ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) FOR THE REHABILITATION WORKS IN STATE TECHNICAL COLLEGES (STCs) IN EKITI STATE.

FEDERAL MINISTRY OF EDUCATION

Innovation Development and Effectiveness in the Acquisition of Skills (IDEAS) Project

IDEAS

Final Report

Environmental and Social Management Plan (ESMP) for the Rehabilitation Works in State Technical Colleges (STCs) in Ekiti State.

October 2023

EXECUTIVE SUMMARY

ES 1: Background

The Government of Nigeria has secured USD200 Million from the World Bank for the Innovation Development and Effectiveness in the Acquisition of Skills (IDEAS) Project which aims to strengthen the country's Technical and Vocational Education and Training (TVET) system. The Project Development Objective (PDO) of IDEAS is to enhance the capacity of the Nigerian skills development system to produce relevant skills for the formal and informal sectors. The project is structured into four components – i) Incentivizing Public-Private Partnerships (PPPs) for enhanced quality and labour-market orientation of skills development in public Technical Colleges (TCs); ii) Improving skills formation for the informal sector; iii) Increasing the availability of competent and motivated technical teachers and instructors in the Nigerian skills space; and iv) Strengthening the regulatory environment and public management capacities for market-oriented skills development. The IDEAS project is being implemented by the Federal Ministry of Education (FME) through the Technology and Science Education Department (TSED), National Board of Technical Education (NBTE) as well as the state governments of the participating states ***(refer to Chapter 2: subsection 2.4 for more information).*** A total number of 38 TCs – twenty (20) Federal Science Technical Colleges (FSTCs) and eighteen (18) State Technical Colleges (STCs) have been identified for rehabilitation in twenty-two (22) states of the country, under the project. The project will provide grant funding for the rehabilitation and upgrade of these Technical Colleges (TCs) with the aim of transforming their operational models into PPPs, in which industry partners assume a prominent role in institutional governance, management, planning, training and service delivery. Consequent on the above, there will be several civil works, involving construction, rehabilitation and expansion activities. These civil works raise environmental and social safeguards concerns and have triggered the World Bank's safeguard policies on Environmental Assessment (OP 4.01) and Involuntary Resettlement (OP 4.12). On this basis, part of the funds earmarked for Ekiti State has been set aside to procure consultancy services for the development of an Environmental and Social Management Plan (ESMP) for the Rehabilitation of Workshops and Office(s) in the Government Technical College (GTC), Igbara Odo, Government Technical College (GTC), Otun-Ekiti and Government Technical College, Ijero-Ekiti all in the state. The ESMP will be carried out to establish modalities of implementing the project in line with World Bank Safeguard Policies, while taking into consideration the environmental and social procedures of the Federal Government of Nigeria.

ES 2: Rationale for the ESMP

The IDEAS Rehabilitation/Renovation project has been identified as Category B according to the World Bank (WB) Environmental Assessment (EA) screening criteria, meaning that impacts will be site specific and manageable (the activities will involve limited adverse social or environmental impacts that are few in number, generally site-specific, largely reversible, and readily addressed through mitigation measures). For site-specific projects such as this, the most suitable EA safeguard instrument is an ESMP. The proposed project comprises essentially, civil and electromechanical engineering works which will be carried out within the premises of the technical colleges. These works will inevitably result in some environmental and social impacts thus triggering the World Bank's Operational Policy on Environmental Assessment OP 4.01. The ESMP will identify the environmental and social impacts of the proposed project and define the roles and responsibilities of all critical stakeholders throughout the project life cycle in order to ensure that mitigation measures including cost estimates are implemented and overall sustainability of the project is assured.

ES 3: Overview of Project Location

The rehabilitation works for Ekiti State will be carried out across four (3) technical colleges as provided in the table below. The rehabilitation works have been divided into three priorities: Priority 1, 2, and 3, as outlined in the feasibility studies. Additionally, some rehabilitation works are classified as "General Works". Technical workshops, Offices, Classroom Blocks and other structures have been proposed for rehabilitation under each of the priority. The General Works mostly comprise ancillary or supplementary works to enhance newly rehabilitated structure. These include Solar Powered Borehole Installation, Landscaping, etc. ***Refer to chapter 3 for more details.***

S/N	Name of Technical Colleges	Total No of Rehabilitation	GPS Coordinates	
			Latitude	Longitude
1.	Government Technical College Igbara Odo	5 Structures	N7.602673	E5.219850
2.	Government Technical College Otun-Ekiti	4 Structures	N7.996542	E5.119506
3.	Government Technical College Ijero-Ekiti	4 Structures	N7.820943	E5.074955

ES 4: Scope of Intervention Works

Based on the CIPs, the proposed rehabilitation, renovation and expansion of the TCs will generally include the following civil works:

Rehabilitation Works:

- **Roofing** – Removal of old and dilapidated roofing sheets and replacement with aluminium roofing.
- **Ceiling Finishes** – Removal of old, damaged, and dilapidated Polyvinyl Chlorides (PVCs), Asbestos ceilings and Board ceilings.
- **Floor Finishes** – Removal and rehabilitation of damaged floors along technical workshops, project offices, classrooms, etc.
- **Doors and Windows** – Replacement of doors and windows with steel types.
- **Wall Finishing** – Wall filling and smearing, and finishing with cement.
- **Painting** – Wall screeding and painting.
- **Electrical Installations** – New electrical installations and connections; including reconductoring of existing electrical connections and installation of energy saving Light-Emitting Diode (LED) bulbs, switches, fans, etc.
- **External Works** – This will include cement, sand, gravel and water mixing. It will also include the transport of materials for civil works into college premises.
- **Mechanical and Plumbing Works** – These will include several fittings and fixtures as well as the installation of WASH facilities such as:
    a. **Toilets** – Rehabilitation of dilapidated and abandoned toilets; including construction of new ones. Toilet rehabilitation and renovation will also include water reticulation to ensure equitable water supply to toilets and sanitary infrastructure such as hand basins.
    b. **Boreholes** – Installation of boreholes, including solar powered boreholes and conversion of some existing boreholes to solar powered boreholes. Installation of overhead tanks and water reticulation to hostels, offices, workshops, etc. where use of water may be required.
    c. Septic Tanks – Rehabilitation of collapsed or dilapidated septic tanks serving the technical workshops, offices and classrooms.

Refer to chapter 3 for specific rehabilitations for the TCs in order of priority works.

ES 5: Environmental and Social Baseline Description of the Project Area

Project Intervention Sites

Technical College	E&S Description
Government Technical College (GTC) Igbara Odo	GTC Igbara-Odo (N7.602673, E5.219850) was established on September 9, 1995. It is a coeducational institution with a student population of about 140 students (specifically 90 males and 50 female students), as at the time of the field studies. The college is located in Ekiti Southwest LGA, along Ado-Akure Road and spans approximately 7 hectares. It lacks adequate toilet facilities for both staff and students, leading to students resorting to open defecation. Waste disposal practices at the school involve open dumping and burning. Despite having a designated waste disposal area, a several mini-dumpsites has been noticed at different points within the college premise. The Brick Laying and Concreting Workshop, Catering Craft Practice (CCP) Workshop and ICT Centre, require rehabilitation due to their deteriorated roofs and asbestos ceilings particularly for the CCP. A major activity to be undertaken at this college during civil work implementation is the extension of most existing priority structures including the Library and IDEAS Office. For the extension works, there will be need to remove outgrown vegetation and shrubs at the rear of these workshops to give way for the planned expansion and for ease of access. The installation of WASH facilities such as toilets, solar powered boreholes and wash hand basins has also been prioritized as an additional work for this college.

Technical College	E&S Description
Government Technical College (GTC) Otun-Ekiti	GTC Otun-Ekiti (N7.996542, E5.119506) was established on September 1977. It is situated in Moba LGA along Ado – Omu Aran Road, which experiences minimal traffic being a major inter-state road connecting Ekiti with Kwara State. The college spans a land area of approximately 6 hectares. As at the time of study, it has a total population 191 students of which 154 are male and 37 are female. Within the college environment, the landscape is uneven and some ornamental trees are cultivated for aesthetics. The access roads within the school premises are untarred and give off significant fugitive dust as vehicles transverse. Demolitions are already underway at the college and scraps/litters of construction and demolition wastes (zinc, door and window frames, plywood, nails, etc.) was found at project sites upon site visits (see section 4.5 – table 19). Additionally, classrooms, offices, toilets, and storerooms scheduled for rehabilitation in the Mechanical Workshop and Welding and Fabrication Workshop have asbestos ceilings which will be removed and replaced with PVC and board ceilings.
Government Technical College (GTC) Ijero-Ekiti	GTC Ijero-Ekiti (N7.820943, E5.074955) was established on September 1981. It operates as a coeducational college and features both junior and senior secondary schools. Located in Ijero-Ekiti LGA, along Oke Oro-Ijero Road, the college occupies a landmass of approximately 5 hectares. As at the time of field studies, it had a total student population of 227 students (126 males and 101 females) and a staff strength of 21 teachers. The college has earmarked technical workshops and offices such as the Garment Making, Tailoring and Fashion Designing, Cosmetology Workshops and IDEAS Office for structural rehabilitation and upgrading under the IDEAS intervention. In these areas, structural elements like pillars, beams, doors, windows, and toilets are deteriorated, posing safety and health hazards to both staff and students. The abandoned cosmetology section, with its damaged roof from previous windstorms and exposure to extreme weather, may serve as shelters for rodents, scorpions, and venomous reptiles, including snakes and monitor lizards. Furthermore, on-site inspections uncovered significant termite infestations in most of the structures slated for rehabilitation, necessitating controlled fumigation for remediation.

Environmental Baseline Studies

Baseline data was acquired during field visits within the colleges. This is in order to ensure management of project-related adverse impacts on the baseline levels of these parameters.

Sampling Methodology

Water samples were collected from wells and few functional boreholes within the three (3) colleges where the installation of solar powered boreholes was proposed so as to establish baseline on groundwater quality in the colleges. The air quality within and around the vicinity of the workshops and classrooms proposed for rehabilitation in each college was also analyzed using a Testo 350 XL to serve as basis for future air quality monitoring. Measurements were taken at different locations around the project corridors (selected structures and priority rehabilitations) with the same coordinates for noise. Ambient noise levels around these areas were measured using a Testo 815 Noise meter. The sampling locations, date and time, GPS coordinates are provided in table 13 below. All samples (ground water, air and noise) were collected from the 20th to 21st of December, 2022 and on 2nd of February, 2023.

Physiochemical Properties of Groundwater Samples

Locations sampled showed results for the technical colleges, Temperature (˚C), pH (mol/L), Conductivity (S/m), Turbidity (NTU), and TDS (ppm) levels were within the FMEnv permissible limit of 25-30 ˚C, 6.5-8.5 mol/L, 1000 S/m, 5.0 NTU, and 2000 ppm respectively. TSS (ppm) levels were within limits, ranging from 13.6 – 19.7 ppm across locations. Dissolved Oxygen (mg/L) were also within the FMEnv permissible limit (>7.5mg/L), with readings ranging from 4mg/L to 5.7mg/L across sampled locations at the TCs. ***Refer to Chapter 4, Subsection 4.3.2 Table 13.***

Heavy Metal Properties of Groundwater Samples

The samples were also subjected to heavy metal analysis. Heavy metals Nickel (Ni), Zinc (Zn), Lead (Pb) and Iron (Fe) were analyzed and results were taken. Locations sampled showed results for the technical colleges, Nickel (Ni) (mg/L), Zinc (Zn) (mg/L), Lead (Pb) (mg/L), and Iron (Fe) (mg/L) levels were within the FMEnv permissible limit of 0.10 mg/L, 3.00 mg/L, 0.01mg/L, and 0.30 mg/L respectively. Nickel levels ranged from 0 – 0.010mg/L, Zinc levels ranged from 0.540- 2.610 mg/L, Lead levels ranged from 0.005 - 0.002 mg/L, while Iron level ranged from 0.0062 - 0.283 mg/L across sampled locations at the TCs. ***Refer to Chapter 4, Subsection 4.3.2 Table 14.***

Air Quality

Air Quality (AQ) analysis was carried out using a Testo 350 XL. Measurements were taken around the project corridors (priority workshops, classrooms, offices, structures proposed for rehabilitation) for each of the three (3) technical colleges. Locations sampled showed results for the technical colleges, CO, NOx, SOx, NH3, and H2S levels were below 0.01µg/m3, meeting the FMEnv permissible limit of 10µg/m3, 0.04-0.06µg/m3, 0.01µg/m3, 0.2µg/m3, and 11.4-22.8µg/m3 respectively. VOC levels were within limits, ranging from 0.002-0.01µg/m3 across locations. Total Suspended Particulate Matter (SPM) were also within the FMEnv permissible limit (<250µg/m3), with readings ranging from 41µg/m3 to 106µg/m3 across sampled locations at the TCs. ***Refer to Chapter 4, Subsection 4.3.2 Table 15.***

Noise Levels

Noise Levels (NL) were measured using a Testo 815 Noise meter. Noise samples were measured with the corresponding coordinates as those for air samples. Results were mostly above The National Environment (Noise Standard and Control) Regulation Limit - 45dB (day); 35dB(night) (Part I section 2 of NESREA (2009). Results show that noise levels at GTC Igbara Odo were 55.2 dB (Corridors of the Bricklaying and Concreting Workshop), 54.25dB (Around the Catering Craft Practice Workshop) and 53dB (ICT Building). Similarly, GTC Ijero-Ekiti's Mechanical Workshop arena, W&F Workshop and Agric Mechanic Workshop had average levels of 35.05dB, 40 dB and 50dB respectively. At GTC Otun-Ekiti, Around Garment Making Section, Electrical Department, and Cosmetology Workshop recorded averages of 65.1 dB, 53.55 dB and 53.45dB. ***Refer to Chapter 4, Subsection 4.3.3 Table 16.***

Socioeconomic Baseline Studies

Primary Data: A random socioeconomic survey was carried out with respondents in the college. Semi-structured questionnaires were administered to respondents comprising of the College Implementation Unit (CIU) Officers, College Principal/Vice Principal, Staff, NYSC Corp Members and Students) of the college. Contrary to the proposed sample size of fifteen (15) persons per TC, the sample population varied per college and was dependent on the number of people found in each of the colleges as at the time of site visits (Dec 2022). Accordingly, the sample sizes for the socioeconomic survey at GTC Igbara Odo, GTC Ijero-Ekiti and GTC Otun-Ekiti are 12, 10 and 14 respondents, respectively. The survey was designed to understand the socioeconomic conditions within the college.

Summary of Socioeconomic Baseline Studies

Of the sampled population across the TCs comprising mainly of SPIU Staff, Principal, Vice Principals, Staff and Students of the colleges, approximately 67% (32) in GTC Igbara Odo; 80% (32) in GTC Ijero-Ekiti; 83.33% (40) in GTC Otun-Ekiti were male, whereas 33% (16) in GTC Igbara Odo; 20% (8) in GTC Ijero-Ekiti, 16.67% (8) in GTC Otun-Ekiti made up the female respondents. 96 out of the 136 (71%) respondents across all three (3) technical colleges fell within the age range of 35-64 years; students and NYSC corps members within the age range of 15-34 comprised the remainder of the respondents 40 (29%). 116 (86%) of all respondents across the three (3) colleges were found to be predominantly Christians while the remaining 20 (14%) respondents were Muslims. The results of the socioeconomic survey revealed that on average the respondents have attained an appreciable level of formal education, with 116 out of 136 respondents completing tertiary education, the others comprised of students of the colleges who participated in the survey. The state colleges were "***Small Sized"*** (<500 students) as at the time of visit. The survey recorded malaria 86% (116) as the most prevalent disease associated within the colleges; Cough 20% (14) was also recorded. The survey results show that access roads leading to GTC Igbara Odo and GTC Ijero-Ekiti is deteriorated and in a poor state, this was also confirmed during the site visits. Access to healthcare facilities (Otun General Hospital, Otun Comprehensive Health Centre, God Care Trado - Medical Health Centre, Araromi Health Centre etc.) and potable water was adjudged fair by majority of the respondents across the colleges. Although available, these resources are in limiting supply and not readily accessible when needed.

Site-Specific Conditions/Sensitivities

Generally, the site visits across the technical colleges revealed that rehabilitation activities have fully commenced. Some significant environmental and social baseline conditions identified during the field visits are itemized in the table below.

Technical College	Environmental and Social Conditions/Sensitivities
GTC Igbarra Odo	• Access to water is a major issue in the school. As a result, sanitary conditions has deteriorated and male students engage in open defecation. As at the time of site visits, a solar powered borehole was being installed in the college. • The ceilings in the structures to be rehabilitated are made of asbestos. These structures particularly the CCP (Priority 2) and ICT (Priority 3) were being demolished as at the time of study. • Waste generated in the college is being open dumped and burned at a mini dumpsite in proximity to the CCP workshop. • No past incidence of GBV.
GTC Ijero-Ekiti	• The College is situated along Oke Oro- Ijero road which experiences minimal traffic. • There is no borehole at the school. As a result, access to and availability of water remains a the most critical facing students at this college. A solar-powered borehole was being installed during the site visits. • Rehabilitation activities have begun for all priorities, and asbestos waste management from the removal of obsolete ceilings and roofs is critical. The abandoned cosmetology section has become hideouts for poisonous reptiles such as monitor lizards, snakes, etc. • The structures to be rehabilitated across all the priorities are heavily infested with termites.
GTC Otun-Ekiti	• The college is situated along the Omu Aran-Ekan Meje-Otun Road which experiences minimal traffic during the day. • Demolition activities are ongoing at the structures to be rehabilitated. There is need to temporarily store disused roofing sheets and asbestos ceilings removed from these structures at a designated location pending final disposal by EKSWAMA. Considering that civil rehabilitations are currently in progress, litters/scraps and demolition wastes are to be safely managed to prevent health and safety risks to students and staff. • Increased noise levels around the Garment Making section and proximal classroom blocks due to ongoing demolitions. No past incidence of GBV. The college makes use of local vigilante for security management.

Gender and GBV Statistics (Ekiti State)

According to records provided on ReportGBV[1] – the National Gender-Based Violence dashboard of the Federal Ministry of Women Affairs to report on violence against women and girls in Nigeria, there are currently 38 reported incidences of GBV in Ekiti State. Of the reported cases (largely constituting false calls, fatal cases, open and closed cases, etc.), about 50% (19 cases) are currently under investigation, with 13.2% (5 cases) successfully closed and 37% (14 cases) open and unresolved. A total of eight (8) GBV cases have been reported in the state within the 1st and 2nd quarter of the year 2023. Generally, the referral pathways for victims of sexual assaults is weak and underdeveloped with the main types of services provided being Psychosocial/Counselling (11.1%), Livelihood/Social Welfare Services (11.1%) and others[2] (77.8%). Currently, there are about twelve (12) functional CSOs and GBV service providers in the state distributed across its sixteen (16) LGAs.

GBV Status at Project Locations

Although there are currently no records of GBV cases Igbarra Odo, Ijero and Otun several GBV service providers were identified to be domiciled in the local government and communities Whereas service providers exist, the mechanism and referral pathways for safely linking survivors to supportive and competent services in a timely way are not flexible and well established in these locations. Although no GBV service providers were discovered in the project areas or LGAs at the time of this ESMP, there are primary healthcare centers that can be contacted in the event of a GBV incident. Furthermore, it is also advised that GBV mapping is carried out in these locations in order to identify service providers and referral pathways for survivors. Stakeholder engagement with the Principal, Staff, Students and NYSC Corp members across the colleges revealed that there has been no past incidence or records of GBV. All of the colleges have a disciplinary committee saddled with the responsibility of addressing matters pertaining to GBV and imposing adequate penalties to culpable parties and perpetrators. The disciplinary committee of these colleges is also tasked with all follow-up activities as regards GBV including hand-over to the appropriate service providers.

[1] **Nigeria FMWASD –** ReportGBV
[2] **Other Services –** Include Medical/Health Service, Education, Safe House/Shelter, Service of Police/Other Security Actors, Legal Assistance.

ES 6: Identification and Assessment of Potential E&S Impacts

Identified Positive Impacts

Generally, the positive impacts of the IDEAS project are similar across the three (3) technical colleges. Some of the benefits attributed to the proposed rehabilitation and expansion activities are:

- Increased enrolment of students at across the colleges which will subsequently boost revenue generation for the Colleges.
- A more conducive environment for learning and skills acquisition for the students. The expanded workshops will accommodate more students for practical and technical vocations.
- The rehabilitation and installation of new WASH facilities (solar powered borehole, overhead tanks and toilets) will guarantee the availability of water in the state colleges.
- Construction of complete WASH facilities in the schools will promote hygiene and sanitation hereby resulting in improved health.
- The construction phase of the rehabilitations may likely create short-term employment opportunities for unskilled workers most of whom are based within the host communities of the colleges. This will encourage community perception and stakeholder satisfaction of the IDEAS project.
- The upgraded technical workshops will not only serve as a conducive practical space for the students, the proposed rehabilitation and expansion of the facilities will also increase technical and vocational service delivery to the colleges host communities and environs thereby increasing the colleges' Internally Generated Revenue (IGR).
- The proposed rehabilitation works at the three (3) colleges of interventions will improve job satisfaction for the teaching staff as well as the technical workshop instructors as a result of the provision of and access to improved work facilities. Furthermore, staff productivity and quality of service delivery will be enhanced.
- The project will create an avenue for continuity or future investment including Public Private Partnerships (PPPs).

Negative Impacts

The potential adverse impacts of the proposed rehabilitation/renovation work across the colleges are summarized below.

PRECONSTRUCTION PHASE

Environmental Impacts

- Vehicle movements to and from the technical colleges for material supply could lead to carbon emissions, impacting local air quality.
- The mobilization and transportation of tools, machinery, materials, and workers along access routes leading to workshops within the colleges may generate fugitive dust, potentially causing respiratory issues or exacerbating existing conditions for students, staff, and NYSC corps members.
- Minor, localized increases in noise levels may occur during mobilization to project sites.
- Workers may also face OHS risks, including potential injuries from falling objects, musculoskeletal disorders, and back injuries resulting from unsafe material handling or offloading, as well as slips, trips, and falls due to slippery work areas or adverse weather conditions.

Social Impacts

- Short-term traffic congestion may occur on the Otun-Omuaran Express Road (GTC Otun-Ekiti) and Oke Oro – Ijero road (GTC Ijero-Ekiti) during the transport and supply of construction materials to these colleges, especially in case of vehicle breakdowns.
- Teenage and adolescent females in the colleges may be predisposed to Gender Based Violence (GBV) during workers' mobilization to site, offload of supplied materials, etc.

CONSTRUCTION PHASE

Environmental Impacts

- Increase in noise levels above the FMEnv permissible limit as a result of demolition activities at the technical colleges. E.g. Classrooms, Offices and the school library in proximity to the Garment Section and W&F Workshop at GTC Otun-Ekiti.
- Slurry and spills from civil work activities such as masonry (including cement mixing, plastering, brick work, etc.), painting, etc. may contaminate the soil.
- Dust generation during materials transport to site through earth road leading to the workshops.
- Minor dust generation during digging of foundation for the extension of some workshops. Dust could also be generated during masonry, cement/POP mixing and use, etc.
- Use of vehicles, generators and construction equipment may also result in GHG emission.
- Potential for increased open defecation by contractor workers during rehabilitation works at the colleges.
- Generation of waste streams, including a) construction and demolition wastes (e.g., wood, large stones, cement/POP bags, metal rods, pipes, disused fixtures, ceramics, sinks, etc.); b) stockpiles of electrical waste (sockets, switches, wires, cables, circuit boards, cathode ray/mercury bulbs, etc.); c) food and other biodegradable wastes (food remains, sachet and bottle water, etc.).
- Generation of asbestos waste at GTC Ijero-Ekiti and GTC Otun-Ekiti, such as asbestos ceilings and roofs. Exposure of personnel to asbestos dust/fibrils could lead to asbestosis on the long-term.
- Occupational Health and Safety (OHS) risks for workers during a) electrical work (injuries, explosions, electrical fires, falls, release of hazardous energy, accidents, etc.); b) mechanical work (exposure to welding fumes, dust, and paints leading to eye irritation, respiratory issues, Musculoskeletal Disorders, noise); c) work at heights (falls, injuries, death); d) work at abandoned sites (risk of snakebites and scorpion stings).

Social Impacts

- Temporary electricity supply interruptions may affect ICT workshops and the IDEAS office during electrical repairs, disrupting activities reliant on electricity such as lighting, fans, and computer-based tasks.
- Mechanical and plumbing work might temporarily interfere with water supply and access to toilets, particularly in GTC Igbarra Odo and GTC Ijero Ekiti.
- Risks of on-site and off-site social issues, including physical assaults (fights, harassment, vandalism), and substance abuse due to an increased labour force.
- Potential for social conflicts between school staff and some construction workers due to non-compliance with school rules.
- An influx of contractor workers and followers offering additional goods and services on school premises.
- Heightened risk of theft of construction materials by local residents, delinquents, or hoodlums from the project communities.
- The possibility of female teachers, corps members, and male/female students (within the school premises) being exposed to sexual exploitation, abuse, and harassment in interactions with construction workers and their followers.
- Students may be at risk of various forms of bullying and violence during interactions with construction workers, particularly if asked to assist with tasks such as purchasing food items or moving materials/equipment.
- Anticipated grievances from students and school staff who may need to temporarily vacate their classrooms, workshops, laboratories, etc., during rehabilitation work within the schools.
- Considering that all civil work occurs within the school premises, public health and safety is crucial, as improperly labelled and stored construction and demolition materials could lead to cuts, injuries, and exposure to hazardous chemicals for students, workers, and staff.
- Students or stray children engaged in horseplay may be at risk of being struck by incoming project vehicles during the transport of construction equipment to and from project sites.

OPERATION PHASE

Environmental Impacts

- Woods used for roofing and ceiling of the rehabilitated structures may be prone to infestation and future destruction due to attacks by termites.
- Operation of newly installed electrical fittings and lightbulbs may lead to excessive energy consumption.
- Use of rehabilitated workshops, laboratories, offices, etc. may lead to the generation and indiscriminate disposal of solid wastes.
- Extreme weather conditions may result in wear and tear of newly rehabilitated structures.

Social Impacts

- Solar boreholes may not consistently guarantee water availability at the schools, and given the absence of existing boreholes, shortages or intermittent unavailability of water may occur due to damage of installed solar boreholes or environmental factors like weather conditions.

ES 6: Mitigation Measures

The table below summarizes some proffered mitigation measures for the identified adverse impacts. ***Refer to Chapter 5; table 19 for the detailed ESMP mitigation and monitoring matrix table.***

Identified Impacts	Mitigation Measures
Environmental Risks	
• Vehicle movement to and from technical colleges for material supply may lead to carbon emissions, affecting local air quality.	• Use vehicles, plants and equipment that are in good condition generally less than 5 years old. • Ensure Vehicles are serviced regularly, depending on the frequency of use.
• Fugitive dust generation during mobilization and transportation of materials.	• Reduce vehicle speed when driving through unpaved roads (20km/hr. in schools and 30km/hr. for Residential Areas) • Vehicles transporting material should be covered with tarpaulin • Ensure watering of access route and project site prior to incoming of vehicles and transporting materials into schools.
• Transport of materials as well as demolition activities may result in localized noise level increase. This may lead to hearing impairments, headaches or disruption of learning activities particularly in locations where demolition sites are close to classrooms, staff offices, etc. • Increase in noise levels above the FMEnv permissible limit as a result of demolition activities at the technical colleges. E.g. Classrooms, Offices and the school library in proximity to the Garment Section and W&F Workshop at GTC Otun-Ekiti.	• Where possible, retrofit all hired vehicle exhausts with mufflers/silencers to minimize noise from heavy machineries • Convey materials and reschedule noise intensive activities e.g. demolitions for evenings or night hours when classes are over and schools are closed for the day (weekends, holidays, mid-term breaks, etc.). • Provision and use of PPE for contractor workers.
• Localized, minor and short-term soil contamination from improper management of slurry (mixture of cement), oil, fuel, water, lubricants, paint, etc.	• Collect slurry into designated containers; label appropriately before final disposal by Licensed Private waste collector • Tighten loosed equipment oil valves; • Provide stacking points for project equipment
• Generation of waste streams, including a) construction and demolition wastes (e.g., wood, large stones, cement/POP bags, metal rods, pipes, disused fixtures, ceramics, sinks, etc.); b) stockpiles of electrical waste (sockets, switches, wires, cables, circuit boards, cathode ray/mercury bulbs, etc.); c) food and other biodegradable wastes (food remains, sachet and bottle water, etc.).	• Provision of waste bins. • Food waste and other organic and biodegradable waste should be composted and reused for maintenance of gardens and flowers and flora within the school premises. • Designate a temporary site for collecting waste generated prior to sorting and management. • Ensure proper sorting, storage and final disposal by an accredited third-party waste disposal agency • Implement waste management plan (WMP) (See Annex 4).
• Generation of asbestos waste at GTC Ijero-Ekiti and GTC Otun-Ekiti, such as asbestos ceilings and roofs. Exposure of personnel to asbestos dust/fibrils could lead to asbestosis on the long-term.	• Implement Asbestos Waste Management Plan (AWMP) *(See Annex 10).*
• Workers may be predisposed to OHS risks during: a) electrical works (including injuries, explosions, electrical fires, falls, release of hazardous energy, accidents, etc.); b) mechanical works (exposure to welding fumes during welding of doors/windows, inhalation of asbestos dust and exposure to paints may result to asbestosis, eye irritations and respiratory issues, Musculoskeletal Disorders (MSDs),	• Conduct electrical safety trainings; Implement OHS Management Plan (OHSMP). *(See Annex 6)* • Conduct OHS Training and Education.

Identified Impacts	Mitigation Measures
Noise); c) works at heights (falls, injuries, death); d) work at abandoned sites (risk of poisonous bites from snakes and scorpion stings). • Extreme weather conditions may result in wear and tear of newly rehabilitated structures.	• Conduct Job Hazard Analysis (JHA) & Process Hazard Analysis (PHA). • Use of PPEs. • Use fall protection equipment. • Safe Work Practices. • Make available polyvalent antivenin. • Enforce the use of PPEs (nose masks, eye googles, etc.) when necessary during rehabilitation activities. • Install lightening conductors/rods on all newly rehabilitated structures to protect against lightening and windstorms.
Social Risks	
• Short-term traffic congestion may occur on the Otun-Omuaran Express Road (GTC Otun-Ekiti) and Oke Oro – Ijero road (GTC Ijero-Ekiti) during the transport and supply of construction materials to these colleges, especially in case of vehicle breakdowns.	• Schedule procurement and supply of construction equipment/materials for off peak periods (12:30 – 2:30pm or 6pm – 6am daily) or during weekends. • Implement Traffic Management Plan (TMP). *(See Annex 5)*
• Temporary electricity supply interruptions in workshops, classrooms, and offices during electrical repairs and fitting may briefly disrupt activities dependent on electricity (e.g., classroom lighting, ceiling fans, computer labs).	• Early and adequate notification of students and teachers of the schools, prior to commencement of works and subsequent power cut offs. • Additionally, carry out works at non-operational hours such as evenings, weekends and public holidays.
• Mechanical and plumbing work might temporarily interfere with water supply and access to toilets, particularly in GTC Igbarra Odo and GTC Ijero Ekiti.	• Early and adequate notification of students and teachers prior to commencement of works and where works must be carried out during operational hours, they shall be done in phases, in a manner that doesn't shutdown water supply completely • Alternative water supply sources should be made available prior to commencement of water works e.g., use of water vendors for supply of water.
• Risks of on-site and off-site social issues, including physical assaults (fights, harassment, vandalism), and substance abuse due to an increased labor force. • Potential for social conflicts between school staff and some construction workers due to non-compliance with school rules. • An influx of contractor workers and followers offering additional goods and services on school premises.	• Ensure workers understand and sign a CoC • Ensure fair wages is paid to Contractor workers. and ensure unskilled labour is sourced within the community. • Establish and maintain a Grievance Redress Mechanism within schools • Continuous trainings and sensitization of students, school staff and corps members. • Reduce labour influx by sourcing required unskilled labour locally.
• Heightened risk of theft of construction materials by local residents, delinquents, or hoodlums from the project communities.	• Employ trained security personnel to guard the construction site. • Establish designated entry and exit points that are monitored by security personnel. • Provide secure storage facilities within the construction site for tools, equipment, and valuable materials.
• The possibility of female teachers, corps members, and male/female students (within the school premises) being exposed to sexual exploitation, abuse, and harassment in interactions with construction workers and their followers.	• Ensure all workers sign the Code of Conduct (CoC). ***See Annex 7*** • Organize trainings and workshops on GBV and SEA/SH and sensitize workers on zero tolerance for sexual integration with students/community. • Guidance and Counselling Unit and Parents Teachers Association (PTA) to sensitize students on safety habits and reporting mechanism for SEA/SH incidents.
• Potential injuries to students due to rough play around demolition waste and construction materials stockpiles.	• Ensure to properly label and store away all construction and demolition materials. • Install danger signs and cordon off areas where hazardous materials are stored. • After use ensure that all hazardous materials are safely disposed by an approved vendor.
• Anticipated grievances from students and school staff who may need to temporarily vacate their classrooms, workshops, laboratories, etc., during rehabilitation work within the schools.	• Early notification of affected classrooms, offices, workshops used for learning. • Propose alternative classrooms for temporarily displaced students. • Carryout rehabilitation works at a time that is not likely to disrupt learning and training activities such as holidays, weekends, etc.

ES 7: ESMP Cost Estimates

To effectively implement the mitigation and monitoring measures recommended in this ESMP, necessary provision will have to be made. The cost of these measures has been estimated and included in the ESMP and presented

in Table below. The cost of mitigation by the Contractor will be included in the contract as part of the implementation cost by the Contractor. The overall total estimated cost for the ESMP implementation, monitoring and capacity building across the three (3) technical colleges is estimated at **Fifty- Seven Thousand and Forty-Three US Dollars Only** (**USD 57,043).** This is equivalent to **Forty-Four Million and Sixty-Eight Thousand, Three Hundred and Eight Naira Only (N44,068,308).** Specifically, the total estimated cost per technical college is estimated as follows:

- ***GTC Igbara Odo:*** Seventeen Thousand, Five Hundred and Forty US Dollars Only (USD 17,540). This is equivalent to Thirteen Million, Five Hundred and Fifty Thousand and Forty-Two Naira Only (N13,550,042).

- ***GTC Otun-Ekiti:*** Eighteen Thousand, Seven Hundred and Thirty-Eight US Dollars Only (USD 18,738). This is equivalent to Fourteen Million, and Four Hundred and Seventy-Five Thousand and Four Hundred and Sixty-Eight Naira Only (N14,475,468).

- ***GTC Ijero-Ekiti:*** Eighteen Thousand, Eight Hundred and Twenty-Three US Dollars Only (USD 18,823). This is equivalent to Fourteen Million, Five Hundred and Forty-One Thousand, Seven Hundred and Fifty-Three Naira Only (N14,541,753).

Table 1: Overall ESMP Cost Estimate for the Rehabilitations across the Technical Colleges.

Unit	Mitigation (A)	Monitoring (B)	Capacity Building (C)	Contingency 10% of (A+B+C)	GRM Implementation	Total
GTC Igbara Odo						
NGN	6,908,825	2,842,947	2,111,352	1,186,312	500,606	**13,550,042**
USD	8,943	3,680	2,733	1,536	648	**17,540**
GTC Otun-Ekiti						
NGN	7,424,109	3,168,959	2,111,352	1,270,442	500,606	**14,475,468**
USD	9,610	4,102	2,733	1,645	648	**18,738**
GTC Ijero-Ekiti						
NGN	7,636,558	3,016,769	2,111,352	1,276,468	500,606	**14,541,753**
USD	9,885	3,905	2,733	1,652	648	**18,823**
ESMP Disclosure						
NGN	**Lump Sum**					**1,501,045**
USD						**1,943**
Grand Total NGN						**44,068,308**
Grand Total USD						**57,043**

Note: USD to Naira exchange rates as at October, 2023 (1 USD = 772.54 Naira) was applied and figures rounded up.

ES 8: ESMP Disclosure

After the ESMP review and clearance by the World Bank; the ESMP will be registered with the FMEnv for approval to be granted for its disclosure in-country. The table below describes the process of disclosure.

S/N	Action	Remarks
1.	**Registration of ESMP with FMEnv**	Following clearance of the ESMP by the Bank, the SPIU shall proceed with the registration of the ESMP at the FMEnv through its website. A payment of N50,000 will be made via remita per project site–**Three (3) technical colleges (N150,000)**. Afterwards, two (2) hard copies and one (1) soft copy of the report will be sent together with the receipt of payment and a letter of **"Request for Disclosure"** addressed to the Minister or Permanent Secretary of the FMEnv as the case may be.
2.	**Letter of Approval by the FMEnv**	After all necessary inputs have been incorporated the SPIU will receive an acknowledgement by the FMEnv in form of a letter approving the disclosure of the ESMP.
3.	**Disclosure of the Cleared ESMP in two (2) National Dailies and conduct of Local Radio Announcement as recommended by the FMEnv.**	The SPIU will then carryout an announcement at a local radio station in the state and proceed with the ESMP disclosure in two (2) national dailies, all at the discretion of the FMEnv and in accordance with the Nigeria EIA public notice and review procedures. The goal will be to inform stakeholders about the project activities, anticipated environmental and social risks and impacts, and proposed mitigation measures for identified impacts.

S/N	Action	Remarks
5.	**Disclosure at the World Bank External Website**	The ESMP will be disclosed according to the World Bank Disclosure Policy (OP 17.5).

ES 9: Stakeholder Engagement

The consultation process was conducted from 20th December 2022 and on 2nd February, 2023. In the consultation, special care was taken to ensure the appropriate participation of female teachers, corps members and students within the project areas and to understand and appreciate their views. Critical stakeholders identified and consulted included: i) Ekiti IDEAS SPIU ii) CIU Staff and School Management (Principal, Staff, Students and Youth Corp Members) iii) Ekiti State Environmental Protection Agency (EKSEPA) and Ekiti State Waste Management Agency (EKSWAMA) iv) Federal Road Safety Corps and other stakeholders within the boundaries of the project locations including women groups (locations for stakeholder engagement were at the sites, and offices of the respective agencies). Vulnerable Groups were identified at the level of consultations**.** The criteria utilized were based on establishing members of the project area of influence likely to be at the most risk of the adverse impacts of the proposed intervention works. This is with regards to: (*i) easy predisposition to SH and SEA, contracting STIs and STDs or unwanted pregnancies (social vulnerability); (ii) individuals likely to suffer temporary effects of renovation of classrooms, workshops, toilets, laboratories and on-site infrastructure and may face psycho-social impacts (physical and social vulnerability); (iii) staff and visitors with physical disabilities; and (iv) elderly persons (social and probably, economic vulnerability)*. In line with the criteria above, these include:

- **Female Students/Corpers/Staff within the College:** These stand the risk of suffering SH, SEA, contracting STIs, STDs or unwanted and/or early pregnancies caused by migrant workers, especially at the pre-construction and construction phases.
- **Persons with Disabilities:** Negative risks & impacts may be associated to restriction of movement and access to work areas/classrooms during the construction phase especially for teachers, students, corps members with disabilities. Barricaded or waste stacked routes or work areas may restrict and impede movement of staff living with disabilities to their office blocks.
- **Elderly Persons:** Considering that most schools have administrative personnel and security personal who are above 55years, it's imperative to put them into cognisance, as they might easily be susceptible to adverse environmental and social risks & impacts associated with the intervention works.

A summary of the consultation at the technical colleges is presented below.

Date of Consultation	**20/12/2022**
Project Location	GTC Igbara Odo
Name of Stakeholder(s)	*SPIU Staff, CIU, ESSG Officer, NPCU TA, ESMP Consultant*
Language of Communication	English and Yoruba
Subject Matter	***Brief Overview of the ESMP in relation to the proposed rehabilitation works for the college.*** • *Understanding the proposed rehabilitation works as specified in the CIP prepared for the college.* • *Review of the engineering designs for the rehabilitation.* • *Implications of the intervention works which has commenced prior to preparation of safeguards instruments.* • *Assessment of significant adverse impacts of the proposed rehabilitations for the college, analysing alternatives to designs and proffering realistic mitigation measures.*

Questions/Concerns/Complaints/Suggestions from Consultant	Response/Suggestions (By the Consultant)
• Technical enquiries on the scope of the intervention works at the college and request for the engineering designs. • Inquiries were made about the basis for starting intervention activities without a safeguard instrument for implementing ESMP and monitoring project performance. The consultant also inquired about the scope of the "General Works". • While using the holidays to carry out some civil works is not a bad idea, it is ideal and considered good practice to conduct an environmental assessment and develop an ESMP to guide the management of E&S risks and impacts associated with the project implementation in the college. The Consultant further recommended that a **"Stop Work Order"** is put in place until assessment are completed. • The consultant informed the CIU and the school management that generally, minor E&S impacts are envisaged as regards the rehabilitation works and an ESMP is currently being prepared to target and address these impacts specifically for the college.	• The CIU furnished the Consultant with information on the priority works for GTC Igbara Odo. They further informed that the college has started rehabilitation activities for the **"General Works".** • The Architectural drawings and DEDs for the rehabilitation cannot be provided at this time as the design team are yet to conclude with its preparation. As soon as it is completed, it will be sent to the consultant. • According to the CIU, the "General Works" are generally peripheral engagements that are not part of the college's major efforts. These include the renovation of the IDEAS project office, the installation of a solar-powered borehole, etc. Given that the school will shortly close for the Christmas break, the administration intended to take advantage of the time when students would be absent to commence several projects of this nature. • Currently, the school has not selected a location for provisional storage of the asbestos wastes prior to disposal by EKSWAMA; nonetheless, one of the several abandoned structures could serve the purpose. • Igbara community is safe and has not experienced any security incidence lately.

• Is there a designated location in the school where obsolete asbestos ceilings and roofs can be temporarily stored pending uptake and subsequent disposal by EKSWAMA? • Generally, caution should be applied in managing asbestos material due to its hazardous nature. The handler must ensure all asbestos waste are carefully cut into conveyable pieces and wetted before safely transporting to the designated storage point. He further informed the stakeholders that an asbestos waste management plan will be included as an annex to the ESMP being prepared to guide in the safe management of asbestos waste. • Consultant enquired on the security situation in Igbara community. • The team also enquired on past GBV incidences and if the college has established a GRM and constituted GRCs at the level of the school.	• There has been no past incidence of GBV in the college. The management enforces discipline through their disciplinary committee and the G&C that handles matters pertaining to GBV as well as other school related malpractices. • Further, the college is currently in the process of constituting GRC members at the school which will include the same disciplinary committee and some stakeholders of the college such as members of the PTA. • They appreciated the consultant for their time and informed that they will follow through with the provisions of the ESMP prepared to ensure a smooth implementation.

Date of Consultation	**02/02/2023**
Project Location	GTC Otun-Ekiti
Name of Stakeholder(s)	*SPIU Staff, CIU, ESSG Officer, ESMP Consultant*
Questions/Concerns/Complaints/Suggestions from Consultant	Response/Suggestions (By the Consultant)
• Technical enquiries on the scope of the intervention works at the college and request for the engineering designs. • Management of construction wastes and scraps particularly asbestos wastes. • Traffic situation along the Omuaran – Otun highway in relation to procurement and supply of construction materials to the college. Possible alternate routes. • Demolition activities are ongoing at the structures to be rehabilitated. Increased noise levels around the Garment Making section and proximal classroom blocks due to ongoing demolitions. Informed that noise intensive activities should be reserved for weekends or evenings. • The consultant emphasized the roles and responsibilities of the SPIU Safeguards Unit (ESO & SSO) as well as the ESSG Officer in monitoring ESMP implementation during the rehabilitation works.	• The CIU furnished the Consultant with information on the priority works for the college, according to the CIU team, there are 3 major focal areas or priorities for works in the school namely; Mechanical Workshop, Welding and Fabrication and Agric Mechanic Workshops. There are also other general works. • There is a designated storage point for asbestos wastes in the college. The college will engage the services of EKSWAMA for the evacuation of the construction wastes. • Being an interstate road connecting Ekiti to Kwara and even Osun States, the Omuaran – Otun highway only experiences short term traffic during the day as commuters ply the road. It is advised that materials are moved preferably later in the day or early in the morning. • Only partial demolition has commenced at this time in preparation for the rehabilitations and informed that weekends will be taken advantage of for all activities that generate noise as suggested by the consultant. • They appreciated the consultant for their time and informed that they will follow through with the provisions of the ESMP prepared to ensure a smooth implementation.

Date of Consultation	**02/02/2023**
Project Location	GTC Ijero-Ekiti
Name of Stakeholder(s)	*SPIU Staff, CIU, ESSG Officer, ESMP Consultant*
Questions/Concerns/Complaints/Suggestions from Consultant	Response/Suggestions (By the Consultant)
• Technical enquiries on the scope of the intervention works at the college and request for the engineering designs. • Inquiries were made about the basis for starting intervention activities without a safeguard instrument for implementing ESMP and monitoring project performance. • The consultant recommended that although one (1) solar powered borehole has been proposed for the college, the school can make provisions for the installation of another one to reduce water scarcity and improve sanitary conditions within the college. • A one-off fumigation will not completely resolve the issue, the school management has to commit to the continuous fumigation of all structures in the college, preferably quarterly. • The consultant informed the CIU and the school management that generally, minor E&S impacts are envisaged as regards the rehabilitation works and an ESMP is currently being prepared to target and address these impacts specifically for the college. • The team also enquired on past GBV incidences and if the college has established a GRM and constituted GRCs at the level of the school. • General questions on security situation, GBV incidences, GRM and GRC constitution.	• The architectural drawings are currently being developed by the design team hence it cannot be provided the consultant. However, they assured it will be sent across as soon as it is completed. • The works that have commenced are borehole installation under the general works. This is because the college has no existing borehole and access to water has been a major challenge facing the college for a long time. • The CIU informed the consultant that the buildings are all infested with termites and the school plans to fumigate the structures. • The college is currently in the process of constituting GRC members at the school which will include the same disciplinary committee and some stakeholders of the college such as members of the PTA. • Ijero community is safe and has not experienced any insecurity lately. • There has been no past incidence of GBV in the college. The management enforces discipline through their disciplinary committee and the G&C that handles matters pertaining to GBV as well as other school related malpractices. • They appreciated the consultant for their time and informed that they will follow through with the provisions of the ESMP prepared to ensure a smooth implementation.