration of the contract;
- Supervising the implementation of the ESMP;

9.3.2 Supervision

The Supervision Consultant through its Environmental Specialist will be required to oversee the construction programme and construction activities performed by the Contractor, in compliance with the ESMP. It is recommended that prior to commencement of actual construction; the Consultant should submit a work plan that complies with the national and AfDB environmental guidelines and an updated ESMP for the different phases of the work. The environmental plan should specify in particular the location of sources of materials, disposal area of construction debris and arrangements for waste management during operations.

9.3.3 The Contractor

Contractor will be responsible for construction works of the project in accordance with the Technical Specifications required. The Contractor will implement the project fully in accordance with the ESIA mitigation measures. During mobilization phase, the contractor will review the ESMP and develop specific ESMP (contractor's ESMP) for implementation

of specific proposed mitigation measures. The contractor will nominate an Environmental and Safety Officer (ESO), Social Officer (SO) to implement the mitigation measures outlined in this ESMP and will be the contractor's focal point for all environmental, social and traffic control matters. The SO and ESO will be routinely on-site for the duration of the construction works. These officers will also be responsible for:

- Supervising the implementation of the ESMP and C-ESMP;
- Undertaking consultations with the stakeholders;
- Managing project environmental and social issues
- Training of workers and daily site inspection
- Preparing environmental progress reports on the status of implementation of mitigation measures at site.

9.3.4 Ministry of Environment Forestry

Ministry of Environment and Forestry will play a key role in monitoring the project during the construction and operational phases to ensure that the mitigation measures set out in chapter 7 above are fully implemented.

9.3.5 Funding Institutions

The Government of South Sudan through MoL has prepared an application for funding this project from AfDB. The funding organization will have overarching responsibility to ensure that the Project is carried out to the highest environmental and social safeguards standards, at least, in accordance with the ESIA and the mitigation measures set out therein. Additionally, it is a requirement that environmental and social impacts are managed in accordance to AfDB safeguards standards.

9.4 Capacity building for implementation of ESMP

Capacity of PMT and implementing partners is critical for ensuring successful implementation of this ESMP. Participants from implementing partners sector specialists, environmental officer and staff from departments responsible Social planning/Community Development, Economic Planning, Agribusiness, Land and Health as well as PMT will be trained. Training shall focus on

I. Environmental Monitoring procedures
II. Indicators for Environmental Monitoring
III. Health and Safety
IV. Implementation of ESMPs
V. Grievance management
VI. Environmental reporting

9.5 ESMP Resources and Responsibility

An important part of the ESMP is to delineate all the resources required for its effective implementation so as to ensure it remains as cost effective as possible. This will be duty of the PMT all resources human and financial should be listed alongside the remedial actions

employed against each of the project's risks. Financial records should be maintained to ensure the Health Safety and Environment remains accountable and basically makes business sense by showing the costs avoided by maintaining the system in terms of lives saved, man hours saved, health care etc.

Whereas the human resources responsible for undertaking all activities that carry or create risk should be kept in record and maintained. This will ensure the project has a documented, maintained and established method of managing HSE responsibilities. This will in addition keep all the staff undertaking these activities abreast with not only the policies in place but also with the risks involved with their activities and importantly know how to manage the risks and carry out their duties safely. This information will also be vital when undertaking audits and targeting training towards the staff and foster greater accountability in the staff in terms of monitoring and reporting since all duties will be known and documented.

9.6 Environmental and Social Management Plan

The ESMP has been developed with project knowledge and information available to date. As project commencement and scheduling plans are developed and changed, components of the ESMP might require amending. This is therefore a life document, which can be updated whenever new information is received or there are changes on site conditions. Table 9.1 below presents the ESMP. It outlines corresponding management strategies proposed in Chapter 8 that will be employed to mitigate potential adverse environmental impacts and assigns responsibility for the implementation of the mitigation measures.

Component I: Construction of a Science complex: offices, lecture Rooms and an equipped laboratory at University of Juba					
Pre-Construction (Planning/ Design) Phase					
Aspect	**Anticipated Environmental and Social Impacts**	**proposed mitigation measures**	**Monitoring Indicators**	***Responsible Institutions***	***Cost estimate (USD)***
Design related	• Poor facility designs that may drive demand for raw materials • Designs that may increase greenhouse emissions • Designs that are out of character with the culture of the area	• Project designs to take cognizant of environmental best practices like energy and water conservation. E.g. project designs to promote natural aeration and lighting, use alternative energy like solar, propose fixtures that enhance water and energy efficiency • Design with Nature and culture in mind	• The energy efficiency the of building and the equipment installed • Building materials promoted • Environmentally sensitive designs	MoL University of Juba Architects and contractors	5000
Social Impacts	• Un managed community expectations that may lead to conflicts • Project activities that may not align with social, cultural and religious norms	• Public participation/sensitization on the project • Stakeholder view on project components and execution	No. of stakeholder sensitization sessions General awareness level on project	MoL to take lead through PMT	2000
SUBTOTAL					7000
Construction Phase					
Aspect	**Anticipated Environmental and Social Impacts**	**proposed mitigation measures)**	**Monitoring Indicators**	***Responsible Institutions***	***Cost estimate (USD)***
Land degradation	• Extraction of raw materials (sand, ballast, rocks, timber and poles) may lead to Loss, degradation or fragmentation of ecologically sensitive areas • Earthworks and clearance may lead to the loss of plant species and habitats • Potential for adverse effects from alteration of soil structure and increased runoff from paved surfaces leading to changes in water flow and drainage as well as soil erosion,	• Raw materials like sand, ballast and stones sourced from licensed quarries. • Rehabilitation of cleared areas with native species	• Proper sourcing of raw materials • Compliance with transportation rules • Land restoration and revegetation after construction and or rehabilitation works	***PMT& Contractor***	4000
Air Pollution	• Dust and Fugitive gases from transportation tracks • Emissions by machineries (NOx and Sox and fugitive dust from disturbed soil surfaces	• Loose materials to be covered during transportation to reduce fugitive gas • Transportation trucks to observe speed limits. Where possible put measures for traffic calming like bumps near settlements, around corners etc. • Reducing machinery idling times to cut on emissions	• Ambient air quality	***PMT& Contractor***	1000

Accident Risks during Transport	• Accident risks by transportation vehicles to and from site	• Erect adequate signage warning of different hazards: e.g. heavy trucks turning, observe speed limits among others • Transportation trucks to observe speed limits. Where possible put measures for traffic calming like bumps near settlements, around corners etc. • Sensitize the machine operators on need for safe practices • Machinery to be operated only by qualified personnel	• Observe speed limits • Traffic calming like erection of bumps on blind spots • Proper signage	***PMT& Contractor***	1000
Waste Management	• Pollution risks to soils and waterr due to poor disposal of construction waste • Generation of wastes (liquid and solid waste	• Waste must be disposed of in licenses sites only and in compliance with local laws and bylaws • Contractor to prepare a detailed waste management plan • Provision of adequate facilities for solid and liquid waste management at the sites. Sensitize workers on proper waste management including 3Rs • Facilitate programs/measures to ensure appropriate sanitary and medical facilities are available	• Solid waste separation and recycling/disposal measures adopted in camp settlements • Proper waste management practices related to construction works, • Solid and liquid waste management practices and status.	***PMT& Contractor***	4000
Occupational health and Safety Risks	• Poor construction management practices may lead to adverse effects on safety, human health and wellbeing. • Storage of materials, circulation of construction machinery leading to accidents, pollution risk etc.; •	• Fencing of construction areas to reduce unauthorised access • Proper signage warning of different hazards • Provide PPEs to all workers and visitors in the construction areas • Sensitize workers on health and safety	• Accident/incidence reports • Provision and use of PPEs • Presence of adequate signage	***PMT& Contractor***	5000
Noise and Vibration	• Noise and Vibration • Health and safety concerns	• Strict adherence to regulations on noise and vibration, including use of silencers and mufflers for loud equipment • Work to be carried out within stipulated hours to reduce nuisance • Proper PPE provision	• Compliance with laws and regulations on noise and vibration • Hours of operation by contractor • Compliance with the Environmental Guidelines • Environmental audits	Contractor PMT	1000

Chemicals Management	• Risk of oil spills, fires etc. from servicing of equipment • Fire risks	• Proper housekeeping within workshops for equipment to reduce fire and pollution risks • Prepare an emergency management plan	• Compliance with the Environmental Guidelines • Environmental audits	Contractor PMT	1000
Conflicts and Grievances	• Labour related disputes • Differences (Perceived or real) in working conditions between workers may lead to resentment, • Risk of gender related violence and crimes	• Development of transparent and culturally appropriate communication with communities an Employment Plan, with clear employment requirements, and procedures for the construction and operational /maintenance workforce, • Fair and transparent hiring and staff management procedures, • Staff training and awareness raising in communities, • Implementation of a Grievance Procedure, • Ensure the participation and benefit of marginalized and vulnerable part of the communities (poor, landless, minority groups, women, old and youth) throughout and after the project.	• Employment records • Grievance redress records • Level of awareness on gender issues, HIV, •	Contractor PMT UoJ Administration	2000
University Community and Worker health and safety	• Risk of exposure to COVID 19 • Risk of Occurrence of communicable diseases, including HIV/AIDS, COVID-19 and sexually transmitted diseases (STDs). • Social differences may lead to discrimination and harassment, • Real or perceived disruption to normal community life, through the physical presence of a workforce; in particular, potential for conflicts to occur over resources,	• Development of COVID 19 protocols including provision of adequate hand wash facilities • Training and awareness raising and Implementation of a health management for workforce and their dependents on HIV/AIDS and other STDs, and communicable diseases; health awareness raising campaigns for communities on similar topics, • Community grievance redress mechanism	• Observance of COVID 19 protocols • Provision of materials for sexual health awareness • Grievance redress records • Level of awareness on gender issues, HIV,	Contractor PMT UoJ Administration	6000
SUBTOTAL					**25000**
Operation Phase					
Aspect	**Anticipated Environmental and Social Impacts**	**proposed mitigation measures)**	**Monitoring Indicators**	***Responsible Institutions***	***Cost estimate (USD)***

Waste Management	• Generation of wastes (Liquid and solid) by student and staff population • Pollution risks from the generated waste • Waste waters from the laboratories • Management of hazardous chemicals for use in the laboratories	• Each institution to have infrastructure for solid and liquid waste management based on Best Available Technologies • Programs for promoting best environmental practices include adoption of 3Rs in waste management • Chlorination of laboratories waters • Pool water recirculation system: • discharged into the municipal sewer • substitute the hazardous chemicals with less hazardous	• Status of waste management • Quality of general environment	Institution administration	2000
Pressure on Resources	• Increased pressure on resources (water, energy) • Influx of population to capitalize on demand for laboratories as well as good services to support the student population • Increased use of water for the laboratories	• Sensitize students on resource efficiency measures like keeping taps closed, witching off lights • Use of resource efficient fixtures like energy efficient lighting and electronic appliances, water efficient fixtures among others • Programs for self-sustained within the TVETs including agriculture • Using an automatic pumping • Use of a pool cover.	• Presence of local development plans • Adoption of resource efficiency measures	UoJ Administration PMT	1000
Social Conflicts	• Potential for adverse effects if expectations not met and community relations are not well managed,	• Sensitize communities to utilize the facilities to enhance their access to education • Sensitize communities on opportunities from the facility • Favor local suppliers in procurement for goods and services • Develop a grievance management system	• Level of TVET enrollment by local communities • Local content in procurement processes • No of grievances reported and resolved	JoL administration MoL	6000
SUBTOTAL					**9,000**
Decommissioning Phase					
Aspect	**Anticipated Environmental and Social Impacts**	**proposed mitigation measures)**	**Monitoring Indicators**	***Responsible Institutions***	***Cost estimate (USD)***

Waste Management	• Construction waste containing ballast, rocks, timber, poles and roofing materials) that need disposal • Generation of wastes (liquid and solid waste •	• Usable materials like construction blocks, roofing, steel etc to be sold off to recyclers for recycling and re-use. • Remaining materials to be used for burrowing or disposed off in designated sites. Can also be used for backfilling access roads	• Safe disposal of construction waste • Solid waste separation and recycling/disposal measures adopted in camp settlements •	UoJ to take lead through PMT	*3000*
Air Pollution	• Dust and Fugitive gases from transportation tracks • Emissions by machineries (NOx and SOx and fugitive dust from disturbed soil surfaces	• Loose materials to be covered during transportation to reduce fugitive gas • Transportation trucks to observe speed limits. • Reduce machinery idling time	• Air quality during demolition •	PMT Contractor	1000
Accident Risks	• Traffic related accidents • Machinery related accidents	• Transportation trucks to observe speed limits. Where possible put measures for traffic calming like bumps near settlements, around corners etc. • Only Qualified personnel to operate machinery • Provide PPEs to all workers and visitors in the construction areas • Sensitize workers on health and safety • Fencing of construction areas to reduce unauthorised access • Proper signage warning of different hazards	• Accident/incidence reports	PMT Contractor	3000
Land degradation	• Pollution risks to soils and water due to poor disposal of construction waste • Earthworks and clearance may lead to loss of plant species and habitats • Potential for adverse effects from alteration of soil structure and increased runoff from paved surfaces leading to changes in water flow and drainage as well as soil erosion	• Waste must be disposed off in licenses sites only and in compliance with local laws and bylaws • Contractor to prepare a detailed waste management plan • Rehabilitation of cleared areas with native species	• Compliance with laws and regulations, • Proper waste management practices related to construction works, • Land restoration and revegetation after construction and or rehabilitation works, • Compliance with the Environmental Guidelines	Contractor MoL	2000

Noise & Vibration	• Noise and Vibration • Risk of oil spills, fires etc from servicing of equipment • Storage of materials, circulation of construction machinery leading to accidents, pollution risk etc; • Health and safety concerns •	• Strict adherence to regulations on noise and vibration, including se of silencers and mufflers for loud equipment • Work to be carried out within stipulated hours to reduce nuisance • Proper housekeeping within workshops for equipment to reduce fire and pollution risks • Proper PPE provision	• Noise levels at site • Hours of Operation • Ambient air quality around site	Contractor MoL	1000
General health and safety Risks	• Poor construction management practices may lead to adverse effects on safety, human health and wellbeing.	• Reducing machinery idling times to cut on emissions • Sensitize the machine operators on need for safe practices • Erect adequate signage warning of different hazards: e.g., heavy trucks turning, observe speed limits among others • Transportation trucks to observe speed limits. Where possible put measures for traffic calming like bumps near settlements, around corners etc.	• Proper use of PPES among workers • Accident/Incidence records	Contractor MoL	1000
Social Impacts	• Risk of Occurrence of communicable diseases, including HIV/AIDS, COVID-19 and sexually transmitted diseases (STDs). • Social differences may lead to discrimination and harassment, • Real or perceived disruption to normal community life, through the physical presence of a workforce; in particular, potential for conflicts to occur over resources, • Conflicts over land access	• Training and awareness raising and Implementation of a health management for workforce and their dependents on HIV/AIDS and other STDs, and communicable diseases; health awareness raising campaigns for communities on similar topics, • Community grievance redress mechanism	• No. of Trainings • Grievance reports		2,000
SUBTOTAL					13000
COMPONENT 1 SUBTOTAL					54,000

Table 9-1 Environmental and Social Management Plan (ESMP)

ESMP: Component II: Construction of: Girls Hostel, a Perimeter wall and equipping the laboratory /Workshop at MTC

Pre-Construction (Planning/ Design) Phase					
Aspect	**Anticipated Environmental and Social Impacts**	**Proposed Monitoring and Implementation including performance indicators**	**Monitoring Indicators**	***Responsible Institutions***	***Cost estimate (USD)***
Land Use Conflicts	• Improper site selection for the Hostel may lead to conflicts with other stakeholders • Un managed community expectations that may lead to conflicts, e.g. during relocation to pave way for the hostel	• Participatory site selection and site planning by all stakeholders • Good construction site "housekeeping" and management procedures (including site access), .	• Stakeholders engagement	PMT :MoL and MTC Ministry of Environment And Forestry and AfDB	1000
Design related	• Poor facility designs that may drive demand for raw materials • Designs that may increased greenhouse emissions • Designs that are out of character with the culture and them of the area	• Project designs to take cognizant of environmental best practices like energy and water conservation. E.g. project designs to promote natural aeration and lighting, use alternative energy like solar, a propose fixtures that enhance water and energy efficiency • Design with Nature and culture in mind	• Energy efficiency of buildings • Building materials promoted • Environmentally sensitive designs	MoL Architects and contractors	5000
Increased Pressure on resources	• Poor facility designs that may drive demand for raw materials and increased greenhouse emissions	• Approval of designs and plans by relevant authorities at all locations, • project designs to take cognizant of environmental best practices	• Approval of all development works • Level of Compliance with laws and regulations, Environmentally sensitive designs	PMT	5,000
SUBTOTAL					**11,000**
Construction Phase					
Aspect	**Anticipated Environmental and Social Impacts**	**Proposed Monitoring and Implementation including performance indicators**	**Monitoring Indicators**	***Responsible Institutions***	***Cost estimate (USD)***
Land degradation	• Extraction of raw materials (sand, ballast, rocks, timber and poles) may lead to Loss, degradation or fragmentation of ecologically sensitive areas • Earthworks and clearance may lead to loss of plant species and habitats • Potential for adverse effects from alteration of soil structure and increased runoff from paved surfaces	• Raw materials like sand, ballast and stones sourced from licensed quarries. • Rehabilitation of cleared areas with native species •	• Proper sourcing of raw materials • Compliance with transportation rules • Land restoration and revegetation after construction and or rehabilitation works	***PMT& Contractor***	3000

	leading to changes in water flow and drainage as well as soil erosion,				
Air Pollution	• Dust and Fugitive gases from transportation tracks • Emissions by machineries (NOx and Sox and fugitive dust from disturbed soil surfaces •	• Loose materials to be covered during transportation to reduce fugitive gas • Transportation trucks to observe speed limits. Where possible put measures for traffic calming like bumps near settlements, around corners etc • Reducing machinery idling times to cut on emissions •	• Ambient air quality	***PMT& Contractor***	1,000
Accident Risks during Transport	• Accident risks by transportation vehicles to and from site	• Erect adequate signage warning of different hazards: e.g. heavy trucks turning, observe speed limits among others • Transportation trucks to observe speed limits. Where possible put measures for traffic calming like bumps near settlements, around corners etc • Sensitize the machine operators on need for safe practices • Machinery to be operated only by qualified personnel	• Observe speed limits • Traffic calming like erection of bumps on blind spots • Proper signage	***PMT& Contractor***	5000
Waste Management	• Pollution risks to soils and waterr due to poor disposal of construction waste • Generation of wastes (liquid and solid waste	• Waste must be disposed off in licenses sites only and in compliance with local laws and bylaws • Contractor to prepare a detailed waste management plan • Provision of adequate facilities for solid and liquid waste management at the sites. Sensitize workers on proper waste management including 3rs • Facilitate programs/measures to ensure appropriate sanitary and medical facilities are available	• Solid waste separation and recycling/disposal measures adopted in camp settlements • Proper waste management practices related to construction works, • Solid and liquid waste management practices and status.	***PMT& Contractor***	1000
Occupational health and Safety Risks	• Poor construction management practices may lead to adverse effects on safety, human health and wellbeing. • Storage of materials, circulation of construction machinery leading to accidents, pollution risk etc.;	• Fencing of construction areas to reduce unauthorised access • Proper signage warning of different hazards • Provide PPEs to all workers and visitors in the construction areas	• Accident/incidence reports • Provision and use of PPEs • Presence of adequate signage	***PMT& Contractor***	5,000

		• Sensitize workers on health and safety			
Noise and Vibration	• Noise and Vibration • Health and safety concerns	• Strict adherence to regulations on noise and vibration, including se of silencers and mufflers for loud equipment • Work to be carried out within stipulated hours to reduce nuisance • Proper PPE provision	• Compliance with laws and regulations on noise and vibration • Hours of operation by contractor, • Compliance with the Environmental Guidelines • Environmental audits	Contractor PMT	2000
Chemicals Management	• Risk of oil spills, fires etc. from servicing of equipment • Fire risks	• Proper housekeeping within workshops for equipment to reduce fire and pollution risks • Prepare an emergency management plan	• Compliance with the Environmental Guidelines • Environmental audits	Contractor PMT	2000
Conflicts and Grievances	• Labour related disputes • Differences (Perceived or real) in working conditions between workers may lead to resentment, • Risk of gender related violence and crimes	• Development of transparent and culturally appropriate communication with communities an Employment Plan, with clear employment requirements, and procedures for the construction and operational /maintenance workforce, • Fair and transparent hiring and staff management procedures, • Staff training and awareness raising in communities, • Implementation of a Grievance Procedure, • Ensure the participation and benefit of marginalized and vulnerable part of the communities (poor, landless, minority groups, women, old and youth) throughout and after the project.	• Employment records • Grievance redress records • Level of awareness on gender issues, HIV, •	Contractor PMT MTC administration	2000

MTC Community and Worker health and safety	• Risk of exposure to COVID 19 • Risk of Occurrence of communicable diseases, including HIV/AIDS, COVID-19 and sexually transmitted diseases (STDs). • Social differences may lead to discrimination and harassment, • Real or perceived disruption to normal community life, through the physical presence of a workforce; in particular, potential for conflicts to occur over resources,	• Development of COVID 19 protocols including provision of adequate hand wash facilities • Training and awareness raising and Implementation of a health management for workforce and their dependents on HIV/AIDS and other STDs, and communicable diseases; health awareness raising campaigns for communities on similar topics, • Community grievance redress mechanism	• Observance of COVID 19 protocols • Provision of materials for sexual health awareness • Grievance redress records • Level of awareness on gender issues, HIV,	Contractor PMT MTC Administration	1000
SUBTOTAL					**22000**

Operation Phase

Aspect	**Anticipated Environmental and Social Impacts**	**Proposed Monitoring and Implementation including performance indicators**	**Monitoring Indicators**	***Responsible Institutions***	***Cost esti***
Waste Generation	• Generation of wastes (Liquid and solid) from the market facilities • Pollution and nuisance risks from the generated waste	• Each market facility to have requisite infrastructure for management of solid and liquid wastes • Programs for promoting best environmental practices include adoption of 3Rs	• Status of waste management • Quality of general environment	Market Management committees	1,000
Traffic generation	• Increased traffic to the markets may lead to traffic congestion • Accident risks around the market	• Traffic Management plans for areas around market facilities • Encourage Non-Motorized Transport for market access • Redesign access points to and from markets	• Traffic management measures in place	Local Authorities	3000
Space Contestation	• Proliferation of hawkers along the area may lead to insecurity and challenges in access • Mushrooming of other support facilities like restaurants,	• Preparation of local development plans to take care of anticipated developments. The plans to include proposals for enhancing infrastructure services to cater for extra population • Market design to provide for mixed use • Where possible have themed market days	• Presence of local development plans • Level of order within markets	Local Authorities	1000

Social Conflicts	• Conflicts related to access and use of market space • Conflicts related to market management • Exclusion in access to markets	• Provide space to all qualified personnel based on agreed criteria during design • Establish market management committees • Ensure inclusivity in space allocation • Establish grievance redress mechanism	• Market management committees • Grievances records	Market management	1000
SUBTOTAL					**6000**
Decommissioning Phase					
Aspect	**Anticipated Environmental and Social Impacts**	**Proposed Monitoring and Implementation including performance indicators**	**Monitoring Indicators**	***Responsible Institutions***	***Cost estimate***
Air Pollution	• Dust and Fugitive gases from transportation tracks • Emissions by machineries (NOx and Sox and fugitive dust from disturbed soil surfaces	• Loose materials to be covered during transportation to reduce fugitive gas • Transportation trucks to observe speed limits. Where possible put measures for traffic calming like bumps near settlements, around corners etc • Reducing machinery idling times to cut on emissions	• Ambient air quality	***PMT& Contractor***	***1000***
Accident Risks during Transport	• Accident risks by transportation vehicles to and from site	• Erect adequate signages warning of different hazards: e.g. heavy trucks turning, observe speed limits among others • Transportation trucks to observe speed limits. Where possible put measures for traffic calming like bumps near settlements, around corners etc • Sensitize the machine operators on need for safe practices • Machinery to be operated only by qualified personnel	• Observe speed limits • Traffic calming like erection of bumps on blind spots • Proper signage	***PMT& Contractor***	***2000***
Waste Management	• Pollution risks to soils and waterr due to poor disposal of construction waste • Generation of wastes (liquid and solid waste	• Waste must be disposed off in licenses sites only and in compliance with local laws and bylaws • Contractor to prepare a detailed waste management plan • Provision of adequate facilities for solid and liquid waste management at the sites. Sensitize workers on proper waste management including 3rs • Facilitate programs/measures to ensure appropriate sanitary and medical facilities are available	• Solid waste separation and recycling/disposal measures adopted in camp settlements • Proper waste management practices related to construction works, • Solid and liquid waste management practices and status.	***PMT& Contractor***	1,000

Occupational health and Safety Risks	• Poor construction management practices may lead to adverse effects on safety, human health and wellbeing. • Storage of materials, circulation of construction machinery leading to accidents, pollution risk etc.; •	• Fencing of construction areas to reduce unauthorised access • Proper signage warning of different hazards • Provide PPEs to all workers and visitors in the construction areas • Sensitize workers on health and safety	• Accident/incidence reports • Provision and use of PPEs • Presence of adequate signage	***PMT& Contractor***	2,000
Noise and Vibration	• Noise and Vibration • Health and safety concerns	• Strict adherence to regulations on noise and vibration, including se of silencers and mufflers for loud equipment • Work to be carried out within stipulated hours to reduce nuisance • Proper PPE provision	• Compliance with laws and regulations on noise and vibration • Hours of operation by contractor, • Compliance with the Environmental Guidelines • Environmental audits	Contractor PMT	1,000
SUBTOTAL					**7.000**
COMPONENT II SUBTOTAL					**37,000**

Social Impacts Management

General and Cross Cutting Impacts				
Anticipated Environmental and Social Impacts	**Proposed Monitoring and Implementation including performance indicators**	**Monitoring Indicators**	***Responsible Institutions***	***Cost estimate (USD)***
Construction work force Increased communicable diseases such as HIV/AIDS, STD	• Conduct education and awareness creation campaigns on the spread and transmission of STDs and HIV/AIDS for construction workers and local communities living close to the construction camp sites. • Provide free distribution and provision of condoms to construction workers by the Contractor to avoid the spread of STDs and HIV/AIDS.	• No of sensitization sessions • Trends in diseases	Project Management Unit Contractor AfDB	1000

	• Implement interventions on sexual and reproductive health including providing information regarding transmission and safer sex practices • Develop and implement HIV/AIDS awareness and prevention program. Develop mechanism which will allow employees to get information on HIV/AIDS alleviation programs.			
Risk of Gender Based Violence	• Integrate measures for prevention and handling Gender Based Violence (GBV) and Sexual Exploitation and Abuse (SEA) in the contractor's environmental and social management plan (C-ESMP). • Record and report every Gender Based Violence (GBV)- related incident and take appropriate actions • Develop an induction programme, including a Code of Conduct, for all workers directly related to this project. A copy of the Code of Conduct should be presented to all workers and signed by each workers • Provide means for women workers and other community members to report abuse in the work place • Conduct monthly community leader's engagement meeting to discuss incidents related to violence against girls and	• Cases of GBV reported and solved	Project Management Unit Contractor AfDB	2,000

	women involving project workers			
Potential Changes to social fabric	• Undertake broader community engagement before the commencement and during implementation of the project • Preference to locals for employment opportunities • Implement awareness campaign on the impact of labor influx •	• Level of cohesion	• • Contractor PMT	1000
Vulnerable Members of Community	• Employ more community women in skilled and clerical positions • Ensure fairness in allocation of stalls for the tourist markets	•	• • Contractor • PMT	2,000
SUBTOTAL				**6,000**
OVERALL TOTAL				

ESMP: Component II: Construction Hostel for Female students, a perimeter wall and Equip the laboratory /Workshop.

Pre-Construction (Planning/ Design) Phase					
Aspect	**Anticipated Environmental and Social Impacts**	**Proposed Monitoring and Implementation including performance indicators**	**Monitoring Indicators**	***Responsible Institutions***	***Cost estimate (USD)***

Land Use Conflicts	• Improper site selection for the incubation centre may lead to conflicts with other stakeholders • Un managed community expectations that may lead to conflicts, e.g. during relocation to pave way for modern incubation centre	• Participatory site selection and site planning by all stakeholders • Good construction site "housekeeping" and management procedures (including site access), .	• Stakeholders engagement	MoL and Vocational Training Authority; The South Sudan Environmental Management Authority (MININISTRY OF ENVIRONMENT AND FORESTRY) AfDB and PMT	1000
Design related	• Poor facility designs that may drive demand for raw materials • Designs that may increased greenhouse emissions • Designs that are out of character with the culture and them of the area	• Project designs to take cognizant of environmental best practices like energy and water conservation. E.g. project designs to promote natural aeration and lighting, use alternative energy like solar, a propose fixtures that enhance water and energy efficiency • Design with Nature and culture in mind	• Energy efficiency of buildings • Building materials promoted • Environmentally sensitive designs	MoL Architects and contractors	10,000
Increased Pressure on resources	• Poor facility designs that may drive demand for raw materials and increased greenhouse emissions	• Approval of designs and plans by relevant authorities at all locations, • project designs to take cognizant of environmental best practices	• Approval of all development works • Level of Compliance with laws and regulations, Environmentally sensitive designs	PMT	10,000
SUBTOTAL					**21,000**
Construction Phase					
Aspect	**Anticipated Environmental and Social Impacts**	**Proposed Monitoring and Implementation including performance indicators**	**Monitoring Indicators**	***Responsible Institutions***	***Cost estimate (USD)***
Land degradation	• Extraction of raw materials (sand, ballast, rocks, timber and poles) may lead to Loss, degradation or fragmentation of ecologically sensitive areas • Earthworks and clearance may lead to loss of plant species and habitats • Potential for adverse effects from alteration of soil structure and increased runoff from paved surfaces leading to changes in water flow and drainage as well as soil erosion,	• Raw materials like sand, ballast and stones sourced from licensed quarries. • Rehabilitation of cleared areas with native species •	• Proper sourcing of raw materials • Compliance with transportation rules • Land restoration and revegetation after construction and or rehabilitation works	***PMT& Contractor***	7000

Air Pollution	• Dust and Fugitive gases from transportation tracks • Emissions by machineries (NOx and Sox and fugitive dust from disturbed soil surfaces •	• Loose materials to be covered during transportation to reduce fugitive gas • Transportation trucks to observe speed limits. Where possible put measures for traffic calming like bumps near settlements, around corners etc • Reducing machinery idling times to cut on emissions •	• Ambient air quality	***PMT& Contractor***	8,000
Accident Risks during Transport	• Accident risks by transportation vehicles to and from site	• Erect adequate signages waring of different hazards: e.g. heavy trucks turning, observe speed limits among others • Transportation trucks to observe speed limits. Where possible put measures for traffic calming like bumps near settlements, around corners etc • Sensitize the machine operators on need for safe practices • Machinery to be operated only by qualified personnel	• Observe speed limits • Traffic calming like erection of bumps on blind spots • Proper signage	***PMT& Contractor***	9000
Waste Management	• Pollution risks to soils and waterr due to poor disposal of construction waste • Generation of wastes (liquid and solid waste	• Waste must be disposed off in licenses sites only and in compliance with local laws and bylaws • Contractor to prepare a detailed waste management plan • Provision of adequate facilities for solid and liquid waste management at the sites. Sensitize workers on proper waste management including 3rs • Facilitate programs/measures to ensure appropriate sanitary and medical facilities are available	• Solid waste separation and recycling/disposal measures adopted in camp settlements • Proper waste management practices related to construction works, • Solid and liquid waste management practices and status.	***PMT& Contractor***	7000
Occupational health and Safety Risks	• Poor construction management practices may lead to adverse effects on safety, human health and wellbeing. • Storage of materials, circulation of construction machinery leading to accidents, pollution risk etc.; •	• Fencing of construction areas to reduce unauthorised access • Proper signage warning of different hazards • Provide PPEs to all workers and visitors in the construction areas • Sensitize workers on health and safety	• Accident/incidence reports • Provision and use of PPEs • Presence of adequate signage	***PMT& Contractor***	10,000

Noise and Vibration	• Noise and Vibration • Health and safety concerns	• Strict adherence to regulations on noise and vibration, including se of silencers and mufflers for loud equipment • Work to be carried out within stipulated hours to reduce nuisance • Proper PPE provision	• Compliance with laws and regulations on noise and vibration • Hours of operation by contractor, • Compliance with the Environmental Guidelines • Environmental audits	Contractor PMT	9000
Chemicals Management	• Risk of oil spills, fires etc from servicing of equipment • Fire risks	• Proper housekeeping within workshops for equipment to reduce fire and pollution risks • Prepare an emergency management plan	• Compliance with the Environmental Guidelines • Environmental audits	Contractor PMT	5000
Conflicts and Grievances	• Labour related disputes • Differences (Perceived or real) in working conditions between workers may lead to resentment, • Risk of gender related violence and crimes	• Development of transparent and culturally appropriate communication with communities an Employment Plan, with clear employment requirements, and procedures for the construction and operational /maintenance workforce, • Fair and transparent hiring and staff management procedures, • Staff training and awareness raising in communities, • Implementation of a Grievance Procedure, • Ensure the participation and benefit of marginalized and vulnerable part of the communities (poor, landless, minority groups, women, old and youth) throughout and after the project.	• Employment records • Grievance redress records • Level of awareness on gender issues, HIV, •	Contractor PMT Local administration	5000
Community and Worker health and safety	• Risk of exposure to COVID 19 • Risk of Occurrence of communicable diseases, including HIV/AIDS, COVID-19 and sexually transmitted diseases (STDs). • Social differences may lead to discrimination and harassment, • Real or perceived disruption to normal community life, through the physical presence of a workforce; in particular, potential for conflicts to occur over resources,	• Development of COVID 19 protocols including provision of adequate hand wash facilities • Training and awareness raising and Implementation of a health management for workforce and their dependents on HIV/AIDS and other STDs, and communicable diseases; health awareness raising campaigns for communities on similar topics, • Community grievance redress mechanism	• Observance of COVID 19 protocols • Provision of materials for sexual health awareness • Grievance redress records • Level of awareness on gender issues, HIV,	Contractor PMT Local administration	5000
SUBTOTAL					**65000**

Operation Phase					
Aspect	**Anticipated Environmental and Social Impacts**	**Proposed Monitoring and Implementation including performance indicators**	**Monitoring Indicators**	***Responsible Institutions***	***Cost estimate (USD)***
Waste Generation	• Generation of wastes (Liquid and solid) from the market facilities • Pollution and nuisance risks from the generated waste	• Each market facility to have requisite infrastructure for management of solid and liquid wastes • Programs for promoting best environmental practices include adoption of 3Rs	• Status of waste management • Quality of general environment	Market Management committees	10,000
Traffic generation	• Increased traffic to the markets may lead to traffic congestion • Accident risks around the market	• Traffic Management plans for areas around market facilities • Encourage Non-Motorized Transport for market access • Redesign access points to and from markets	• Traffic management measures in place	Local Authorities	5000
Space Contestation	• Proliferation of hawkers along the area may lead to insecurity and challenges in access • Mushrooming of other support facilities like restaurants,	• Preparation of local development plans to take care of anticipated developments. The plans to include proposals for enhancing infrastructure services to cater for extra population • Market design to provide for mixed use • Where possible have themed market days	• Presence of local development plans • Level of order within markets	Local Authorities	4000
Social Conflicts	• Conflicts related to access and use of market space • Conflicts related to market management • Exclusion in access to markets	• Provide space to all qualified personnel based on agreed criteria during design • Establish market management committees • Ensure inclusivity in space allocation • Establish grievance redress mechanism	• Market management committees • Grievances records	Market management	5000
SUBTOTAL					**24000**
Decommissioning Phase					
Aspect	**Anticipated Environmental and Social Impacts**	**Proposed Monitoring and Implementation including performance indicators**	**Monitoring Indicators**	***Responsible Institutions***	***Cost estimate (USD)***
Air Pollution	• Dust and Fugitive gases from transportation tracks • Emissions by machineries (NOx and Sox and fugitive dust from disturbed soil surfaces	• Loose materials to be covered during transportation to reduce fugitive gas • Transportation trucks to observe speed limits. Where possible put measures for traffic calming like bumps near settlements, around corners etc • Reducing machinery idling times to cut on emissions	• Ambient air quality	***PMT& Contractor***	***5,000***

Accident Risks during Transport	• Accident risks by transportation vehicles to and from site	• Erect adequate signages warning of different hazards: e.g heavy trucks turning, observe speed limits among others • Transportation trucks to observe speed limits. Where possible put measures for traffic calming like bumps near settlements, around corners etc • Sensitize the machine operators on need for safe practices • Machinery to be operated only by qualified personnel	• Observe speed limits • Traffic calming like erection of bumps on blind spots • Proper signage	***PMT& Contractor***	***6000***
Waste Management	• Pollution risks to soils and waterr due to poor disposal of construction waste • Generation of wastes (liquid and solid waste	• Waste must be disposed off in licenses sites only and in compliance with local laws and bylaws • Contractor to prepare a detailed waste management plan • Provision of adequate facilities for solid and liquid waste management at the sites. Sensitize workers on proper waste management including 3rs • Facilitate programs/measures to ensure appropriate sanitary and medical facilities are available	• Solid waste separation and recycling/disposal measures adopted in camp settlements • Proper waste management practices related to construction works, • Solid and liquid waste management practices and status.	***PMT& Contractor***	5,000
Occupational health and Safety Risks	• Poor construction management practices may lead to adverse effects on safety, human health and wellbeing. • Storage of materials, circulation of construction machinery leading to accidents, pollution risk etc.; •	• Fencing of construction areas to reduce unauthorised access • Proper signage warning of different hazards • Provide PPEs to all workers and visitors in the construction areas • Sensitize workers on health and safety	• Accident/incidence reports • Provision and use of PPEs • Presence of adequate signage	***PMT& Contractor***	6,000
Noise and Vibration	• Noise and Vibration • Health and safety concerns	• Strict adherence to regulations on noise and vibration, including se of silencers and mufflers for loud equipment • Work to be carried out within stipulated hours to reduce nuisance • Proper PPE provision	• Compliance with laws and regulations on noise and vibration • Hours of operation by contractor, • Compliance with the Environmental Guidelines • Environmental audits	Contractor PMT	4,000
SUBTOTAL					**26.000**
COMPONENT II SUBTOTAL					**136,000**

Social Impacts Management

General and Cross Cutting Impacts				
Anticipated Environmental and Social Impacts	**Proposed Monitoring and Implementation including performance indicators**	**Monitoring Indicators**	***Responsible Institutions***	***Cost estimate (USD)***
Construction work force Increased communicable diseases such as HIV/AIDS, STD	• Conduct education and awareness creation campaigns on the spread and transmission of STDs and HIV/AIDS for construction workers and local communities living close to the construction camp sites. • Provide free distribution and provision of condoms to construction workers by the Contractor to avoid the spread of STDs and HIV/AIDS. • Implement interventions on sexual and reproductive health including providing information regarding transmission and safer sex practices • Develop and implement HIV/AIDS awareness and prevention program. Develop mechanism which will allow employees to get information on HIV/AIDS alleviation programs.	• No of sensitization sessions • Trends in diseases	Project Management Unit Contractor AfDB	6000
Risk of Gender Based Violence	• Integrate measures for prevention and handling Gender Based Violence (GBV) and Sexual Exploitation and Abuse (SEA) in the contractor's environmental and social management plan (C-ESMP). • Record and report every Gender Based Violence (GBV)- related incident and take appropriate actions • Develop an induction programme, including a Code of Conduct, for all workers directly related to this project. A copy of the Code of Conduct should be presented to all workers and signed by each workers • Provide means for women workers and other community members to report abuse in the work place • Conduct monthly community leader's engagement meeting to discuss incidents related to violence against girls and women involving project workers	• Cases of GBV reported and solved	Project Management Unit Contractor AfDB	5,000
Potential Changes to social fabric	• Undertake broader community engagement before the commencement and during implementation of the project • Preference to locals for employment opportunities • Implement awareness campaign on the impact of labor influx •	• Level of cohesion	• • Contractor PMT	1000
Vulnerable Members of Community	• Employ more community women in skilled and clerical positions • Ensure fairness in allocation of stalls for the tourist markets	•	• • Contractor • PMT	5,000
SUBTOTAL				**17,000**
OVERALL TOTAL				**153,000**

9.7 Environmental and Social Impact Assessment Monitoring

The purpose of this section is to outline the key monitoring requirements identified through the ESIA process to monitor the environmental and social performance of the project. The overall objectives of the monitoring activities are to:

- Ensure regulatory requirements are met;
- Check that impacts do not exceed national environmental and safety standards
- Verify predictions made in the ESIA by obtaining real time measurements;
- Verify that mitigation measures are effective and implemented in the manner described in Chapter 7 and 8;
- Provide early warning of potential environmental impacts; and
- Inform future operations and contribute to continuous improvement in the management of environmental and social issues related to the project.

Monitoring will be carried out by the project contractor pursuant to her/his contractual obligations to undertake inspections, monitoring and reporting.

The following four types of inspections and monitoring must be employed.

a. Inspections: planned and conducted on a regular basis to ensure that mitigation measures and commitments are properly maintained and implemented, and that specific management procedures are followed.
b. Receptor monitoring: undertaken to verify predictions made in the ESIA and to confirm that the activities at the site are not resulting in an unacceptable deterioration i.e. monitoring disturbance to affected residents (through a grievance mechanism).
c. Compliance monitoring: involving periodic sampling or continuous recording of specific environmental quality indicators or discharge levels to ensure compliance of discharges and emissions with project standards.

Monitoring results will be presented in regular reports and reviewed at monthly and quarterly site meetings. The results of the inspection and monitoring activities will be reported to the Client. Monitoring should check if and to what extent the impacts are mitigated, benefits have been enhanced, and new environmental, social and cultural heritage issues are adequately addressed.

The selection of the parameters to be monitored is based on the high likelihood of occurrences of the selected parameters. Monitoring of these parameters will be done in various stages of the project as follows:
Mobilization stage: Monitoring of the parameters at this stage is meant to establish the baseline information of the target parameters in the project area.

Construction stage: Monitoring at this stage is meant to establish the pollution levels and impacts in the community around the project site that arise from the construction activities. It is also to verify the effectiveness of the mitigation measures and to allow Contractor to take corrective and preventive actions if necessary.

Operation stage: Monitoring at this stage is meant to check on the impacts that might arise as the result of normal use of the infrastructure.

Decommissioning stage: Monitoring at this stage means the project is winding up the operational activities and is mainly concerned with impacts that might arise at the end of the project. The final disposal of the project and associated materials at the expiry of the project lifespan.

9.7.1 Monitoring Responsibility

Ministry labour (PMT) in collaboration with UoJ and MTC, UNESCO and Ministry of Environment and Forestry will implement the ESMP, supervise and monitor all components of the plan and maintain detailed records of monitoring outcomes. PMT has technical capacity and human resources to successfully conduct supervisory oversight of ESMP implementation.

9.7.2 The role of AfDB in the Implementation of the ESIA/ESMP

The Safeguards and Compliance Department of the Bank plays a significant role in the ESMP implementation through reviewing and clearing of the ESIA and ESMP and through supervision missions. It is a mandatory requirement by the AfDB that all Bank funded projects undergo mandatory review processes at all the project cycles. The project ESIA must be reviewed and cleared prior to country and Bank disclosures. It is also a mandatory requirement that all Category 1 and Category 2 Projects that are funded by the Bank be supervised during implementation. As such the Bank will be monitoring ESIA/ESMP implementation through regular bi-annual supervision missions. The Safeguards and Compliance Department will also ensure that periodic environmental and social safeguards performance reports are regularly prepared and meet the required standards

9.7.3 Environmental and Social Monitoring Plan

The details of environmental, and social economic issues, proposed parameter to be monitored and timing, agencies responsible for execution of proposed actions during mobilization, construction and operation and stages are presented in Tables 9.1 below.

Table 0-3 Environmental Monitoring Plan

Construction Phase							
Impact	Proposed mitigation measure	Implementation tool	Monitoring Indicators	Means of verification	Monitoring frequency	Responsibility	Estimated Cost USD
Air/noise pollution	• Use local routes away from sensitive areas • Site construction facilities away from sensitive areas • Use equipment fitted with abatement devices and good maintenance regime • Prohibit working at night working if possible • Observe seasonal sensitivities • Give due notices for settlements/sensitive receptors	Part of contract agreement with contractor Contractor's maintenance program or plan for equipment/ machinery	Contractors plan and report Grievances recorded	Independent checks by project engineers and ESS Maintenance records verified by project engineers and PMT Self-check by Contractor	Construction stage	Contractor (s) and PMT	3,000
Water Pollution	• Construction of a functional waste management infrastructure at each facility • Adoption of Best environmental practices in waste management • Good drainage system to reduce erosion • Proper siting of drainage outfalls • Water abstraction to adhere to the local laws so as to avoid over extraction of ground water	Industry-specific standards, for water quality monitoring Standards for drainage works construction AFDB's OS-4 Construction site management plans	Water quality analysis Visibility of oil and other pollution materials on water bodies	Incidences of pollution reported Water quality results	• Regular Monthly report • Occasional checks and observations by project engineers and PMT • Periodic reports on performance by Contractor	Contractor (s) and PMT	4,000
Solid waste generation and disposal	Develop waste management plan including for hazardous waste; construction waste, general waste and kitchen waste	Part of contract agreement with Contractor Contractor's waste management plan;	Number of waste management infrastructure provided	Periodic reports	Monthly	Contractor(s) and PMT	6,000

		Industry-specific standards, particularly the EHS Guidelines	Final waste disposal records				
Impact on flora, fauna and ecologically sensitive areas	• Demarcate and avoid areas of unique flora and fauna • In case of any identified ecologically sensitive areas, conserve them • Rehabilitate cleared areas with native species, and ecosystem restoration in habitats of conservation value	AfDB's OS-3	Presence of sensitive habitat	Activity reports Site remediation reports	Construction	Contractor/PMU	2,000
Marginalization of women and other vulnerable groups	• Provide women and vulnerable groups specific interventions Target the women and other vulnerable groups in the allocation of Project resources and benefits	ESMF	Number of women benefiting from Project activities Number of women and other vulnerable groups enrolled for training	baseline data and project implementation report	During Project implementation	PMT	2,000
Interaction between workforce and Student community communities	Carry out training and awareness training for the workforce and their dependents on COVID-19, HIV/AIDS and other sexually transmitted illnesses, and communicable diseases Carry out health awareness-raising campaigns for communities on similar topics	ESMF; Industry-specific standards, particularly the EHS Guidelines	Health and safety incident register Grievance records Number of training and awareness sessions held Number of women and other vulnerable groups that participated	Site visit and Observations by ESS/Contractor	Construction and operation	Contractor and PMT	1,000
Labor and working conditions	Employment practices and working conditions should conform to ILO standards and national regulations Institute a clear and comprehensive health and safety reporting and grievance procedure system freely available to all of the workforce	Industry-specific standards,	Comprehensive health and safety reporting and grievance procedure	Periodic reports by performance ESS/Contractor	Construction and operation	Contractor and PMT	1,000

Economic Development and Employment	Contractor to develop an Employment Plan, with clear employment requirements and procedures for the construction and operational/ maintenance workforce Institute fair and transparent hiring and staff management procedures	Industry-specific standards, and Guidelines ESMF	Employment Plan	Periodic reports by performance ESS/Contractor	Construction n and operation	Contractor and PMT	2,000
Total	**TOAL**						**21,000**
Operations Phase							
Impact	Proposed mitigation measure	Implementation tool	Monitoring Indicators	Means of verification	Monitoring frequency	Responsibilit y	Estimated Cost
Air/noise pollution	Facility fitted with equipment with abatement devices and good maintenance regime Prohibit operations at night if possible	Part of contract agreement with contractor Contractor's maintenance program or plan for equipment/ machinery	Contractors plan and report Grievances recorded	Independent checks by project engineers and ESS Maintenance records verified by project engineers and PMT Self-check by Contractor	Construction stage	Contractor (s) and PMT	1000
Water Pollution	Operation of functional waste management infrastructure at each facility Adoption of Best environmental practices in waste management Good drainage system to reduce erosion Water abstraction to adhere to the local laws so as to avoid over extraction of ground water	Industry-specific standards, for water quality monitoring Standards for drainage works construction AFDB's OS-4 Construction site management plans	Water quality analysis Visibility of oil and other pollution materials on water bodies	Incidences of pollution reported Water quality results	• Regular Monthly report • Occasional checks and observations by project engineers and PMT • Periodic reports on performance by Contractor	Contractor (s) and PMT	1,000
Solid waste generation and disposal	- Solid Waste Generation and	• Part of contract agreement with Contractor	• Number of waste management	Periodic reports	Monthly	Contractor(s) and PMT	2,000

	Management - Regular inspection and maintenance of the waste disposal systems during operation phase - Establish a collective waste disposal and management system - Provide waste disposal bins to each house well protected from adverse weather and animals - Ensure waste materials are disposed of on Council and MININISTRY OF ENVIRONMENT AND FORESTRY approved sites - Use of the 3rs – Reduce, Re-use, Re-cycle	• Contractor's waste management plan; • Industry-specific standards, particularly the EHS Guidelines	infrastructure provided • Final waste disposal records				
Impact on flora, fauna and ecologically sensitive areas	Rehabilitate cleared areas with native species, and ecosystem restoration in habitats of conservation value	AfDB's OS-3	Presence of sensitive habitat	Activity reports Site remediation reports	Construction	Contractor/PMU	1,000
Marginalization of women and other vulnerable groups	Provide women and vulnerable groups specific interventions Target the women and other vulnerable groups in the allocation of Project resources and benefits	ESMP	Number of women benefiting from Project activities Number of women and other vulnerable groups enrolled for training	baseline data and project implementation report	During Project implementation	PMT	1,000

Interaction between workforce and local communities	Carry out training and awareness training for the workforce and their dependents on COVID-19, HIV/AIDS and other sexually transmitted illnesses, and communicable diseases Carry out health awareness-raising campaigns for communities on similar topics	ESMF; Industry-specific standards, particularly the EHS Guidelines	Health and safety incident register Grievance records Number of training and awareness sessions held Number of women and other vulnerable groups that participated	Site visit and Observations by ESS/Contractor	Construction and operation	Contractor and PMT	1,000
Economic Development and Employment	Innovators to develop products and services and investment opportunities maintenance workforce Institute fair and transparent hiring and staff management procedures Students to train and undertake swimming operations and utilizing the skills	Industry-specific standards, and Guidelines	Products and services developed	Periodic reports by performance ESS/Contractor	Institutions in operation	Contractor and PMT	2,000
Total	**TOTAL**						**9.000**
Decommission Phase							
Impact	Proposed mitigation measure	Implementation tool	Monitoring Indicators	Means of verification	Monitoring frequency	Responsibility	Estimated Cost
Air/noise pollution	Site demolition facilities Use equipment fitted with abatement devices and good maintenance regime Prohibit working at night working if possible	Part of contract agreement with contractor Contractor's maintenance program or plan for equipment/ machinery	Contractors plan and report Grievances recorded	Independent checks by project engineers and ESS Maintenance records verified by project engineers and PMT Self-check by Contractor	Construction stage	Contractor (s) and PMT	1000

Water Pollution	Adoption of Best environmental practices in waste management Good drainage system to reduce erosion Proper siting of drainage outfalls Water abstraction to adhere to the local laws so as to avoid over extraction of ground water	Industry-specific standards, for water quality monitoring Standards for drainage works construction AFDB's OS-4 Construction site management plans	Water quality analysis Visibility of oil and other pollution materials on water bodies	Incidences of pollution reported Water quality results	• Regular Monthly report • Occasional checks and observations by project engineers and PMT • Periodic reports on performance by Contractor	Contractor (s) and PMT	1,000
Solid waste generation and disposal	Develop waste management plan including for hazardous waste; construction waste, general waste and kitchen waste	Part of contract agreement with Contractor Contractor's waste management plan; Industry-specific standards, particularly the EHS Guidelines	• Number of waste management infrastructure provided • Final waste disposal records	Periodic reports	Monthly	Contractor(s) and PMT	1,000
Interaction between workforce and local communities	Carry out training and awareness training for the workforce and their dependents on COVID-19, HIV/AIDS and other sexually transmitted illnesses, and communicable diseases Carry out health awareness-raising campaigns for communities on similar topics	ESMP; Industry-specific standards, particularly the EHS Guidelines	Health and safety incident register Grievance records Number of training and awareness sessions held Number of women and other vulnerable groups that participated	Site visit and Observations by ESS/Contractor	Construction and operation	Contractor and PMT	2000
Labor and working conditions	Employment practices and working conditions should conform to ILO standards and national regulations Institute a clear and comprehensive health and safety reporting and grievance procedure system	Industry-specific standards,	Comprehensive health and safety reporting and grievance procedure	Periodic reports by performance ESS/Contractor	Demolition and operation	Contractor and PMT	1,000

Accidents/Injuries	Securing the Site by fencing off	ESMP	Comprehensive health and safety reporting and grievance procedure	Periodic reports by performance ESS/Contractor	Demolition and operation	Contractor/Proponent	2000
Subtotal							**8000**
Overall Total							**38,000**

9.8 Grievance Redress Mechanism

The AfDB defines project GRM as a systematic process for receiving, evaluating and facilitating resolution of affected people's project-related concerns, complaints and grievances about the borrower's/client's social and environmental performance on a project. AfDB requires its clients to be aware of and respond to stakeholders' concerns related to the project in a timely manner. In OS 1, the Bank requires the borrower/client to establish a "credible, independent and empowered local grievance and redress mechanism to receive, facilitate and follow up on the resolution of the affected people's grievances and concerns regarding the environmental and social performance of the project. The local grievance mechanism needs to be sufficiently independent, empowered and accessible to the stakeholders at all times during project cycle and all responses to grievances shall be recorded and included in project supervision formats and reports."

The process by which the GRM is designed should be integrated into the overall approach to project preparation as prescribed in the Bank's ISS. The Bank ISS through its (IESIA) Guidelines Notes provides guidance on development and Implementation of GRM. It should also be included in the concrete actions required in the Environmental and Social Management Plan (ESMP) for Category 1 projects and, on a case by case basis, for Category 2 projects that exhibit specific potential social tensions, in particular risks of mismanagement of compensation/resettlement schemes or the presence of particularly vulnerable groups in the project's area of influence.

AfDB has also established its own accountability mechanism, the Independent Review Mechanism (IRM). The IRM seeks to assess whether a Bank approved project complies with relevant the AfDB's ISS. The IRM makes itself accessible to any group (a minimum of 2 persons living in the project's area of influence) actually or potentially negatively affected by a Bank- funded project. The IRM reports to the Bank's Board of Directors and is thus independent of Bank management. The IRM has been set up by the Bank to achieve more transparency. It is also a costly mechanism to trigger. The establishment of local GRMs can help to alleviate the need for plaintiffs to resort to the IRM, while problem-solving can be more rapidly and cost-effectively done locally. The cultural context in which GRMs operate also helps to defuse complaints and to find appropriate and commensurate solutions.

The grievance redress mechanism will make provision for two tier amicable mediation and settlement. The first tier will involve the grievance redress committee resolving the issue at the institution/community level. If the issue is not resolved at the local level, then the 2^{nd} $_{tier}$ should involve the PMT to constitute an appropriate team including regional/national stakeholders including the Administration head for the area (or his/her representative) to resolve the matter. When these two tiers of amicable mediation arrangement fail, the complainant is free to seek redress at the court of law.

9.8.1 GRM at project level

The GRM in the AfDB-STVET -VCD project will be established under the guidance provided in the ISS Bank ISS through its (IESIA) Guidelines Notes. The first step is to determine the primary goal of the GRM which would generally be to resolve specific grievances in a manner that meets both project management and community needs, but with important local variations. The scope of the grievances that may legitimately be brought forward by the communities and/or individuals affected shall be defined in

advance. That scope will generally cover most, if not all, of the issues raised in a typical Environmental and Social Assessment: natural resources, pollution, cultural property, land acquisition, the income of resettled/displaced populations, the welfare of vulnerable groups, etc.

The second step is to design the GRM by:

- Preparing a preliminary design.
- Selecting ways and means to receive, register, assess and respond to grievances.
- Select grievance resolution approaches.
- Design a means to track and monitor grievances.
- Develop the grievance mechanism infrastructure.
- Review and refine the design.

The GRM shall be designed based on the following principles:

1. Involvement of individuals of mixed levels and functions from the entity (e.g., operations, environmental affairs, community relations, legal affairs, contractors). Staffing the design team from just one function such as community relations or human resources is unwise.
2. The inclusion of a balanced group of representatives from the community, representing the range of constituencies and demographics that will be using the grievance mechanism, while keeping the team small enough to be responsive.
3. GRM Relying upon clear terms of reference and a work plan that outlines team goals, roles, and responsibilities, level of decision-making authority, reporting lines, tasks, time frame, and products.
4. Making the use of multiple channels (e.g., face to face, phone conversation, mail, text or e-mail, message on a dedicated website), sensitive to cultural customs and traditional methods that may influence or impede the expression of grievances.
5. The existence of a central point of contact that will receive complaints and log them into a central register.
6. Existence and operation of designated complaint resolution staff.
7. Processes for acknowledging the receipt of a grievance and informing the complainant about the time frame in which a response can be expected.

9.8.2 Appointing members of Grievance Redress Committees (GRC)

The project will involve the formulation of Grievance Redress Committees (GRCs) at project level in the two islands, i.e. GRM staff, for handling grievances. Generally, all project staff, the management staff of agencies involved in the project, and government administrators will take on grievance handling as a responsibility. The GRM members should be qualified, experienced, and competent personnel who can win respect and confidence of the affected communities. It is also important to maintain a gender balance within the GRMs. Criteria for selecting members of GRMs will include the following:

- Knowledge of the project, its objectives, and outcomes

- Technical knowledge and expertise to understand project design and requirements;
- Understanding of the social, economic, and cultural environments and the dynamics of the communities;
- Capacity to absorb the issues dealt with and to contribute actively to decision-making processes;
- Social recognition and standing; and
- Equitable representation of males and females.

The GRC at project level shall constitute among other members, an officer from MoL, e.g. Environmental Control Officers, Project Coordinators, a member from a recognized Non-Government Organization and a community representative. The GRC shall have the right to request the project technical staff, and officers from relevant state or non- state institutions to attend the meetings and provide information. A complainant has the right to appear in person, to be accompanied by a community member, and/or to request to be represented by a community elder. GRCs shall be established at the project level to assure accessibility for aggrieved persons.

9.8.3 Procedures, complaints channels and time frame for Grievance Redress Mechanisms

As there is no ideal model or one-size-fits-all approach to grievance resolution, the best solutions to conflicts are generally achieved through localized mechanisms that take account of the specific issues, cultural context, local customs, and project conditions and scale. The process by which a complaint will be accepted or rejected needs shall be carefully designed, and shall maximize interactivity and cultural sensitivity. The acceptance/rejection of a complaint will go through a discussion stage where the plaintiff and the **GRM staff** interact on the grounds and motives of the complaint, after which the plaintiff should clearly and transparently be told whether or not the complaint is eligible and will be processed.

The acceptance/rejection of the complaint shall be based on objective criteria that are posted by the GRM, including a written copy displayed in the public access area of the GRM in an appropriate language.

The processing of the complaint, if accepted should go through various phases:

- Filing of the complaint and labelling with an identification code communicated immediately to the plaintiff. (see annex 5 for sample Grievance Form)
- Assessment of the complaint (including severity of the risk/impact).
- Formulation of the response.

Selection of the grievance resolution approach is a key. There are four general approaches to choose from:

- The project's management proposes a solution.
- The community and the project's management decide together.
- The project's management and the community defer to a third party to decide.

- The project's management and the community utilize traditional or customary practices to reach a solution.

The Bank ISS recommends the application of a "Decide together" approach that is usually the most accessible, natural and unthreatening ways for communities and a project's management to resolve differences. With the potential to resolve perhaps the majority of all grievances, "decide together" should be the center-piece of any grievance mechanism's resolution options.

The grievance mechanism will comprise of the following primary components:

- ✓ Receive and register a complaint.
- ✓ Screen and validate the complaint (based on the nature and type of a complaint).
- ✓ Formulate a response.
- ✓ Select a resolution approach, based on consultation with affected person/group.
- ✓ Implement the approach.
- ✓ Settle the issues.
- ✓ Track and evaluate results.
- ✓ Learn from the experience and communicate back to all parties involved.

The time for the Grievance Redress Committees to be held shall be agreed and documented, depending on the nature and severity of the complaint. A number of mechanisms will be available to aggrieved parties to access redress. These shall include institutions specific (internal) to a project and set up from its inception or others that might have emerged over time in response to needs identified while the project evolved. Other institutions which are already established within a country's judicial, administrative, and/or political systems and exist outside a project shall also be used. These include the government bureaucracy; judicial institutions; and political institutions such as District Councils, Village Councils, etc. In addition, the Bank itself sometimes shall provide a forum for grievance redress. GRMs shall include avenues for resolving conflicts between aggrieved persons or other stakeholders and can provide information sought by the public on the project.

The channels of presenting complaints could include the presentation of complaints via third parties (e.g., village elites/traditional leaders, community-based organizations, lawyers, non- government organizations [NGOs], etc.); face-to-face meetings; facsimile, telephone, and email communications; written complaints; etc.

If the complainant is not satisfied, the complainant will have to appeal to the Project Management Unit.

Table 9-1 Grievance Redress Mechanism

Step	Process	Description	Time frame	Other information
1	Identification of grievance	Face to face; phone; letter, e-mail; recorded during public/community interaction; others	1 Day	Email address; hotline number; Responsible: community or town head.

2	Grievance assessed and logged	Significance assessed and grievance recorded or logged (i.e. in a log book)	4-7 Days	Significance criteria Level 1 –one off event; Level 2–complaint is widespread or repeated; Level 3- any complaint (one off or repeated) that indicates breach of law or policy or this ESMF provisions. Responsibility: Environmental Site Officer with the approval of the Region's Environmental Control Officer
3	Grievance is Acknowledged	Acknowledgement of grievance through appropriate medium	7-14 Days	Responsible: Environmental Control Officer
4	Development of response	-Grievance assigned to appropriate party for resolution; -Response development with input from management/ relevant stakeholders	4-7 Days 10-14 Days	Environmental Manager Environmental Manager
5	Response signed off	-Redress action approved at appropriate levels	4-7 Days	PMTs
6	Implementation and communication of response	-Redress action implemented and update of progress on resolution communicated to complainant	10-14 Days	Environmental Managers and Environmental Control Officers through the Environmental Site Officers
7	Complaints Response	-Redress action recorded in grievance log book -Confirm with complainant that grievance can be closed or determine what follow up is necessary	4-7 Days	Environmental Site Officers Community/town leader of the complainant
8	Close grievance	-Record final sign off of grievance -If grievance cannot be closed, return to step 2 or refer to sector minister or recommend third- party arbitration or resort to court of law	4-7 Days	PMTs,

Internal Grievances Redress Mechanism between the specific site contractors will employ the same principals but should be developed on site to site basis addressing terms of engagement GBV, SEA and SH.

CHAPTER TEN: OVERAL IMPLEMENTATION OF ESMP

10.1 Measures to Develop Appropriate ESMPs for Subprojects

The framework for the Environmental and Social Management Plan (ESMP) provides guidance on procedures to be followed and standards to be met in implementing the project which should be in agreement with national and African Development Bank operational safeguard provisions. Institutional arrangements with clearly defined roles and responsibilities as well as monitoring protocols to be followed are presented to ensure that the required provisions are adhered to. Budgetary estimates are provided to support the implementation of the ESMP.

10.2 Environmental and Social Preliminary Screening Process

The purpose of the preliminary screening is to: (i) determine whether projects are likely to have potential negative environmental and social impacts; (ii) identify appropriate mitigation measures for activities with adverse impacts; (iii) incorporate mitigation measures into the project design; (iv) review and approve project proposals and (v) monitor environmental and social impacts and concerns during implementation. The early screening process will also consider the provisions of the AfDB involuntary resettlement for possible displacement and livelihood impacts. Hence, the screening will cover both physical and economic displacement including illegal squatters and encroachers.

The PMT must foremost carry out the preliminary environmental and social screening of proposed projects by as per the procedures detailed in 5.4.4. MININISTRY OF ENVIRONMENT AND FORESTRY will inform the PMT of the the screening outcome for further advice in line with the Environmental Assessment. During preliminary screening of the projects/subproject, where there may be doubt concerning project risks and impacts, MININISTRY OF ENVIRONMENT AND FORESTRY should be consulted for guidance.

10.3 ESIA Procedure to be followed

The African Development Bank Operational Safeguard policy OS-1 provides guidance on the environmental assessment procedures for AfDB funded projects. The EIA procedures of Ministry of Environment and Forestry South Sudan have also detailed an acceptable process to screen and evaluate all developments, undertakings, projects and programs which have the potential to give rise to significant environmental impacts. The two processes are largely similar and the procedures are therefore given in the following sections and will mostly be statutorily followed by all the components under the project to obtain environmental permits if required.

The steps below will be followed (if need be) by the implementing Ministry to ensure environmental and social compliance of the project's activities.

Step 1: Environmental registration of the project;
Step 2: Statutory screening;
Step 3: Conduct environmental and social assessment studies;
Step 4: Review & approval of the ESIA for the sub-project; Publication / Dissemination of ESIA
Step 5: Public hearing and Environmental Permitting Decision

10.3 Technical Specification and Standards

10.3.1 Technical specification

With technical support from MoL, UNESCO and the various agencies, there will be development and presentation of clear guidelines for the design and provision of technical specifications and standards for project implementation. These will ensure the streamlining of approaches and activities for sound environmental and social implementation of projects. These will include adequate reference to sector norms or best practices or prescribed national codes of practices or international best practices.

10.3.2 Environmental and Social Clauses for Contractor Agreements

Environmental and Social Clauses should be included in the Technical Specifications and be accounted for as part of the Project investment's overall implementation budget. The contractor in this case refers to any individual or firm or consultant engaged to provide technical services (e.g. design, surveys, construction, installations or any associated works) for the project. The contractor will be responsible for ensuring compliance with all relevant legislation as well as managing the potential environmental, social, health and safety impacts of all contract activities specified in all the approved environmental documents or reports for the project such as ESMF and ESMP or as may be recommended by key stakeholders and sector ministries. The Contractor will be expected to demonstrate commitment to the environment at all levels in the Contractor's management structure. The Contractor will be required to identify individuals responsible for overall environment, social (including community relations); and health and safety management. Contractor implementation of the requirements of the ESMF/EIA will form part of contractual agreement and Contractor project reporting requirements to the implementing Ministries.

10.4 Institutional strengthening measures

For effective implementation of the ESMF, technical assistance is required at National level and project implementation level to build the capacity of the different stakeholders, and government staffs to discharge their responsibilities as per the requirements set out in this ESMF. The bank and PMT should therefore institute the following measures:

1. Recruit an environmental and social safeguard specialist for the project. The budget for this task will be part of project component three for building capacity. The safeguard specialist tasks will include
    - Assist in environmental and social screening task
    - Choice of mitigation measures
    - Preparation of the draft ToR for sub-projects requiring separate ESIA
    - Assist in the recruitment of qualified consultants to carry out EISA
    - Sharing of project safeguards activities and reports to appropriate institutions
    - Conduct environmental and social monitoring and learning for the program
    - Organize capacity building training and experience sharing on environmental and social safeguards tools to program implementation staffs and relevant stakeholders.

2. Program partnership and collaboration agreements with relevant institutions in charge of oversee environmental and social impacts and assessment of development projects.
3. Mainstreaming environmental and social management into the project activities including integrating the tools and recommendations of the safeguard documents into the manuals and management procedures and in the preparation of project and sub-project budget. This would strengthen inclusion of legislative, regulatory and institutional frameworks in the management and support procedures.
4. Updating the ESMP (program, schedule and budget): Need for flexibility for adapting the ESMF of the project to changing context and reality to reflect the changes in the project budgets and the implementation schedule.
5. Organizing ESMP best practice and lesson sharing with stakeholders as well as with other projects implemented by the public and NGO in similar thematic and context.
6. Adoption by the project of the Codes of conduct and action plan for the implementation of Environmental and Social, Health and Safety (ESHS) and occupational health and safety (OHS) standards and the prevention of violence based on gender (GBV) and violence against children (VAC). This measure involves getting the project to adopt a set of key definitions, codes of conduct and guidelines in order to: (i) clearly define the obligations of all project staff (including subcontractors and laborers) concerning the implementation of environmental, social, health and safety (ESHS) and occupational health and safety (OHS) standards; and (ii) to help prevent, identify and combat GBV and VAC on the site and in neighboring communities. The application of these Codes of Conduct will make it possible to ensure that the project meets its objectives in terms of ESHS and OHS standards, as well as to prevent and / or mitigate the risks of GBV and VAC on the project site and in the local communities. The people working in the project must adopt these Codes of Conduct which aims to: - Raise awareness among staff operating in the project of ESHS and OHS expectations; and - Create awareness about GBV and VAC, and: - Create a consensus on the fact that such acts have no place in the project; and Establish a protocol to identify incidents of GBV and VAC; and to proactively manage to such incidents.

10.5 Requirements for Training and Capacity Building for ESMF Implementation

The capacity of various government agencies must be adequate to enable them to play their respective roles effectively to achieve the objectives of the project. The first step in pursuing capacity building will be to identify the needs of the various stakeholders. It will entail organizational development, the elaboration of relevant management structures, processes and procedures, not only within organizations but also the management of relationships between the different organizations and sectors (public, private and community).

10.5.1 General Requirements

The project will include the assessment of MoL capacity to implement the ESMF. Based on a preliminary assessment done, the Framework will entail a Technical Assistance component as capacity building initiative for ensuring successful deployment of the program and enhance the capacity of the RoGZ implementing entities dealing with the STVET -VCD project. The Technical Assistance aims at supporting all project key players i.e. the Implementing Ministries, Local Government Institutions etc.

The Technical Assistance component will address key barriers to implementing effective environmental and social safeguards. The capacity building programme will seek to provide to the key actors, the necessary skills for effective implementation. For effective implementation of the ESMF, there will be need for technical E&S capacity in the human resource base of the PMTs of the implementing Agencies, other Implementing entities working together with the Implementing Ministries as well as key private sector entities responsible for implementation of activities under project components. Implementers need to identify and understand the social and environmental issues. It will also be important to ensure that the Ministries have sufficient capacity and systems for effective oversight of the fairly complex processes for E&S risk management with multiple parties involved.

Given the nature of the environmental and social management requirements and provisions outlined in this ESIA competencies and capacity building to enhance the respective roles and collaboration of the relevant stakeholders will be required in the following areas:

I. Environmental Assessment Process - Screening, scoping, impact analysis, mitigation measures and monitoring, Public participation techniques and stakeholders' engagement, including public awareness creation / educational techniques (on environmental, social and health issues), reviewing ESIA Reports;
II. Environmental Due Diligence - Types of due diligence, screening projects for liabilities, scoping due diligence investigations and reviewing due diligence reports;
III. Monitoring and Evaluation - E&S management planning and monitoring systems. impact assessment tools, monitoring tools and activities, understanding the importance of M&E in project implementation, M&E requirements for environmental and social sustainability of projects;

The capacity building requirements will mostly be in the form of a training workshops. A training workshop on the ESMF and the African Development Bank operational safeguard policies would be organized for the environmental and safeguards officers in South Sudan.

10.6 Technical Assistance (TA)

TA will be available for in-depth safeguards training which may be led by the AfDB's safeguards specialists and/or consultants with adequate experience in safeguard matters. The latter may assist with the preparation of ESIA, ESMP and other safeguard implementation plans. Possible areas of training have been summarised in table below

Table 10-2 Provisional Programme for an Initial 5-Day Training Plan

Possible Topics	Method
• Environmental and Social (E&S) Awareness; • E&S Impacts Assessment Methods and Process; • Environmental Legislation, Regulations and Acts.	Workshops, Seminars
• E&S Management Plan; • Mitigation and Enhancement Measures • Monitoring and Evaluation;	Workshops, Seminars

• Waste Minimization and Management; • Soil Erosion Control and Water management • Transplanting and Planting; and Health and Safety Practices.	Workshops, Seminars
• Record Keeping.	Workshops, Seminars and Site visits

10.7 Public Consultation and Disclosure

AfDB's policies require that environmental reports are made available to project affected groups, local NGOs, and the public at large. Public disclosure of Environmental Impact Assessment (EIA) documents or environmental reports is also a requirement of the ESIA procedures of South Sudan. However, there is no limitation as to the extent and scope of disclosure. The PMT in collaboration with the line agencies and Ministry of Environment and Forestry will make available copies of the ESIA in selected public places as required by law for information and comments. Public notice would be served in the media within a 5- day period on acceptance of the ESIA by AfDB.

MoL will ensure that the disclosure notice is displayed at all the venues identified and the duration of the display period will be for twenty-one (21) days. Also, the AfDB will disclose the summary for at least 30 days before taking the project to their Board for consideration.

10.7.1 Stakeholder Consultation Strategy

Stakeholder consultation process will continue at different stages during the project life cycle when various documents including ESMPs will be prepared for site-specific project. There would be stakeholder consultation (especially communities and institutions that would be affected) at every stage of the project's activities. The focus of the stakeholder engagements would include: potential environmental and social issues of concern from the project implementation; compliance with AfDB safeguards and relevant national laws, regulation and policies; strategies for mitigating potential impact; scope of interventions; awareness creation on potential impacts; trainings on implementation of ESMPs; grievance redress. The modes of engagement would comprise: newspaper publications, media communications (radio, television, etc.), one-on-one interviews, field visits, general stakeholder meetings and trainings.

10.8 General Costs for ESMP Implementation and Monitoring

The ESMP implementation budget refers to all costs that will be incurred to implement the requirements or recommendations in this Environmental and Social Management Plan (ESMP). In the ESMP the requirements are to ensure that implementation of the project integrates environmental and social issues for the sustainability of the project as well as its components and sub-components. Among other things the ESMP recommends the following key issues will be important in the implementation and management of this ESMPs,

- Preparation of site-specific ESIA Audits
- Training and capacity building,
- Reviewing and monitoring mechanisms.

These issues have been amplified and are clearly described in this ESMP. The budget for ESMP monitoring awareness creation, capacity improvement, monitoring and evaluation and training programs for key stakeholders involved in the implementation of the Project is estimated

Table 10.1 the summary of the ESMP

Activity	Timeframe	Responsibility	Cost (USD)
Estimated Mitigation Measures	Design Construction implementation & decommissioning period	PMT/MoL/ CONSTRUCTORS/ Ministry of Environment And Forestry AfDB	97,000
ESMP Monitoring	Entire project period until hand-over	PMT/MoL/ Ministry of Environment And Forestry AfDB	38,000
Establishing & Building Capacity of the GRM	Design Construction & implementation period	PMT/MoL/ Constructors/ Ministry of Environment And Forestry	20,000
Capacity building cost on ESMP (institutions identified in the report)	Project implementation period	PMT/MoL/ Constructors/ Ministry of Environment And Forestry AfDB	10,000
Annual Environmental audits	Entire project period until hand-over	PMT/MoL/ Constructors/ Ministry of Environment And Forestry	5,000
Regular supervisions – environmental aspects	Entire project period until hand-over	PMT/MoL/ Constructors/ Ministry Of Environment And Forestry AfDB	10,000
Sub Total			**175,000**
5% Miscellaneous			**8750**
			183,750

CHAPTER ELEVEN: CONCLUSION AND RECOMMENDATIONS

11.1Conclusions

The proposed project will have several positive economic impacts during its different phases that include: creation of employment; stimulating development through revenue, taxes and income, creating needed skills as well as developed innovations that will steer business development, provide investment opportunities expand goods and services, in the market, create business opportunities for various companies and individuals. These will contribute to the achievement of vision 2040 and contribute to making South Sudan increase the infrastructure for developing the Agribusiness Enterprises. The project will also have high socio-economic benefits to the people along the project area and adjoining regions.

However, the project will present environmental and OSH risks similar to most building and infrastructure projects, which include: generation of wastes (municipal, construction and demolition wastes; vegetation clearing, changes in soil characteristics; emission of air pollutants amongst others. Specific mitigation measures have been suggested in this report to offset the specific inherent adverse impacts. In implementing these mitigation measures there would be an increase of environmental soundness and social acceptability of the project. These risks can be adequately managed and monitored through the proposed mitigation measures that includes frameworks for developing waste management plans, OSH plans and hazardous materials safety plans. The total cost for implementing Environmental Management Plan including the Monitoring Plan is tuned to **USD 183,750** the identified adverse impacts shall be managed through the proposed implementation regime laid down in this ESIA. Ministry of Labour through PMT is committed in implementing all the recommendations given in the ESIA and further carrying out the environmental monitoring schedules.

Therefore, Ministry of Environment and Forestry is advised to license the project subject to it following the proposed annual environmental audits and ESMP and complying with all other statutory requirements that the project subscribes to. The project should also develop a plan for continuous engagement with stakeholders that include members of the public (its neighbors) and government bodies. This will be in compliance with The country's environmental management policies and laws.

11.2Recommendations

1. Aspect of the project will require a multi-sectoral and a multi-disciplinary approach in the overall implementation. Therefore, it is important that during the implementation, relevant stakeholders are effectively engaged.

2. The implementation of STVET -VCD- (a Science Complex at the University of Juba and a new women Hostel MTC –Juba South Sudan is likely to have multiplier effects and proliferation of other economic activities hence engaging other stakeholders, and especially the private sector may help in addressing some of the cross cutting challenges.

3. The contractors and the project proponent should take into consideration all the legislative measures put in place so as to ensure the due process is followed.

4. The mitigation measures provided are based on the recommendations of this ESMP and they should be followed so as to address the environmental issues that may arise in the course of the implementation of this project. But contractors should enrich the ESMPs and develop their site specific ESMPs

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10 APPENDICES

Appendix 1: Tools

Checklist **(**Literature and Documents**)**

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT CHECKLIST FOR "SUPPORT TO TVET FOR VALUE CHAIN DEVELOPMENT (STVET-VCD) PROJECT", JUBA, SOUTH SUDAN.

1. DESCRIPTION OF THE PROJECT AREA
   a. Project Location (Administrative Location, Site Location, Access to the Sites, Area of Influence,
   b. Environmental setting (Topography and slope, Soils, Geology, Climate, Land Use and Land Cover
   c. Biodiversity Assessment (Flora and Fauna)

2. SOCIAL –ECONOMIC SETTING (Population Size, Well-being, Mortality, Education, Livelihoods, Employment, Poverty, Vulnerable groups, Infrastructure services (Road Networks, Schools, Health facilities), gender, GVB

3. DESCRIPTION OF DEVELOPMENT PROPOSALS
   a. The Project (The Project Setting, Site access, Land ownership, Proposed Project Description, Scope of Works, Project Cost)
   b. Expected Project Activities, Planning and Design Activity component, Construction Activity component, activities during operation.
   c. Analysis of project alternatives(No Project Alternative, Alternative Site Location, Alternative technology)
   d. Capacity of the implementation agency to implement ESMP

4. POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

- **Overview of the Policy Framework:** Policy on Environment and Development: National Environment Policy, Land and land use Policy, Water policy, Biodiversity policy, and Wildlife Policy etc.

- **Overview of the Legislative Framework** (The country Constitution, The Environmental Management and Co-ordination law, The Environmental (Impact Assessment and Audit) Regulations, The Environmental Management and Coordination, (Water Quality) Regulations, Environmental Management and Co-ordination (Waste Management) Regulations, Environmental Management and Coordination (Fossil Fuel Emission Control) Regulations, Environmental Management and Coordination (Noise and Excessive Vibration Pollution) Control Regulations, Water Act, The Water Resources Management Rules, Occupational Health and Safety Act, 2007, The Physical and land use Planning Act, The Traffic Act, The Public Health Act etc.)

- **Institutional Framework** (GoSS- Water Resources Authority, Ministry of Education in charge of TVET training etc.)

5. LICENCES AND PERMITS PROCEDURES

6. ENVIRONMENTAL AND SOCIAL GUIDELINES AND SAFEGUARDS POLICY

- The Banks Integrated Safeguards System (ISS)

7. MEAs

8. CONFLICT/ GRIEVANCES RESOLUTION MECHANISM

I. Key Informant Interview (KII) Guide

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT QUESTIONNAIRE GUIDE FOR THE PROPOSED "TVET FOR VALUE CHAIN DEVELOPMENT (STVET-VCD) PROJECT", JUBA, AND SOUTH SUDAN.

Dear Sir/Madam,

The Government of Southern Sudan is engaged in a "**TVET FOR VALUE CHAIN DEVELOPMENT (STVET-VCD) PROJECT", JUBA, SOUTH SUDAN.** As part of the statutory requirement, the Bank has commissioned an Environmental and Social Impact Assessment for the proposed project. As a key component of public participation process, this questionnaire serves to inform and engage you about the development, as well as capture any issues of concern that you may have, so as to ensure the project remains environmentally, socially and economically sustainable.

As a key stakeholder, we would appreciate if you provided us with the follow

1. **Discuss Project site description**
   Including The land on which the construction will be located, land ownership Site Access Details, The main land cover/use etc.)
   PROBE
   - *i. Description of project and justification*
   - *ii. Are the project sites located in areas considered ecologically sensitive? e.g. areas covered under Ramsar Convention - wet lands, etc.*
   - *iii. Are wetlands sites located in protected areas such as protected forests, areas with endangered species, etc.?*
   - *iv. Are the project sites in culturally important areas?*
   - *v. Is the project going to involve extensive construction work, which will involve extensive excavations?*
   - *vi. Are the project works going to involve involuntary resettlement of populations? Compensation?*
   - *vii. How are the people or their livelihoods going to be affected by the project? – Interference with daily economic activities, closure of roads, etc.*

2. **Explain the Key Project Highlights**

3. **Discuss the Anticipated Positive Project Impacts During project construction and implementation, and propose Mitigation Measures**

   PROBE

Potential impacts	**Descriptions**
Employment Creation	

Future employment opportunities	
Revenue generation	
Employment opportunities	
Increased recreation facilities:	
Conservation:	
Strategic partnerships:	
Increased security	
Others specify	

4. **Discuss the Anticipated Negative Impacts and proposed Mitigation Measures During project construction and implementation**

PROBE

Potential impacts	
Loss of Biodiversity	
Livelihood Disruption	
Community Health and Safety Concerns	
Noise generation and Vibration	
Air pollution	
Waste management	
Others specify	

5. **Discuss Issues to be addressed in detail within the EMP (including Issues Raised During Public Participation, Unplanned/contingency impacts etc.)**
   Management measures, actions, roles and responsibilities, timeframes, monitoring and cost of implementation

6. **Discuss how The proponent is committed to minimizing the environmental impact of the project operations:** through complying with applicable environmental law and providing staff with adequate training to see the successful completion of the project. And therefore the ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP): - *including Labour migration, Cultural conflicts, etc.*

7. **Give any other information that may be necessary in regard to this ESIA**

8. **Do you approve this project? Yes [ ] No [ ]**

Name: _____Cell phone: _____

Organization: _____

Position in the organization_____ Date: _____

Signature/Initials: _____I. D No._____

(*Please note that these details are required for the purposes of authenticity*)

- **END and Thank you***

II. Focused Group Discussion (FGD)

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT QUESTIONNAIRE GUIDE FOR THE PROPOSED "TVET FOR VALUE CHAIN DEVELOPMENT (STVET-VCD) PROJECT", JUBA, AND SOUTH SUDAN

Dear Sir/Madam,
The Government of Southern Sudan is engaged in a "**TVET FOR VALUE CHAIN DEVELOPMENT (STVET-VCD) PROJECT", JUBA, AND SOUTH SUDAN**

As part of the statutory requirement, the Bank has commissioned an Environmental and Social Impact Assessment for the proposed project. As a key component of public participation process, this questionnaire serves to inform and engage you about the development, as well as capture any issues of concern that you may have, so as to ensure the project remains environmentally, social and economically sustainable.

As key stakeholders, we would appreciate if you provided us with the following information

Name of the Group/ Community: _____
Contact person and Cell phone: _____
Names and ID of the participants

Name	ID	Membership	Signature

(Please note that these details are required for the purposes of authenticity)

1. **Describe how the project will affect the group/ community activities-**
(Including The land on which the construction will be located, land ownership Site Access Details, The main land cover/use etc.)

2. **Discuss the Key Project Highlights and how they relate with group/community livelihood**

3. **Are you aware of any environmentally sensitive area near the proposed sites; (**wetlands, streams, forest land, cultural sites etc.). If yes, state and describe including approximate distances).

4. **Is there any land conflict you are aware of; regarding the project site where the institute will be constructed? Yes [] No [].**

If yes, kindly explain the nature of conflict.

5. **What injuries are likely to occur to the public during the project construction and operation activities?**

6. **What measures do you recommend to ensure public safety?**

7. **Discuss the Anticipated Positive Project Impacts.**

PROBE

i. What will be the social impacts of the project? - social interactions, improvement of life quality/living standards
ii. What are the economic impacts of the project? – change in income levels, development programmes, change in economic activities, etc. Are the changes perceived or real?
iii. Is the project going to involve extensive land use change/ infrastructural or create a complete change of the ecosystem?
iv. Are there any specific interventions that you may want incorporated in the design to enhance the positive issues?

8. **Discuss the Anticipated Negative Impacts and proposed Mitigation Measures During construction** and project implementation.

PROBE

i. What will be the social impacts of the project? - social interactions, change of life quality/living standards
ii. What are the economic impacts of the project? – change in income levels, development programmes etc. Are the changes perceived or real?
iii. Is the project going to involve extensive deforestation/wetland conversion/ or create a complete change of the ecosystem/pollution/waste generation etc.?

iv. Are there any specific interventions that you may want incorporated in the design/ during construction to address the negative issues?

9. **Discuss Issues to be addressed in detail within the ESMP**

PROBE

i. Discuss how the proponent is committed to minimizing the environmental impact of the project operations through complying with applicable environmental law and providing staff with adequate training to see the successful completion of the project.

ii. Discuss Environmental and Social Management Plan (ESMP): - including Labor migration, Cultural conflicts, etc.

10. **Do you approve this project? Yes [ ] No [ ]**

END AND THANK YOU

Appendix 2: Stakeholder's Consultative Meetings

a) Consultative meeting with MININISTRY OF ENVIRONMENT AND FORESTRY

b) Stake holders consultative meeting

c) Stakeholders meeting with students at UOJ

d) Stakeholders meeting with ministry of Labour and Empowerment

e) Stake holders consultative meeting

Stakeholder Rapp up meeting

Appendix 3: Project Sites

Project Site at MTC

Appendix 3 b Project site at UOJ

Appendix 4*: Sample Grievance Application Form and Grievance Log*

Sample Public Grievance Form

Reference No:	
Full Name:	
Contact Information Please mark how you wish to be contacted (telephone, mail, E-mail).	By Telephone: _____ By Post: Please provide mailing address: _____ _____ By E-mail _____
Description of Grievance:	What happened? Where did it happen? Who did it happen to? What is the result of the problem? Has the grievance triggered an incident investigation? (*Continue on additional pages as required*)
Date of Grievance ----------	One time grievance (date _____) Happened more than once (how many times? _____) On-going (currently experiencing problem)
What would you like to see happen to resolve the problem?	

Sample Grievance Log _____

REF No.	Description of Complaint	Date Identified	Corrective/Preventative Action	Responsible Party	Date Resolved	Other information/Status Update

NOTE: This log will be expanded as necessary when in use.