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COUNTRY: KENYA

SUPPORT TO TECHNICAL VOCATIONAL EDUCATION AND TRAINING FOR RELEVANT SKILLS DEVELOPMENT-PHASE II

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

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ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP)
SUMMARY

Project Name:		**Support to Technical Vocational Education and Training for Relevant Skills Development-Phase Ii**
Country	**:**	**KENYA**
Project Code	**:**	**P-KE-IAE-002**

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1. INTRODUCTION

The proposed projects' main activity during the implementation Phase is the completion of construction of workshops, laboratories, classrooms, offices, and other support structures for Butere Technical Training Institute (TTI) located in Butere District, Kakamega County; Aldai TTI located in Nandi South district, Nandi County; Bureti TTI located in Bureti district, Kericho County; Godoma TTI located in Ganze District, Kilifi County; Mukurweini TTI located in Mukuruwe-ini District, Nyeri County; Siala TTI located at Rongo sub County, Migori County; Tseikuru TTI located in Tseikuru district, Kitui County; and Wajir TTI located in Wajir East District, Wajir County. After completion of this phase the Institutions' main activity shall be training of the youth, which involves use of training equipment in the workshops and the laboratories.

2. BRIEF PROJECT DESCRIPTION AND KEY COMPONENTS

Component I: Improve Access, Quality and Relevance of TVET: The project proposes to support completion of engineering and applied sciences workshops/ laboratories in the eight TTIs1 under Phase 1; complete procurement of the remaining sets of engineering and applied sciences equipment from some of the Phase 12 target TTIs. Furthermore, this sub-component will also support provision of equipment and training at the upcoming Mpeketoni TTI in Lamu. The vocational in Turkana, Lowdar Youth Polytechnic is currently being upgraded by the County Government and the private sector, mainly Tullow Oil, as a Centre of Excellence in Oil related trainings. These TTIs are located in areas where key projects such as the LAPPSET, railway, oil and wind projects are situated.

The component also involves the provision of engineering equipment for engineering faculties in Siaya IT, Mathenge TTI Nyeri, Nkabune TTI Meru, Mpeketoni TTI Lamu, Mawego TTI Homabay, Oll'lessos TTI Nandi and Kaiboi TTIs Nandi. GoK has put new engineering and applied sciences workshops in these TTIs but have no equipment.

Component II: Equip Vulnerable Youth with Relevant TVET Skills and work experience: This component will support delivery of selected TVET training programs in Engineering and Applied Sciences in line with the Labour Market needs. The training will be conducted as a joint operation between TTIs and the private sector/industry through a competitive process.

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[1] Tseikuru in Kitui, Mukurweini in Nyeri, Wajir TTI, , Siala in Migori, Aldai in Nandi, Bureti in Kericho, Godoma in Kilifi and Butere in Kakamega.

[2] Mombasa TTI , North Eastern TTI Garrisa, Meru TTI, Kitale TTI Transzoia, Gusii IT Kisii, Kisumu Polytechnic, Eldoret Polytechnic Uasin Gishu, Nairobi TTI, Sang'alo IT Bungoma, Coast IT Taita, Thika TTI Kiambu, Masai TTI Kajiado, Nyandarua IT and Rwika TTI Embu.

Component III: Institutional support and Project Management for the Ministry of Education, Science and Technology: This component will support capacity building of TTIs in financial management and procurement as part of project activities under this component. The component will also support TVET tracer studies in selected TVET engineering and applied sciences programs. The study questionnaire will take into account gender perspective including young TVET graduates female access to jobs.

3. POLICY, LEGAL AND REGULATORY FRAMEOWRK

The project's environmental and social assessment process and preparation of the ESMP has been guided by the policy and legal requirements of Kenya in addition to the requirements of the African Development Bank.

The Constitution of Kenya confers to every person the right to a clean and healthy environment. The Environmental Management and Coordination Act (EMCA), 1999 provides for the establishment of a legal and institutional framework for the management of the environment (Operational Safeguards 1). The Occupational Health and Safety Act 2007 provides the legal and institutional framework for the protection of workers and the community where the projects are being implemented (Operational Safeguards 5). The Climate Change Secretariat within The Ministry of Environment and Natural Resources has recently developed a National Climate Change Action Plan which addresses mitigation and adaptation measures for all sectors. The new Constitution, the EMCA and OSHA therefore obligates the project's Executing Agency and the Contractor to work in a clean and safe environment and not to contravene the right of any person within its zone of influence, to this entitlement.

The national authority established to oversee environmental issues in accordance with EMCA is the National Environment Management Authority (NEMA). For Occupational Health and Safety matters, the Directorate of Occupational Health and Safety Services (DOHSS) is the regulatory agency.

Table 1: AfDB Operational Safeguards Triggered

OS1	Environmental Assessment	Yes
OS2	Involuntary Resettlement	No
OS3	Natural Habitats / Biodiversity & Ecosystem Services	No
OS4	Pollution Prevention & Hazardous Materials	Yes
OS5	Labour Conditions & Occupational Health and Safety	Yes

The proposed project includes a sub-component that involves civil works and construction of engineering workshops and laboratories. Hence OS.1 is triggered. The appropriate Environmental assessment tool for the proposed level of intervention is the Environmental and Social Management Plan (ESMP) for the Contractor. Since the additional facilities will be constructed entirely within the TTI premises, OS.2 on resettlement and OS.3 on natural habitats are not triggered. The project involves construction and hazardous chemicals, fuels, paints are likely to be used during construction, hence OS.4 is triggered. The contractor shall employ construction staff hence OS.5 is triggered.

4. MAJOR ENVIRONMENTAL AND SOCIAL IMPACTS AND CLIMATE CHANGE RISK

Positive Impacts

The following is a summary of the positive benefits anticipated from implementation of the proposed project. (i) Provision of employment opportunities during both construction and operation phases of the project; (ii) Creating of business opportunities for local residents; (iii) National cohesion due to intermingling with students from other parts of the country as this will be a national institution; (iv) Access to affordable technical skills.

The project does not have any impacts on land acquisition and resettlement. All the civil works for the project are located on existing sites and government-owned land. Access to the project sites is through public right of way (ROW) and existing roads hence, land acquisition and encroachment on private property will not occur.

There are no anticipated impacts on encroachment on ecologically and culturally protected areas because the civil works are located on the existing public TVET institutions and there are no culturally protected areas in the location of the Project.

Negative Impacts

The civil works anticipated during the construction activities are: (i) site clearing and earthworks such as excavation and site grading; (ii) laying of foundations; (iii) casting of ground floor slab; (iv) construction of floor beams and floor slabs; (v) construction of roof beams and roofing; (vi) pipe network for the sanitation and water facilities for the laboratories and workshops; (vii) architectural components and finishes; and (viii) transportation of materials to, from and within the site.

The anticipated impacts on the physical and biological environment are temporary, localized, relatively in small area and can be easily avoided or minimized with the implementation of mitigation and monitoring measures which are detailed in the environmental and social management plan (ESMP). There are no impacts that are significant in nature. The following are the anticipated impacts and the corresponding mitigation measures during the construction phase of the Project:

Noise and Vibration: During construction and decommissioning activities, noise and vibration may be caused by the operation of the pile drivers, earth moving and excavation equipment, concrete mixers, cranes and the transportation of equipment, materials and people.

Air Quality: Construction and decommissioning activities may generate emission of fugitive dust caused by a combination of on-site excavation and movement of earth materials, contract of construction machinery with bare soil, and exposure of bare soil and soil piles to wind. A secondary source of emissions may include exhaust from diesel engines of earth moving equipment, as well as from open burning of solid waste on-site.

Soil Erosion and Water Quality: Soil erosion may be caused by exposure of soil surfaces to rain and wind during the clearing, earth moving, and excavation activities. The mobilization and transport of soil particles may, in turn, result in sedimentation of surface drainage networks, which may result in impacts to the quality of natural water systems and ultimately the biological systems that use these waters.

Solid Waste: Non-hazardous solid waste generated at construction and decommissioning sites includes excess fill materials from grading and excavation activities, scrap wood and metals, and small concrete spills. Other non-hazardous solid wastes include office, kitchen, and dormitory wastes when these types of operations are part of construction project activities. Hazardous solid waste includes contaminated soils, which could potentially be encountered on –site due to previous land use activities, or small amounts of machinery maintenance materials such as oily rags, used oil filters, and used oil, as well as spill cleanup materials from oil and fuel spills.

Wastewater Discharges: Construction and decommissioning activities may include the generation of sanitary wastewater discharges in varying quantities depending on the number of workers involved. Adequate portable permanent sanitation facilities serving all workers should be provided at all construction sites.

Occupational Health and Safety: Construction activities may cause harm and danger to the lives and welfare of workers. The contractor should prepare occupational health and safety plan (OHSP) which will be part of the contractor's contract documents. The occupational safety plan should have provisions on (i) providing personal protective equipment (PPE) like hard hats, safety gloves, ear mufflers to all workers; (ii) providing occupational health and safety training to all workers (i.e. first aid measures, prevention of malaria, diarrhea, HIV/AIDS); (iii) documenting safety procedures to be followed for all construction site activities; (iv) maintaining records of accident and the corrective actions implemented; and (v) emergency response plan during fire and other incidents.

Community Health and Safety: The construction activities will be inside the premises of the TVET institutions and management strategies must be implemented to protect both the people within the TVET Institution and the nearby local community from physical, chemical, or other hazards associated with the construction sites. Risks may arise from unauthorized entry at the construction site, resulting to potential contact with hazardous materials, contaminated soils and other environmental media, or excavations and structures which may pose falling and entrapment hazards.

5. ENHANCEMENT/MITIGATION MEASURES

Mitigation Measures:

Noise pollution from the construction activities resulting to disturbance of classes and nuisance to the community, will be mitigated with continuous consultation with the officials of the training centers and the community on the schedule and time of construction activities and the use of noise suppression on construction equipment.

Air pollution from the dust emissions from on-site excavation, movement of earth materials and emission from movement of heavy equipment and construction vehicles will be mitigated by good construction practices such as water spraying on road surface and work areas, covering all materials during transportation, and proper maintenance of construction vehicles and equipment.

Water pollution from run-off or soil erosion from stockpiled construction materials and wastewater from domestic sewage of construction workers and accidental spillage of oil and other

lubricants from washing of construction equipment, will be mitigated by covering exposed soils, construction of temporary silt traps, and provision of adequate and on-site sanitation facilities.

Solid Waste generation will be mitigated by the provision of waste bins in the construction site and the proper segregation, collection and disposal of solid wastes will be strictly observed.

Occupational health and safety aspects in the construction site causing harm and danger to the lives and welfare of workers will be mitigated with the implementation of occupational and health safety plan including the provision of personal protective equipment to all workers.

Community health and safety such as the disruption of normal traffic patterns, damage or degradation of the roads from the transport of materials and risks from unauthorized entry to the construction site resulting to accidents, will be mitigated by the implementation of community health and safety plan which will includes the provision of fence to enclose the area of civil works and posting warning signs and information in the construction area.

Enhancement Measures

There are no anticipated significant impacts during the operation and maintenance of the project. The following are the recommended measures on the maintenance of the workshops, and laboratories:

(i) Occupational health and safety for the teachers and trainees such as the provision of first-aid kit, PPE to trainees and teachers in all workshop and laboratories areas;
(ii) Emergency response plan during fire, terrorism and other incidents;
(iii) Proper segregation, collection and disposal of domestic solid wastes.

6. ENVIRONMENTAL AND SOCIAL MONITORING PROGRAM

The Monitoring Plan shall be implemented by the Contractor's Environmental Health and Safety Officer with oversight supervision by a designated safeguards officer from the Ministry of Education, Science and Technology. The Monitoring Plan is summarized below;

Table 2: Monitoring plan

Parameter/ indicator	Sample location	Analytical method	Sample time	Responsibility
Noise and Dust	Site specific areas during construction	Observations, field check, interviews	Weekly	Contractor
Traffic	Site specific areas during construction	Observations, field check, interviews	Weekly	Contractor
Health & safety	Site specific areas during construction	Observations, field check, interviews	Weekly	Contractor
Water quality (WHO standard	Within local rivers	Laboratory analysis and comparison to WHO standards	Quarterly during operation phase	Management of the institutes/Public Health Department

Incidence of disease (water-related diseases)	Local people	Observations, field check, interviews	Quarterly during operation phase	Public Health Department

External Monitoring of ESMP: NEMA represented by Sub Country Environment Officers shall undertake or cause MoEST to undertake routine inspections to verify compliance with the mitigation measures contained in the ESMP. The contractor must submit an environmental management report every three months, with the results of quarterly monitoring. It is recommended that environmental audits are carried during project implementation period and one year into operation phase to verify compliance with the stipulations of the ESMP.

7. PUBLIC CONSULTATIONS AND DISCLOSURE REQUIREMENTS

The Support to Technical Vocation Education and Training for Relevant Skills Development – Phase II is a continuation of the Support to Technical Industrial Vocation and Training (TIVET) Project – Phase I. Intensive consultations were carried out during the launch of Phase I on all the various aspects of the Project including environmental and social mitigations aimed at enhancing the positive impacts as well as minimizing the effects of the negative impacts. However, the consultative channels shall remain active so that any emerging issue requiring wider consultation shall be dealt with as and when need arises.

Since the project is Category 2 and required a Project Brief in accordance to the national regulations, it is not necessary to disclose the ESMP. On the other hand, the Bank's Environmental and Social Assessment Procedures requires that the ESMP Summary be disclosed on the Bank's website for 30 days prior to the presentation of the project to the Board for consideration.

8. INSTITUTIONAL ARRANGEMENTS & CAPACITY BUILDING

A team of regular Ministry of Education, Science and Technology (MoEST) officers will comprise the Project's Coordinating Unit (PCU). The PCU will be headed by a Project Manager and will include a Procurement Officer; Finance and Accounts officer; a Monitoring and Evaluation officer; a Gender specialist as a gender Focal Person; and two senior TVET Technical Officers, one of which will be provided with Environmental and Social Safeguards training to oversee and monitor the implementation of the ESMPs by the Contractors.

The Institutional responsibilities for the ESMP are:

Ministry of Education, Science and Technology (MoEST): The Executing agency's PCU is responsible for the overall supervision for the implementation of ESMP. MoEST shall appoint a safeguards officer from the PCU.

MoEST PCU Safeguards Officer: The assigned safeguards officer will have the following responsibilities: (i) inclusion of EMP in bidding documents and other applicable contracts; (ii) monitoring the implementation of the ESMP during the construction, operation and maintenance activities in the TVET institutions; (iii) review and monitoring of the

Occupational Health and Safety Plan (OHSP) and the Community Health and Safety Plan (CHSP); and (iv) submission of annual monitoring reports to AfDB.
Contractor: The Contractor is responsible for the implementation of the ESMP. The Contract shall: (i) Provide sufficient budget and human resources for the implementation of ESMP; (ii) Ensure proper and timely implementation of the mitigation measure during the construction phase of the project; (iii) Submit and implement OHS and CHS plans to the PCU Safeguards Officer and (iv) Implement additional environmental mitigation measures, as necessary.

9. ESTIMATED COSTS OF ESMP & REPORTING

The Environmental and Social Mitigation Monitoring and Evaluation shall be integrated into the overall M&E programme for the Project. In this regard the following estimated |Budget is a total Budget for the M&E for the entire project.

Table 3: Estimated costs associated with implementation of ESMP

Category	**Kes' million**
M & E, stakeholders consultation, training	150
ESMP Implementation and Monitoring	50
	200.00

10. CONCLUSION

The proposed project to construct eight technical training institutes is environmentally viable and implementation of mitigation measures identified in this study will minimize the environmental impacts associated with various components of the proposed projects. The identified environmental impacts are all of moderate to low significance, reducing significantly after implementation of the mitigation measures. 'The local communities interviewed during the ESIA were in support of the proposed projects. Their only concern was to be considered for job and supplies opportunities that will be generated during the construction and operation phases of the projects. More importantly the projects have adequate land to accommodate and future expansion. The projects are therefore environmentally viable and should be implemented subject to adherence to recommendations contained in the ESMP.