



Republic of Ghana

MINISTRY OF COMMUNICATIONS AND DIGITALISATION

**GHANA DIGITAL ACCELERATION PROJECT (GDAP)
(P176126)**

Environmental and Social Management Framework (ESMF)

MARCH 2022

EXECUTIVE SUMMARY

Project Background

The Republic of Ghana (Ghana), currently a lower middle-income country is one of the fastest growing African countries that is championing digitization, digitalization and digital transformation through its Ministry of Communications and Digitalization (MoCD) and allied agencies. The Government of Ghana (GoG) is formalizing especially the informal economy by the introduction of several reforms leveraging on Information Communications Technology (ICT). The ICT sector is one of Ghana's best-performing sectors and grew on average by 19% per year between 2014 and 2020. Thus, Ghana is among the digital leaders in Sub-Saharan Africa (SSA). The Digital Economy for Africa (DE4A) Initiative forms part of the World Bank Group's support for the African Union's Digital transformation for Africa, which aims for every African individual, business and government to be digitally enabled by 2030. The Digital Economy for Africa initiative is underpinned by the following five principles:

- Comprehensive; - taking an ecosystem approach that looks at supply and demand and defies a narrow silo approach in defining the digital economy elements and foundations.
- Transformative; - aiming at a very different scale of ambition beyond incremental "islands" of success.
- Inclusive; - a digital economy for "everyone, in every place, and at all times" creating equal access to opportunities and dealing with risks of exclusions.
- Homegrown; - Based on Africa's realities and unleashing the African spirit of enterprise to have more homegrown digital content and solutions.
- Collaborative; - dealing with the digital economy requires a different flexible "mindset," collaborating among countries, sectors, and public and private players.

As part of the GoG's ICT Policy as espoused in the Coordinated Program of Economic and Social Development Policies 2017 – 2024, An Agenda for Jobs: Creating Prosperity and Equal Opportunity for All (October 2017), the policy direction focuses on entrenching ICT, and especially data science, (including analytics), at the center of the national development agenda, and also as part of a strategy to position the country as a regional ICT hub.

In response to these issues, the Ghana Digital Acceleration Project (GDAP) is proposed and the World Bank (WB) is supporting the proposed project with a sum of US\$200,000,000.00 to enhance conditions for private sector development with quality job growth. The Project Development Objective (PDO) of the proposed GDAP is "to Expand access to broadband, enhance the efficiency and experience of selected digital public services, and strengthen the digital innovation ecosystem." The proposed project supports results in three areas:

- i. Expanding access to broadband;
- ii. Enhancing the efficiency and experience of selected digital public services; and
- iii. Strengthening the digital innovation ecosystem.

In compliance with the World Bank Group (WBG) Environmental and Social Framework (ESF) and the applicable Environmental and Social Standards (ESSs), the proposed GDAP is being

subjected to Environmental and Social impacts and risks assessment hence the need for this Environmental and Social Management Framework (ESMF).

Purpose of the ESMF

The primary purpose of this ESMF is to assist MoCD in examining the environmental and social risks and impacts of the GDAP subprojects. It guides the MoCD to assess potential environmental and social risks and impacts of GDAP's interventions when subprojects' locations cannot be determined during project preparation. It sets out the principles, rules, guidelines, and procedures to assess the potential environmental and social (E&S) risks and impacts. It provides adequate information on the area in which subprojects are expected to be sited, including any potential E&S vulnerabilities of the area; and on the potential impacts that may occur and mitigation measures that might be expected to be used.

The general framework for the assessment and management of E&S risks and impacts of developmental projects in Ghana is provided for in the Environmental Assessment Regulations (EAR) 1999, Legislative Instrument (LI) 1652 and the Environmental Protection Agency (EPA) Act 1994, Act 490.

Approach and Methodology

The ESMF has been prepared in accordance with WB's Environmental and Social Framework (ESF) requirements and applicable Ghana environmental assessment procedures. The following approach and techniques were used in the development of the ESMF:

- Data gathering through desktop study;
- Participatory public consultations and discussions with relevant sector institutions including Ministries, Departments and Agencies (MDAs) private and public innovation ecosystem providers, telecom providers, vulnerable groups and Non-Governmental Organizations (NGOs);
- Data analysis for risks/ impacts identification and guidelines for the preparation of subprojects Environmental and Social Management Plans (ESMPs);
- Review of comments and feedback from stakeholders; and
- Finalization of the ESMF for disclosure.

Project Scope and Duration

The GDAP activities seek to support a strong enabling environment for fast-tracked digitization by accelerating country-wide digital transformation, focusing on critical digital enablers that promote the digital economy and build on existing digital foundations. The project is expected to be implemented during the period between 2022 - 2028.

Project Overview

The proposed project will contribute directly to three objectives of the FY22-26 WBG Country Partnership Framework (CPF) for Ghana and specifically to the CPF Focus Area 1 which is "enhancing conditions for private sector development with quality job growth". The CPF prioritizes digital transformation as a cross-cutting approach of leveraging digital solutions, which offers a unique opportunity towards better jobs, increased efficiency, quality services, and better governance. The objectives include:

- Improved conditions for enterprise development, which aims to (i) streamline the regulatory environment, (ii) boost the digital innovation ecosystem by positioning the private sector as a key role in the digital economy, and (iii) support the development of market-relevant digital skills to increase labor and firm productivity;
- Increased access to finance by enabling access to finance and investment for tech start-ups, digital entrepreneurs, and Micro, Small & Medium Enterprises (MSMEs), focusing on women-led businesses;
- Improved connectivity for access to productive opportunities, which aims to incentivize private sector investment in expanding the last mile connectivity in underserved rural areas - which will support closing the regional digital gap and improving accessibility, inclusion, and availability of digital services;
- Strengthened market-relevant skills for a productive workforce, which focuses on developing market-relevant digital skills from basic to advanced levels to improve productivity and income opportunities. By tackling the key barriers and prioritizing the most pressing needs for the citizens and focusing on vulnerable groups at risk of being socially and economically excluded, the proposed project is aligned with and complements the WBG's twin goal of ending extreme poverty and boosting shared prosperity.

The proposed project activities will contribute to the WBG Gender Strategy's two pillars (i) Removing constraints for more and better jobs by reinforcing women's access to the internet and digital public services, as well as increasing their participation in the digital economy and income-earning opportunities, and (ii) Enhancing women's voice and agency and engaging men and boys by ensuring, inter alia, equal representation of female beneficiaries, sex-disaggregated data monitoring, and confidential mechanism dedicated for women to report complaints.

The proposed project areas of intervention are fully consistent with the Ghana Beyond Aid Vision (2021-2023) the medium-term Ghana COVID-19 Alleviation and Revitalization of Enterprise Support (CARES) Program and the recently completed Ghana Integrated Digital Transformation Blueprint (GIDTB). The medium-term Ghana CARES program, which sets fast-tracking digitization as an integral part of its action plan, envisions structural reforms in the business environment to support economic diversification and plans to refocus key government flagship programs for increased efficiency, leverage digitization, and advance financial sustainability.

The project will also support Green, Resilient and Inclusive Development (GRID) – including the WBG's (i) Climate Change Action Plan, 2021-2025; (ii) COVID-19 Crisis Response Approach Paper; (iii) Gender Strategy, 2016-2023; and (iv) Disability Inclusion and Accountability Framework.

Finally, the project will promote Maximizing Finance for Development (MFD) approach through designing interventions that crowd in private sector funding and stimulate private sector development. Despite the relatively competitive telecom market environment, Ghana still experiences insufficient ICT infrastructure in rural and remote areas that do not attract investments from private operators due to low purchasing power and expensive roll-out of building infrastructure. Therefore, the project will seek to crowd in commercial financing by providing support on an enhanced regulatory framework, such as infrastructure sharing to reduce the costs

of network deployment and maintenance. Moreover, public investments will provide an avenue for greater private sector participation by creating markets, de-risking investment with long-term revenue guarantee, and providing catalytic subsidies for infrastructure expansion. The WB will collaborate closely with the International Finance Corporation (IFC) in areas such as broadband market reform and last mile connectivity interventions. Additionally, Public-Private Partnerships (PPPs) will also be required to provide access to network infrastructure and basic digital skills training. The project's investment and support to the overall digital innovation ecosystem aim to facilitate private sector initiatives for technology innovations and job creation, preparing the relevant policy framework, the Ghana Start-up Act, and extended support to Entrepreneur Support Organizations (ESO).

Project Components and Descriptions

The project aims to accelerate country-wide digital transformation, focusing on critical digital enablers that promote the digital economy and build on existing digital foundations. Complementary investments on the supply and demand sides of the digital economy will also be supported. Based on recommendations of previous assessments, including the Ghana Digital Economy Diagnostic, the project activities seek to support a strong enabling environment for fast-tracked digitalization. The project will promote a shift in digital public services from service to life-event focused approach to enhance the Government's digital capabilities. The project will further increase Ghana's capacity to promote digital innovation and sector-wide digital transformation in selected strategic sector(s). Finally, the project will boost digital skills development and capability to increase Ghana's digital talent base.

The project is an Investment Project Financing (IPF) operation comprising of five components. Component 1 will use a result-based approach, with part of the financing linked to Performance-Based Conditions (PBCs). Component 2 and 3 will be a traditional IPF. Component 4 is reserved for project management and implementation support, while Component 5 is a contingency emergency allocation aimed at mobilizing unallocated funds from the project to rapidly respond to emergency situations.

Both the project design and implementation plan have accounted for COVID-19's impact on the economy. For interventions on digital skills, distance learning will be adopted as a delivery mechanism.

Component 1: Ensuring Inclusive and Safe Digital Transformation

This component will support the GoG in improving the strategic, policy, and regulatory environment for the acceleration of a vibrant, safe, and inclusive digital transformation. Specifically, it aims to establish an enabling environment for the development of a vibrant broadband market, expand the reach and coverage of broadband networks in rural areas, ensure safe and resilient digital services, and strengthen the digital sector's institutional structure and capacity.

Component 2. Modernizing Digital Government Services

This component is focused on the public sector side of digital transformation and aims at supporting Ghana to establish an agile and citizen-centric digital government model. It supports developing adequate institutional setup reinforced by a strong governance framework and change

management, essential for implementing the next generation government infrastructure and delivering transactional and digital by design public services. Accelerating Ghana's digital transformation agenda requires a realignment to support the transition towards sustainable and user-centric e-government.

Component 3. Support for Digital Transformation of Strategic Sectors

This component is focused on the private sector side of digital transformation and aims to boost the digital innovation ecosystem by (i) removing the key barriers that tech start-ups, digital entrepreneurs, and Business Process Outsourcing (BPO) firms in the ICT sector face and (ii) unlock the digital transformation in selected productive sector (such as agriculture) through the relevant government entities and digital accelerators. Each subcomponent aims to provide end-to-end support to set up a proof-of-concept of how other sectors can also leverage and reap the full benefit of digital solutions to drive more robust and inclusive sector growth and diversified economy.

Component 4. Project Management and Implementation Support

This component will provide support for the management and implementation of project-associated activities. It will finance activities related for recruitment of consultants in areas of project management, project coordination, fiduciary specialists (e.g., procurement, financial management), Monitoring and Evaluation (M&E), an Environment and Social Safeguards (E&S), project communication, and citizen engagement. This component will also cover modest office equipment and independent audits and learning/training for key beneficiaries (e.g., the Project Implementation Unit and the Technical Committee) up to the official closing date of the project. Moreover, Special attention will be devoted to promoting equal participation of women in all decision-making bodies under the project and contributing to tackling barriers in recruitment, retention, and promotion. It is also anticipated consultant's Terms of References (ToR) clearly stipulate knowledge transfer and hands on training to ministry staff.

Component 5: Contingent Emergency Response Component

In the context of the COVID-19 crisis, a Contingent Emergency Response Component (CERC) is added to the project structure to provide support to the Government to swiftly respond to an eligible crisis, including climate or natural disasters and public health emergencies. Including CERC at the preparation stage, albeit with zero funding, provides for flexibility for an agile response to an imminent or actual emergency (such as COVID-19) through quick disbursement of uncommitted balances from other components. The crisis response expenditures could cover, for instance, the facilitation of emergency payments to vulnerable groups of population using mobile money or ensuring business continuity of core government functions, when civil servants are required to continue home-based work. The CERC is not expected to finance civil engineering works that can induce risks and/or negative environmental and social impacts. However, CERT component is not added to finance any activities that include adverse environmental and social risks and impacts.

The project aims to actively close gender gaps between women and men across various pillars of digital development and aligned with International Development Association-19 (IDA-19 theme, the WBG's 2016–2023 Gender Strategy and the Digital Development Gender Strategy. Actions designed to close gender gaps between women and men in the digital economy are incorporated across various components of the project.

Project Oversight and Implementation Arrangement

A Project Coordination Unit (PCU) within the MoCD will provide project oversight and lead the day-to-day management of the project. The proposed PCU will utilize the existing e-Transform Project Implementation Unit (PIU) and take advantage of experience and institutional memory accumulated from the current and previous WB-funded projects. The current e-Transform PIU will be expanded and become a PCU responsible for the implementation of both the e-Transform Project (until October 2023) and the GDAP. The PCU will consist of a Project Coordinator, fiduciary specialists (FM and Procurement), Deputy Project Coordinator, Safeguards Specialists (Environmental and Social), Technical specialists (at least one per component), and specialists to cover other PCU functions such as M&E, Communications, etc. The technical specialists will work directly with the Technical Implementing Agencies (TIAs) to ensure that each TIA is provided with the technical, financial, procurement, and political support required to achieve desired outcomes for the project. The proposed project will use the experience and lessons learned from the eTransform Project (e.g., the Technical Committee, the Project Steering Committee, and the Inter-Ministerial Oversight Committee) and strengthen the coordination role of the Ministry. A Project Oversight Committee (POC) will provide strategic guidance to MoCD and oversight to ensure minister-level support and effective coordination across the Government. This committee will (i) oversee the project implementation and advise PCU, (ii) have the composition of relevant Ministers, stakeholders, and private sector representatives, and (iii) be co-chaired by the Ministry of Finance and MoCD. The mandate of the oversight committee will include (i) responsibility for review of project progress, (ii) provision of strategic guidance and recommendations over project implementation, and (iii) coordination of the involvement of the relevant Ministries.

Results Monitoring and Evaluation Arrangements

The PCU will have responsibility for results monitoring and evaluation (M&E). Project M&E will be led by each component technical lead supported by PCU M&E specialist who will provide guidance and support to all components. An annual public event to report on project results, including both technical and financial, will be organized by PCU.

The MoCD will present comprehensive reports reflecting M&E findings to WB and the oversight committee on a quarterly basis, and a comprehensive report showing progress towards outcomes will be submitted semi-annually. The quarterly report should be tied to the submission of the financial and procurement reports. The project will build on successful M&E lessons from the implementation of the e-Transform project. The team will use new ICT-based tools (i.e., GEMS Initiative) and mobile-based beneficiary feedback mechanisms to strengthen monitoring facilities of the project and to build citizen engagement. The M&E will thus provide a window to illustrate which districts and regions have well-performing programs. The M&E team will work in conjunction with the Policy, Planning and M&E (PPME) Directorate of MoCD.

In terms of tracking user experience of select digital services supported by the project, real time feedback tools and functions will be embedded directly in the design of service delivery. Feedback received from end-users will be tracked over time and will be reflected in the system update or upgrade.

Options for Considerations

The following options have been analyzed for consideration to inform project implementation:

- Site Selection Options {use of existing Right of Ways (RoWs) as against creating of new ones and avoiding ecological sensitive ecosystems, national parks, forests reserves, parks, protected wetlands/ Ramsar sites, and buffer zone around water bodies};
- Fiber Network and Cable Deployment Options {trenching only, thrust boring only and combination of the two}; and
- Power Supply Options (national grid, generator set and solar).

Environmental and Social Standards, Legal and Institutional Framework

The proposed GDAP will strictly adhere to and follow the World Bank's ESF as well as the legal and regulatory frameworks of Ghana. The key environmental policies, legal framework and procedures considered as relevant under the GDAP have been presented in Chapter 2 of this ESMF including a comparison of Ghana's Regulations/ Policies and World Bank ESF for Handling Environmental and Social Risks including analysis for ESS 5 requirements.

Environmental and Social Baseline Conditions

Ghana is situated on the west coast of Africa and lies close to the equator within longitudes 3°5'W and 1° 10'E and latitudes 4°35'N and 11°N, with a total area of 238,535km². The proposed GDAP will be implemented in the 16 regions of Ghana (260 MMDAs). The environmental and social baseline of Ghana has been provided as part of the ESMF and they include the general climate, climate change issues, relief and topography, vegetative zones, drainage and water resources, population, economic activities, Gender- Based Violence (GBV) in Ghana, Collection and disposal of e-waste and internet usage among others.

Potential Impacts of the Proposed Project and Proposed Mitigation Measures

The implementation of the proposed GDAP may result in several potential E&S impacts on the biophysical, and socio-economic and cultural environments. These potential E&S impacts could mainly be positive, negative or neutral, and will occur during the preparatory, construction and operation & maintenance phases. The following project activities may lead to some minimal risks and impacts:

- General construction activities; and
- Operation and maintenance of the project facilities and equipment.

However, good E&S risks and impacts management practices will minimise or eliminate most of the anticipated risks and impacts, which are mostly temporary and site specific.

Environmental and Social Management Plan (ESMP)

The ESMP provides details on: (a) the measures to be taken during the implementation and operation of a project to eliminate or offset adverse environmental and social impacts, or to reduce them to acceptable levels; and (b) the actions needed to implement these measures. It consists of the set of mitigation, monitoring, and institutional measures to be taken during implementation and operation of a project to eliminate adverse environmental and social risks and impacts, offset them, or reduce them to acceptable levels. The ESMP also includes the measures and actions needed to implement these measures. Roles and responsibilities are clearly defined to guide project implementation with monitoring proposals also included. In this case the MoCD, the implementing agency is required to: (a) identify the set of responses to potentially adverse impacts;

(b) determine requirements for ensuring that those responses are made effectively and in a timely manner; and (c) describe the means for meeting those requirements.

EIA Procedure to be followed by GDAP

The World Bank ESS 1 provides guidance on the environmental assessment procedures for WB funded projects. The Ghana EIA procedures has also established 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 Ghanaian procedures are therefore summarized in the following sections and will mostly be followed by the proposed GDAP.

- i. Registration: Environmental Assessment Registration Forms (EA1 or EA2) are available at the official website of EPA to register every project/ development that may have an impact on the environment. The responsibility is on the proponent undertaking the project/ subproject to register the project with EPA.
- ii. Screening: The EPA, within 25 working days of receiving the Registration Form will take a decision by placing the project at the appropriate level of environmental assessment. The results will be communicated to the developer/ proponent with reasons, which could be any of the following:
 - Objection to the project, i.e., EIA procedure is curtailed, and no permit will be issued.
 - No objection to the project, i.e., EIA procedure will be followed through, and permit issued.
 - EPA may use the completed EA1 form to permit the project, e.g., installation of masts;
 - EPA may require Preliminary Environmental Assessment (PEA) report to permit the project where the impacts are not major.
 - EPA may require an EIA report to permit the project where the adverse impacts are significant. In such a case, a scoping report with Terms of Reference (ToR) for the EIA study will be required by the Agency before approval is given for the detailed EIA study.

Roles and Responsibilities

The roles and responsibilities of MoCD, EPA, PCU, Environment & Social Officer (ESO), Supervising Consultant, Contractor(s), Road Agencies, Telecoms and Utility Companies have been provided for successful implementation of the proposed GDAP.

Guidelines and Checklists

Environmental and social management issues at various stages of the Project are governed or guided by several standards, including:

- the ESMF requirements;
- those contained in national legislation;
- those established by industry codes of practice; and
- international standards and guidelines (such as those of the WBG/ IFC).

Specific Action Plans

Specific action plans (as relevant to the contractor(s) works) will need to be developed by the contractor(s) to implement the mitigation and management measures outlined in this ESMF. Specific action plans could include the following:

- Health and Safety Plan/Policy (HSP) including emergency response plan;
- Contractor's Environmental and Social Management Plan (C-ESMP)
- Traffic Management Plan (TMP);
- Waste Material Management Plan (WMMP);
- Labor Management Plan (LMP);
- Public/Community Engagement Plan; and
- Decommissioning Plan (DP).

Uncertainty and Change Management

Uncertainty in the development of the proposed GDAP derives from several factors including:

- unconfirmed specific installation sites for proposed project equipment;
- unconfirmed locations within the RoW for extension of fiber network;
- unconfirmed total distance of fiber network; and
- unforeseen events (flooding, fire etc).

The final project designs may require further mitigation and management actions. The PCU should liaise with the EPA to assess any change or engage an expert to assist in this direction. Changes that might occur after the completion of the EIA study/findings should be subjected to re-assessment, including further stakeholder consultation, and supplementary EIA or ESMP undertaken in line with the Ghana EIA procedures as well as ESS1 objectives and requirements.

ESMF Implementation Monitoring Plan

Objective of Monitoring

The objective of monitoring is to:

- i. Ensure proper and timely implementation of environmental and social interventions proposed in this ESMF and other relevant documents to be prepared based upon the ESMF such as the EIA/ ESIA and EMP/ ESMP.
- ii. Alert project authorities by providing timely information about the success or otherwise of the environmental management process outlined in this ESMF in such a manner that appropriate decisions can be made to improve upon the process or avert any adverse impact.
- iii. Make a final evaluation in order to determine whether the mitigation measures incorporated in the technical designs and the EMP/ ESMP have been successful in such a way that the pre-project environmental and social condition has been restored, improved upon or is worse than before and to determine what further mitigation measures may be required.

Compliance Monitoring

The following activities should be conducted to ensure compliance with the recommendations of the ESMF and subsequent ESIA/ EIA Study:

- i. As part of the planning stage, ensure that EPA Permits are obtained for specific subprojects;
- ii. Final designs should be completed and submitted to MoCD or PCU following acceptance of the final Environmental Impact Statement (EIS) by EPA;
- iii. Confirm that all the design changes and design mitigation measures recommended by the EIA study have been incorporated into the final detailed design documents;
- iv. During contract negotiations, confirm that the designs and working methods proposed by the contractors have taken into account the environmental and social considerations recommended in the EIS;
- v. Following completion of the detailed designs, confirm that all mitigation measures recommended by the ESMF and confirmed by the ESIA/ EIA study have been incorporated into the appropriate contract documents prior to signing;
- vi. During construction, confirm on a regular basis that all the agreed working conditions and procedures, regarding various environmental considerations, are followed through satisfactorily;
- vii. During construction and upon completion of construction, ensure that all requirements regarding clean up and reinstatement have been satisfactorily met; and
- viii. During the operation of the project, ensure that all the mitigation measures recommended in the EIS forms part of the functions and mandate of the institution responsible for the management and operation of the project facilities.

Monitoring of Environmental and Social Impacts

The actual impacts caused by project implementation e.g., dust from trenching, noise from installation of equipment and hazardous/ e-waste generation from end-of-life equipment usage should be closely monitored during the construction and operation of the project to examine the effectiveness of the mitigation measures. The goals of monitoring are to measure the success rate of the project, determine whether interventions have resulted in dealing with negative impacts (bio-physical, socio-economic, culture and health), and whether further interventions are needed, or monitoring is to be extended in some areas. The monitoring responsibilities of EPA, PCU and Contractor(s) have thus been provided.

Capacity Building Requirements

Project institutions need to understand the purpose of the ESMF, their expected roles and the extent to which the ESMF will facilitate the respective statutory functions. This will engender the required collaboration for the ESMF implementation. The following sections provide recommendations on capacity building to support the program's environmental and social management objectives.

Identification of Capacity Building Needs

The first step in pursuing capacity building will be to identify the capacity building needs of the various stakeholders. Capacity building should be viewed as more than training. It is human resource development and includes the process of equipping individuals with the understanding, skills and access to information, knowledge and training that enables them to perform effectively. It also involves 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).

The capacity building requirements will mostly be in the form of training workshops as follows:

- i. A training workshop on the ESMF and the World Bank ESF/ ESS should be organized for the major stakeholders identified above.
- ii. A training workshop for the key project implementers including PwDs, MoCD, EPA and the proposed PCU among others should cover the following:
 - a) Inclusion of environmental mitigation measures & penalties in contract documents of contractor and contractor supervision;
 - b) Environmental screening and monitoring; and
 - c) Public/community participation techniques and procedures.

For each group, training will be provided at different level of expertise in different areas, and would include:

- i. In-depth training to a level that allows trainees to go on to train others, including environmental and social procedures where relevant; and
- ii. Sensitization or awareness-raising in which the participants are familiarized with the significance or relevance of the issues, to the extent that they can identify potential or emergent challenges and request further assistance as necessary.

Grievance Redress Mechanism (GRM)

The main objective of a Grievance Redress Mechanism (GRM) is to assist the implementing institutions to resolve complaints and grievances in a timely, effective and efficient manner that satisfies all parties involved. It is to help track project-related complaints including a feedback system for regular and timely response on actions taken to respond to complaints and to address and resolve any issues or problems connected to the proposed project from affected persons or community members promptly and in a manner that will be acceptable to all parties. The GRM is an integral part of this ESMF and helps to create avenues for receiving and responding to stakeholder concerns and complaints about issues related to the project. Specifically, it provides a transparent and credible process for fair, effective and lasting outcomes. It also builds trust and cooperation as an integral component of broader community/ citizen engagement that facilitates corrective actions. Specifically, the GRM:

- i. Provides affected people with avenues for making a complaint or resolving any dispute that may arise during the implementation of the project;
- ii. Ensures that appropriate, timely and mutually acceptable redress actions are identified and implemented to the satisfaction of complainants;
- iii. Verify that complainants are satisfied with redress action; and
- iv. Avoids the need to resort to judicial proceedings.

Grievances arising from the proposed project implementation could typically include access and quality of services, issues about targeting for services, and availability of facilities and resources. Grievances may also relate to expansion of infrastructural activities with some physical footprints in the later stages of project implementation. The GDAP GRM presented in the SEP is in four levels, i.e., Level 1 will be to (i) receive, (ii) acknowledge, (iii) register/ log, (iv) screen, (v)

Investigate, (vi) resolve and (vii) provide feedback on grievance at the project institutions implementing the GDAP; Level 2 will be to present the grievances to a Grievance Redress Committee (GRC) at the PCU/ MoCD; Level 3 will be to use a Mediation to be agreed by the complainant and PCU/ MoCD and the last resort being the use of Court (Level 4). In line with ESS2 and ESS5, the GDAP GRM shall be utilized with its approach to addressing grievances. GDAP has established a comprehensive Grievance Redress Mechanism for management of all kind of grievances including labor issues under ESS 2 and for resettlement under ESS 5. It also addresses grievances related to Sexual Exploitation, Abuse and Harassment (SEA/H) related action plan will mitigate SEA/ H risks inclusive of referral pathways for rehabilitation of victims.

Public Consultations, Participation and Information Disclosure

The stakeholder consultations have been a two-way flow of information and dialogue between project proponents and stakeholders. It is specifically aimed at developing ideas that can help shape project design, resolve conflicts at an early stage, assist in implementing solutions and monitor on-going activities. In line with ESS10 and national policies and regulations, key stakeholders including organisations and individuals have been consulted during the period April 6 – 12, 2021, July 19 – 30, 2021 October 12 – 22, November 29 – December 6, 2021 and the objectives of the engagement were to:

- i. Provide information related to the activities of the proposed project;
- ii. Facilitate and maintain dialogue;
- iii. Seek participation of all interested parties;
- iv. Identify key stakeholder interests as well as issues;
- v. Create solutions for addressing any concerns and integrating them into project design, operations, and management; and
- vi. Enhance the project by learning from, and incorporating the expertise of individuals, professionals, communities and organizations.

Aspects of the stakeholder concerns are summarized hereunder:

Stakeholders provided some concerns/ suggestions e.g., stock taking of Public Fiber Optic Assets and ICT Resources, developing a Green ICT framework, addressing legal and regulatory gaps to establish enablers for data sharing, enveloping an electronic waste management strategy among others. They were of the opinion that potential beneficiary institutions for e-services implementation should submit proposals to MoCD for review and subsequent selection to ensure more buy-in from the beneficiary institutions.

In order to ensure proper implementation of the ESMF, project/ subproject and to avoid public agitations/ litigations which could hinder the project, the project should further engage/ sensitize the public, particularly those who may be affected within the RoW and sites for project facilities. The engagement/ sensitization should include the schedule of implementation, reinstatement process for any affected property, grievance redress mechanism, traffic management, etc. The public engagement/ sensitization should be carried out ahead of construction works and any grievances addressed.

Institutional Arrangements for ESMP Implementation

The MoCD, the main implementing institution of the proposed project will coordinate work among the relevant institutions and liaise with management on approval of agreed activities for speedy implementation. A technical team from the MoCD will guide the implementation of the proposed project.

ESMF Implementation Budget

Budgetary estimates have been provided to support the implementation of the ESMF regarding these key activities: (i) Awareness creation on Project; (ii) ESMF Disclosure; (iii) Capacity building for key stakeholders; (iv) Public engagement/ sensitization; (v) Engagement of Environmental and Social Safeguards Specialist for the project; (vi) ESMF Project Management; and (vii) Monitoring and evaluation. The estimated budget is **US\$ 1,495,000**.

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List of Abbreviation

AI	Artificial Intelligence
AICCRA	Accelerating the Impacts of CGIAR Climate Research for Agriculture
BPO	Business Process Outsourcing
CARES	COVID-19 Alleviation and Revitalization of Enterprise Support
CERC	Contingent Emergency Response Component
CERT	Computer Emergency Response Teams
CIC	Community ICT Center
CIIP	Critical Information Infrastructure Protection
CSA	Cyber Security Authority
DE4A	Digital Economy for Africa
DPA	Data Protection Authority
DPC	Data Protection Commission
E&S	Environmental and Social
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EMP	Environmental Management Plan
EPA	Environmental Protection Agency
ESB	Enterprise Service Bus
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESO	Entrepreneur Support Organizations
ESS	Environmental and Social Standards
ESSS	Environmental and Social Safeguards Specialist
GEA	Ghana Enterprise Agency
GHG	Green House Gas
GIFEC	Ghana Investment Fund for Electronic Communications
GoG	Government of Ghana
GRID	Green, Resilient and Inclusive Development
GRM	Grievance Redress Mechanism
GSS	Ghana Statistical Services
ICT	Information Communications Technology
IFC	International Finance Corporation
IPF	Investment Project Financing
IT	Information Technology
LMP	Labour Management Procedure
MDAs	Ministries, Departments and Agencies
M&E	Monitoring and Evaluation
MFD	Maximizing Finance for Development
MMDAs	Metropolitan, Municipal, and District Assemblies
MoCD	Ministry of Communications and Digitalization
MoF	Ministry of Finance

MoFA	Ministry of Food and Agriculture
NCA	National Communications Authority
NEIP	National Entrepreneurship Innovation Program
NGO	Non-Governmental Organization
NITA	National Information Technology Agency
OHCS	Office of the Head of Civil Service
PBC	Performance-Based Condition
PCSRC	Ghana Post, Postal and Courier Services Regulatory Commission
PCU	Project Coordination Unit
PDO	Project Development Objective
POC	Project Oversight Committee
PPME	Policy, Planning and M&E
PPP	Public-Private Partnerships
PWDs	Persons with Disabilities
RAP	Resettlement Action Plan
RP	Resettlement Plan
SEP	Stakeholder Engagement Plan
SIP	Single Information Portal
SLA	Service Level Agreement
SMEs	Small and Medium Enterprises
SMS	Short Message Service
SSA	Sub-Saharan Africa
TA	Technical Assistance
TIAAs	Technical Implementing Agencies
USSD	Unstructured Supplementary Services Data
VCTF	Venture Capital Trust Fund
WB	World Bank
WBG	World Bank Group
WDR	World Development Report

1 INTRODUCTION

1.1 Project Background

The Republic of Ghana (Ghana), currently a lower middle-income country is one of the fastest growing African countries that is championing digitization, digitalization and digital transformation. According to Mark Sen Gupta (2020)¹, Digitization refers to creating a digital representation of physical objects or attributes, Digitalization refers to enabling or improving processes by leveraging digital technologies and digitized data and Digital Transformation is really business transformation enabled by digitalization. The Government of Ghana (GoG) is therefore formalizing especially the informal economy by the introduction of several reforms leveraging on Information Technology (IT) or Information Communications Technology (ICT). Ghana is at the forefront of digital transformation in Africa Compared to the continent's average as it scores well on all indicators of digital transformation. This includes digital government, digital business, infrastructure, innovation-driven entrepreneurship, and digital skills and values.

The ICT sector is one of Ghana's best-performing sectors and grew on average by 19% per year between 2014 and 2020, with Ghana being among the digital leaders in Sub-Saharan Africa (SSA). The Digital Economy for Africa (DE4A) Initiative forms part of the World Bank Group's support for the African Union's Digital transformation for Africa, which aims for every African individual, business and government to be digitally enabled by 2030. The Digital Economy for Africa initiative is underpinned by five principles as follows:

- Comprehensive; - taking an ecosystem approach that looks at supply and demand and defies a narrow silo approach in defining the digital economy elements and foundations.
- Transformative; - aiming at a very different scale of ambition beyond incremental "islands" of success.
- Inclusive; - a digital economy for "everyone, in every place, and at all times" creating equal access to opportunities and dealing with risks of exclusions.
- Homegrown; - Based on Africa's realities and unleashing the African spirit of enterprise to have more homegrown digital content and solutions.
- Collaborative; - dealing with the digital economy requires a different flexible "mindset," collaborating among countries, sectors, and public and private players.

A diagnostic of Ghana's digital economy, conducted in Financial Year (FY20) as part of DE4A initiative has identified the main bottlenecks and have provided the necessary recommendations to accelerate digital transformation.

The combination of competitive market and private sector investment participation in digital infrastructure has been instrumental in driving down the cost and access to broadband connectivity;

¹ <https://www.arcweb.com/blog/what-digitization-digitalization-digital-transformation>

however, there is still room for improvement to enhance sector policy and regulation to stay at par with technological innovations.

Ghana recognizes the importance of data generated by digital platforms and the need to ensure personal data protection and governance across the Ministries, Departments and Agencies (MDAs).

The Ghanaian cybersecurity ecosystem ranks third in Africa, showing GoG's high commitment to responding to cybersecurity challenges. Ghana is the regional leader in Western Africa in developing digital government services. While the GoG remains keen to advance the digital government agenda, multiple challenges persist, affecting the Government's ability to operate digitally and impacting the quality and adoption of e-services. Despite its efforts and commitment to boost the digital culture, Ghana still lacks digitally skilled professionals and critical mass to further accelerate digital transformation and fuel the digital innovation ecosystem both nationally and for regional opportunities. The adoption of digital technologies and innovation by other key productive sectors, such as agriculture and land administration, can foster an economy-wide digital transformation and contribute to the creation of better jobs and economic opportunities.

In response to these issues, the Ghana Digital Acceleration Project (GDAP) is proposed to enhance conditions for private sector development with quality job growth. The Project Development Objective (PDO) of the proposed operation is "to accelerate access to, usage of, and innovation in digital services by supporting inclusive and fast-tracking digital transformation." The proposed project supports results in three areas:

1. accelerating access to digital services;
2. accelerating the use of digital services; and
3. accelerating innovation in digital services.

As part of the GoG's ICT Policy as espoused in the Coordinated Program of Economic and Social Development Policies 2017 – 2024, An Agenda for Jobs: Creating Prosperity and Equal Opportunity for All (October 2017), the policy direction will focus on entrenching ICT, and especially data science, (including analytics), at the center of the national development agenda, and also as part of a strategy to position the country as a regional ICT hub. To achieve this, GoG will mainstream ICT in the public sector; improve telecommunications accessibility; create opportunities for entrepreneurship; increase citizens' accessibility to data platforms; and collaborate with the private sector to increase the broadband bandwidth and speed of connections nationwide. Significant investment will be made to develop the ICT infrastructure, in addition to improving the quality of ICT services, especially internet and mobile telephony. Overall, Government will serve as a digital market maker to:

- build a holistic national ICT digital infrastructure (National ID system, addressing system; interoperability of payments and telecommunications systems, citizen's services centers nationwide using available Government infrastructure such as post offices, and community information centers etc.);

- make progressive regulations aimed at using this infrastructure as a platform for e-Government services to enable Government deliver services to citizens and residents efficiently and quickly. Government regulations will also facilitate the participation of private capital, knowhow and risk taking in Public-Private Partnerships (PPPs) to guarantee quality outcomes, aimed at achieving excellent citizen service delivery;
- create the right environment to promote e-commerce and online and offline cashless payments;
- provide real -time information to all segments of the population and economy by building customized content for each population and economic segments, including farmers;
- deepen the digital index of citizens through increased internet availability and accessibility nationally (especially in all schools), increased internet capacity and quality training in and out of school;
- promote Business Process Outsourcing and IT Enabled Services to create thousands of high-paying sustainable jobs for the youth; and
- establish innovation hubs and promote a software and applications industry.

In bridging the digital divide in Ghana, the following measures has been instituted by the Ministry of Communication and Digitalization²:

1. Ensuring efficient connectivity for Ghanaians. This will facilitate access to information and knowledge which will enable the average Ghanaian to improve and enhance their daily lives.
2. Through the collective use of ICT that Ghana can position itself to benefit from the 4th Industrial Revolution. As a result, it is important that every Ghanaian, especially, the unserved and underserved communities have access to meaningful connectivity that is affordable and constant.
3. Subsequently, Ghana has rolled out national connectivity initiatives and implementing the ICT for Accelerated Development (ICT4AD) policy which is promoting public and private investment in various modes of infrastructures to support Ghana's Accelerated Development agenda. The main aim of the policy is to guide all sectors of the economy to develop.
4. Ghana has in place wide spread fiber optic infrastructure and international bandwidth from 5 Submarine Fiber Optic cables. These are providing adequate bandwidth capacity to support Ghana's Digitalization agenda.
5. Ghana has introduced a School Connectivity Project to facilitate access to the internet. This project makes information easily available to students and teachers to enhance leaning. So far, four hundred and eleven (411) schools have been connected and more schools will be rolled onto the project.
6. Ghana has Community ICT Center (CIC) which serve as a community resource Center to provide business services and community development information. The centers also

² Excerpts from the Minister's speech on Wednesday, 24th March, 2021 World Summit on Information Society Forum (WSIS) obtained from [Communications and Digitalization Ministry poised for efficient connectivity | Ministry of Communications \(moc.gov.gh\)](https://www.moc.gov.gh/communications-and-digitalization-ministry-poised-for-efficient-connectivity)

function as information hubs for individuals and educational institutions. The CICs is also used to train the youth especially the women in these communities to enable them embrace technology and benefit from the many digital initiatives implemented by Government.

7. Rural Telephony and Digital Inclusion project is being rolled out, to provide connectivity to over 3.4million citizens in rural communities. This intervention when completed will provide new areas for ICT growth and raise the level of ICT literacy in those communities. It will create the platform for the promotion and growth of local start-ups in these communities.”
8. For protection of Ghana’s cyber space, the following has been deplored:
 - a. Online platforms must be safe for all. Ghana is promoting and creating awareness on the safe use of the internet as part of the Cyber Security interventions in the country. This must sustain the trust to use the internet and the encouragement to provide useful and educative content for all users. To ensure the protection of Ghana’s cyberspace, some initiatives have been introduced and to start with, the Cyber Security Law has been enacted which will established a Cyber Security Authority (CSA) to regulate Cyber Security activities in the country and foresee to the general protection of citizens in the cyber space; and
 - b. A Cyber Security Awareness Month has been instituted to build the capacity of citizens and institutions on cyber security issues to mitigate against some of the intended risks presented by the ICT ecosystem. In October of every year, the public is sensitized on the need to maintain Ghana’s cyber hygiene to protect the citizens.
9. In addition, Ghana is also collaborating with the international community by Ratifying both the Malabo and Budapest Conventions. These conventions provide international cooperation in the fight against cybercrimes. People’s utilization of ICT is generally impressive and speak to the giant strides being made in bridging the global digital divide in Ghana. It is salient that awareness creation efforts are targeted at children and first-time users of the internet in order to insulate them from the threats posed by utilizing online platforms.
10. Within Ghana the implementation of emerging technologies and the roll out of multiple state level digitization projects such as National ID, National Digital Property Addressing System, Mobile Money Interoperability and Paperless Ports as part of the Ghana Digital Agenda and Ghana Beyond Aid have resulted in the growing use of digital services. The ability for all to access and contribute information, ideas and knowledge is essential in an inclusive Information Society and the National Infrastructure Development Program which aims to connect the unserved and underserved is accelerating technology adoption and enabling access to information within Ghana. However, the speed of digitization and the accelerated growth in amounts of data available enabled by Artificial Intelligence, Machine Learning, Blockchain and Internet of Things and driven by cloud computing platforms has increased the aggregation of personal data from multiple sources for decision making based on individual behavior and preferences, with the potential invasion of privacy.
11. The Government of Ghana recognizes the socioeconomic benefits of an inclusive digital economy but also recognizes the importance of a framework which ensures safeguarding of personal data. The Government has therefore mandated the Data Protection

Commission with the task of protecting the dignity and privacy of individuals whilst an inclusive digital environment where innovation and productivity thrives is being encouraged.”

It is in these regard that the GoG is receiving WB support in the sum of Two Hundred Million United States Dollars (US\$200,000,000.00) for the Ghana Digital Acceleration Project (GDAP) to streamline and enhance the opportunities in the digital space.

1.2 Project Components and Descriptions

The proposed GDAP aims to accelerate country-wide digital transformation, focusing on critical digital enablers that promote the digital economy and build on existing digital foundations. Complementary investments on the supply and demand sides of the digital economy will also be supported. The proposed GDAP will be implemented in the 16 regions of Ghana composed of 260 Metropolitan, Municipal and District Assemblies (MMDAs).

1.2.1 Project Development Objective

Based on recommendations of previous assessments, including the Ghana Digital Economy Diagnostic, GDAP activities seek to expand access to broadband, enhance the efficiency and experience of selected digital public services, and strengthen the digital innovation ecosystem. The achievement of the Project Development Objective (PDO) will be measured by the following results indicators:

1. Expanding access to broadband:
 - a. People provided with enhanced access to broadband internet (number) (of which, percent female).
2. Enhancing the efficiency and experience of selected digital public services:
 - a. Number of new/reengineered transactional e-government services available to citizens and businesses (of which are accessible to Persons with Disability (PwDs) (number).
3. Strengthening the digital innovation ecosystem:
 - a. Number of new jobs created by digital businesses that received support from the project (number) (of which are women)
 - b. Percentage of individuals secured new employment opportunities and/or reporting new income after completion of digital skills training supported by the project (percentage) (of which are women, PwDs)

1.2.2 Project Components

The project is an Investment Project Financing (IPF) operation comprising of five components as summarized in **Table 1.1**. Component 1 will use a result-based approach, with part of the financing linked to Performance-Based Conditions (PBCs). Component 2 and 3 will be a traditional IPF. Component 4 is reserved for project management and implementation support,

while Component 5 is a contingency emergency allocation aimed at mobilizing unallocated funds from the project to rapidly respond to emergency situations.

Both the project design and implementation plan have accounted for COVID-19’s impact on the economy. For interventions on digital skills, distance learning will be adopted as a delivery mechanism.

Table 1-1: Summary of Components and Proposed Budget Allocation

Component	Title	Budget (US\$)
Component 1	Ensuring Inclusive and Safe Digital Transformation	43 million
Subcomponent 1.1.	Enabling Environment for Broadband Development and Greening ICT Enablers	10 million
Subcomponent 1.2.	Digital Connectivity in Lagging Areas	21 million
Subcomponent 1.3.	Safeguards for Cybersecurity and Data Protection	12 million
Component 2	Modernizing Digital Government Services	76 million
Subcomponent 2.1.	Change Management moving towards a Strengthened Digital Governance	5.5 million
Subcomponent 2.2.	Digital Government -Enhancing User Centric Services I	64.5 million
Subcomponent 2.3.	Future of Work in Government	6 million
Component 3	Support for Digital Transformation of Strategic Sectors	66 million
Subcomponent 3.1.	Scaling up Ghana’s Digital Entrepreneurship and Innovation Ecosystem	33 million
Subcomponent 3.2.	Digital Transformation in Agriculture Sector	18 million
Subcomponent 3.3.	Skills for Digital Jobs and Inclusion	15 million
Component 4	Project Management and Implementation Support	15 million
Component 5	Contingent Emergency Response Component	0 million
Total		200 million

Source: WB’s Project Appraisal Document (PAD)

1.2.2.1 Component 1: Ensuring Inclusive and Safe Digital Transformation

This component will support the GoG in improving the strategic, policy, and regulatory environment for the acceleration of a vibrant, safe, and inclusive digital transformation. Specifically, it aims to establish an enabling environment for the development of a vibrant broadband market, expand the reach and coverage of broadband networks in rural areas, ensure safe and resilient digital services, and strengthen the digital sector’s institutional structure and capacity. Component 1 is articulated around four subcomponents, as detailed hereunder:

Subcomponent 1.1: Enabling Environment for Broadband Development and Greening ICT Enablers (US\$10 million, of which US\$5 million linked to PBC)

This sub-component focuses on providing forward-looking legal, regulatory, and institutional frameworks governing the telecommunication sector, with the aim of boosting competition, access, and innovation. Furthermore, environmental policy approaches and instruments will be supported in order to promote energy-efficient and green ICT solutions while mitigating the environmental risks posed by the ICT sector. It will consist of (i) a PBC on telecommunication network infrastructure deployment and investment; and (ii) a series of key Technical Assistance (TA). The MoCD, National Information Technology Agency (NITA), National Communications Authority (NCA), and Environmental Protection Agency (EPA) will be the main beneficiaries of activities financed under this sub-component.

PBC#1 on telecommunication network infrastructure deployment and investment

The purpose of the PBC#1 is to incentivize cross-sectoral coordination among regulatory authorities, infrastructure owners, private telecommunication operators to deploy new telecommunication infrastructure. Simplified administrative procedures and requirements for the deployment of passive infrastructure elements (i.e., poles, ducts, conduits, shelters, power, and equipment rooms) will lower the costs of telecommunication network deployment while significantly reducing the risk of fiber optic cuts during civil works. Regulatory guidelines for sharing passive infrastructure will strengthen the ability of the regulatory bodies of different infrastructure sectors, including roadways, railways, water and sewer systems, electricity transmission and distribution systems, to implement consistent regulatory processes and standards to all sector participants.

The PBC will also incentivize a coordinated approach to fiber asset operations and investments, implementing in Ghana international best practices. The fiber asset coordination process would begin with gathering and integrating data on the geographic location, available capacity, and other physical features of all civil engineering infrastructure. A Single Information Portal (SIP) for current physical network infrastructure as well as planned or ongoing activities on construction, deployment, and installation of network infrastructure also facilitates close coordination across infrastructure sectors. Climate risk information will also be integrated into the spatial information tool to allow the monitoring of civil works projects in areas vulnerable to climate change-related floods and storms. This process should be supported by the preparation of legal and regulatory mandates for public and private operators to submit information about civil works in order to assure the central data portal's effective operation. The data will also be used to establish a commercialization strategy and plan for public fiber capacity.

Other activities to be financed under this component will be implemented as regular IPF components (estimated at US\$5 million) and include:

- i. TA to support the telecommunication sector regulator in preparing a strategic plan to optimize the sector development and performance³, with detailed goals and actions to ensure equitable access to broadband for impoverished and disadvantaged populations, including youth, women, persons with disabilities, and people living in marginalized areas⁴.
- ii. Acquisition of necessary equipment and supplies (i) to monitor network performance and conformance, such as Quality of Service and spectrum utilization, in compliance with licensing requirements, and (ii) to establish a Lab to undertake conformance immunity testing on electronic communications equipment.

³ The WB is working closely with the IFC to identify market gaps, strengthen engagement with private operators, and address regulatory and commercial obstacles to private investment.

⁴ The strategy should include: (i) clear measurable targets for ICT sector outcomes, including on inclusive access, female digital livelihood opportunities, and employment, as well as female enrollment in STEM education; (ii) establishing clear accountability structures for achieving targets; (iii) consultations with women's groups and experts in the policy development process; (iv) leveraging procurement opportunities to create income-generating opportunities for women-owned businesses; and (v) strengthening efforts to collect, timely and comprehensive sex-disaggregated ICT data on access and use. In addition, these efforts could include the integration of online safety in the policy framework, through a range of options include: (i) training to address cyber risks, with a focus on online safety modules included in ICT training and (ii) exploring opportunities to build capacity for tackling cybercrime against women and girls.

- iii. Strengthen the country’s policy and regulatory capacity to regulate emerging technologies and services through a TA to develop a regulatory framework on priority services as well as technical capacity building training on new communications services and regulatory sandbox approaches.
- iv. TA to develop a national strategy on green ICT and to design the extended producer responsibility (EPR system)⁵ for electronic waste (e-waste)⁶

Subcomponent 1.2. Digital Connectivity in Lagging Areas (US\$21 million, of which US\$18 million linked to PBC)

This subcomponent will support the GoG in reducing the geographic digital divide in Ghana through a comprehensive strategy that relies on the Maximizing Finance for Development (MFD) approach. It will consist of (i) a PBC on extending digital connectivity in lagging areas; and (ii) a series of key TA. Ghana Investment Fund for Electronic Communications (GIFEC) will be the main beneficiaries of activities financed under this sub-component.

PBC#2 on extending digital connectivity in lagging areas

The purpose of this subcomponent is to finance broadband connectivity of public sites, with a focus on contributing to closing the broadband infrastructure gap in lagging areas, under a MFD approach. The release of US\$18 million IDA funds will be conditioned on the scalable achievement of specific PBC targets related to extending digital connectivity in lagging areas. The result is achieved when public broadband access points are established at public buildings or facilities such as Community Information Centers (CICs), schools, libraries, health clinics in economically non-viable areas. They will serve to attract private sector to serve as anchor tenant premise hubs to benefit a broader consumer base in the vicinity of connected locations. The proposed approach applied under the project is demand aggregation and pre-purchase of capacity, for the Government as a whole (CICs, public access points, schools and hospitals) under so-called “Indefeasible Rights of Use” (IRU) for 5-10 years. This ensures value for money, with competitively tendered contracts with the private sector that guarantee long-term supply agreements with GoG. This will build on successful experiences under the E-Transform Project (P144140) and expand to support universal access in lagging areas.

All infrastructure financed by the project will be developed in cooperation with GIFEC to ensure (i) crowding in private capital and promote competition; (ii) energy efficient civil works standards to improve energy efficiency and fuel consumption; (iii) climate-resilient design and solution that anticipates, prepares for, and adapts to changing climate conditions; and (iv) implementing a sustainable scheme beyond project closing date.

⁵ The EPR system design would include the product scope, definition of roles of responsibilities along the whole product life cycle, strategies to monitoring as well as awareness raising.

⁶ Also known as Waste Electrical and electronic equipment (WEEE)

Other TA activities to be financed under this component will be implemented as regular IPF components to support GIFEC expanding the coverage of broadband networks in lagging areas (estimated at US\$3 million) and include:

- i. TA to determine areas of intervention in lagging areas: a) coverage gap of the areas where the private sector is unlikely to invest without some degree of subsidy or demand aggregation; and b) “Efficient Market Gap⁷” where there is potential investment appetite from the private sector. The study will include an assessment of detailed capacity requirements and technical specifications to support network planning in regions with limited coverage and capacity.
- ii. A feasibility and PPP option study of expanding the network coverage and upgrading the capacity for defined localities with efficient market gap. The study will recommend a set of strategies and mechanisms to crowd-in private sector financing, in collaboration with IFC.
- iii. TA to support in the tendering process for the selection of operators in selected locations, including the preparation of tender documentation.

Subcomponent 1.3. Safeguards for Cybersecurity and Data Protection (US\$12 million)

This subcomponent aims to support the GoG’s effort to promote trust in data governance and data management by building a more robust cybersecurity and data protection ecosystems reflecting on World Development Report (WDR) 2021.

To support developing the institutional capacity for effective implementation and regulation of the Cybersecurity Act, 2020 (Act 1038), this subcomponent will finance:

- i. TA to enhance the existing legal and regulatory frameworks on cybersecurity to increase the efficiency of crisis management by the Cybersecurity Authority. This will include the development of legislative and regulatory directives as well as licensing framework and compliance standards for cybersecurity service providers
- ii. Strengthen the technical and operational capacity of nine sectoral Computer Emergency Response Teams (CERTs), as well as the implementation of the Critical Information Infrastructure Protection (CIIP) framework, by funding activities such as CII owner registration, capacity building training, the establishment of a mechanism for public-private information sharing and collaboration, and the development of the Cyber Security Authority’s (CSA's) capacity to manage the national CERT and CIIP.
- iii. Cyberculture and awareness-raising programs, targeting all members in the cyber ecosystem, including government, the private sector, and citizens.

To ensure safeguards for trusted data use, this subcomponent will also support the Data Protection Commission (DPC) in implementing the Data Protection Act 2012 (Act 843). Particularly, the

⁷ “Efficient Market Gap” is defined as the difference between existing coverage and the extent of commercially viable. It defines all the geographic locations where commercially viable broadband service could be offered if no economic or regulatory constraints impeded market development.

activities will supplement Act 843 through elaborating specific and required controls to provide sufficiently descriptive rules and guidance. Key activities to be financed include:

- i. TA to enhance the existing legal and regulatory frameworks on data protection, including (i) a gap analysis of the data protection framework; (ii) a regulatory impact assessment on the impact of emerging technologies (e.g., Artificial Intelligence (AI), machine learning, big data).
- ii. Capacity building to strengthen data protection operational capacity to implement and maintain additional data protection controls by funding activities such as technical training for DPC staff, strengthening platforms and applications of the Ghana Registration System, and development of a certification module for data protection supervisors; and
- iii. Data culture and awareness-raising programs to support the development of relevant materials and delivery of awareness-raising and training programs for target audiences of data practitioners.

1.2.2.2 Component 2. Modernizing Digital Government Services

This component aims at establishing an agile and user-centric digital government model in Ghana. The activities financed will contribute in responding to the COVID-19 crisis by “Building back better” through investments that improve the front-end user experience of digital public services as well as the efficiency of back-end government systems. The activities are focused on building the next generation government infrastructure and delivering transactional and digital-by-design public services. This will be achieved by (i) developing a change management moving towards a Strengthened Digital Governance, (ii) expand the availability of high-quality transactional government e-services in key sectors, and (iii) support building the next generation of government workforce.

Subcomponent 2.1. Change Management moving towards a Strengthened Digital Governance (US\$5.5 million)

This subcomponent focuses on strengthening institutional arrangements leading towards more user-oriented e-government, under a whole-of-government approach. Digital Governance (as per the WDR2021) is key to establish clear accountability for the digital strategy, policy, and standards. GoG has become increasingly aware of the challenges associated with the effective implementation of digital government strategies. The Integrated Digital Transformation Blueprint (2021–2030) provides range of recommendations leading to new institutions, initiatives, and programs; however, GoG plans on approving and enacting the blueprint remain unclear. In addition, MoCD is in the process of formulating a Digital Economy Policy, Strategy and Action Plan, which would replace the 2003 Ghana Information Technology Policy for Accelerated Development (ICT4AD Policy).

Despite GoG's efforts, a clear strategic direction and unified vision for the public sector is still needed. The Ministries, Departments and Agencies (MDAs) have had different priorities when it comes to digital transformation and the siloed approach resulted in overlaps or duplication of ICT

investments, an uneven level of technological adoption and maturity across the Government. In this context, key activities will include:

- i. TA to develop a new inter-ministerial digital governance framework with a clear definition of the roles and responsibilities for each institution, especially MoCD and NITA, introducing a clear delimitation between policy functions and implementation responsibilities.
- ii. TA to support the implementation of the new digital governance framework, which may include organizational restructuring, establishment, and operationalization of new institutions for digital policy implementation and creation of new positions (e.g., Chief Digital Officer role). This will also include equipment purchases for new institutional arrangements to accelerate their operationalization.
- iii. TA to design a national AI strategy to coordinate governmental and intergovernmental efforts for the trustworthy development, testing, deployment, and adoption of AI technologies. The strategy will include an assessment of the country's strategic priorities, strengths, and weaknesses, as well as a framework for AI-enabled capacities or workforce development, a plan to develop and deploy digital and AI technologies across economic sectors, and an AI regulatory roadmap.
- iv. TA for the design and financing for the implementation of (a) an interoperability model that includes a framework for data governance (actors and roles), (b) service governance (web and app interfaces and protocols), and (iii) interoperability platform (that could include the implementation of an Enterprise Service Bus (ESB) for service interoperability);
- v. TA to draft the regulations for a national interoperability standard (i.e., technical, semantic, legal, processes); and
- vi. TA for the design and financing for the implementation of a robust change management and communications strategy that will strengthen public sector digital transformation and draw from behavioral sciences initiatives. The TA will focus on the development of communication and awareness campaigns targeting different levels of government employees (as well as citizens and businesses) to ensure awareness, commitment, and advocacy of Ghana's digital government agenda and increase trust and use of digital services.

Subcomponent 2.2. Digital Government -Enhancing User Centric Services (US\$64.5 million)

This sub-component will expand the availability of high-quality transactional government e-services in key sectors. It will focus first on setting a common framework (government as a platform approach) across the public sector laying the foundations for public service digitization to scale in a homogeneous manner. This sub-component will then support the development of just-in-time and priority digital public services (G2G, G2B and G2P e-services) by consolidating and upgrading the existing services and developing new ones following a user-centric design.

This subcomponent will involve the following key activities:

- i. TA for the elaboration of a government services directory, to be included in Ghana.gov.
- ii. TA to support for identification, strategic planning, and design of priority user centric e-services, including end-user consultations, and a public service delivery, accessibility, and user journey assessment of the current in person and digital services being provided by the Government.⁸ This TA will also support regulatory and processes simplification analysis of public services, in order to cut unnecessary red tape and facilitate re-engineering of services;
- iii. TA and financing for the consolidation of the existing web-based services of different MDAs under the government portal, Ghana.Gov, and the use of apps⁹ minimizing the existing silos;
- iv. Financing for the design and development of priority and core common platforms for e-services;
- v. Financing of a team who will develop a set of standards and manuals for service digitization across government entities, which will be key instruments for a homogeneous digitization of the public sector; and
- vi. Financing development of multi-channel citizen feedback and grievance mechanism available for all users to ensure two-way communication between government and citizen.¹⁰ Activities financed include: (a) implementing notification functions to the services (e.g., Short Message Service (SMS), email, push notifications through the mobile app); (b) implementing dedicated functions for citizens with sporadic connectivity; (c) implementing G2C emergency channels in case of community mobilization and alert; and (d) assessing and implementing grievance channels with minimum Service Level Agreement (SLA) for the grievance.

These activities set the foundations for a coherent and homogeneous digitization of public services. Subsequently, just-in-time public sector digitization approach will be adopted in the priority sectors.¹¹ The Project Coordination Unit (PCU) will review the proposals submitted by MDAs to finalize beneficiary selection subject to MDAs readiness to roll out and move to the bidding process. For the selected beneficiaries the activities financed will include:

- i. Financing for business process re-engineering, IT equipment, Hardware, and Software;
- ii. TA to support the diversification of service delivery channels by (i) assessing different options to access the digital services (i.e., voice, message, Unstructured Supplementary

⁸ This will be complemented by the on-going DDP TF activity to support mainstreaming Human-centric Design for Digital public Services in Ghana.

⁹ The government has developed the Ghana.gov Mobile App and is currently going through the final stages of testing. The App, which is planned to be available on IOS and Play store, will facilitate direct 2-way interaction between citizens and government, report issues, request and rate services. As a first phase, it will have a job posting component led by the National youth employment agency, Payment, Tax component owned by GRA, and Citizen Complain owned by the Ministry of Information. The app will also offer fully digitized services for driver registration and passport issuance. The government plans to expand the scope of the app and make more public services available as a next phase

¹⁰ NITA in partnership with MDAs have setup a call Center to support Ghana.gov, where users are able to interact via multiple channels, e.g., Phone, Email, Social Media and WhatsApp. Users can reach out to the call center to request support or raise concerns/issues regarding payment & transaction, refund, etc. In addition, GoG is currently developing a mobile-based beneficiary feedback application under the Public Sector Reform for Results Project (P164665). The feedback mobile app aims to cover 10 key services that are tackled under the project (e.g., passport issuance) within 5 years timeframe- 5 services will be piloted by 2022. This is led by the Office of Head of Civil Services and Public Service Commission. As such, the GDAP will consider integrating with existing applications for scale-up and to avoid duplicating efforts.

¹¹ Some of the prioritized sectors include health, social protection, agriculture, local government, as well as trade and industry.

Services Data (USSD), website, mobile app) from cities and rural areas, and identifying the adequate service delivery mechanism/channels; (ii) piloting cloud-based services by converting select services with good connectivity and bandwidth, (iii) creating basic network Service Level Agreement (SLA) between MDAs offering services to ensure service availability; and

- iii. Financing for the digitization of records.

Subcomponent 2.3. Future of Work in Government (US\$6 million)

Government digital transformation and availability of required human capital are intimately intertwined. To retain and invest in skills for digital transformation is critical to realizing the digital government transformation agenda. The ability of the public sector to capitalize on digital back-office systems and shared services, and to provide digital services to citizens and business critically depends on the ongoing development of digital capacity among civil servants. The current situation suffers from insufficient in-house capacity and an overreliance on contractors for upgrades. Furthermore, the capacity gap within the GoG hinders the adoption of digital tools and systems and limits the opportunity to leverage data-enabling technologies (e.g., Big Data analysis, machine learning, and AI) in public service planning, emergency response, and service delivery.

This subcomponent focuses on building digital capacity within the public sector, led by Office of the Head of Civil Service (OHCS) in close collaboration with MoCD and NITA. The Activities include:

- i. TA to develop skills for a digital public sector strategy, based on the digital skills demand and supply assessment in the selected MDAs. It will include enhancing the Government competencies framework for IT officials across the MDAs with the required skills, as well as the designing and implementing specific training program for IT officials (including training in disruptive technologies in public administration),
- ii. TA to develop a core digital training curriculum and upskilling program for public sector employees, targeting civil servants to advance Government's digital transformation, with a focus on promoting women in technology and upskilling female civil servants.
- iii. Capacity building for enhancing in-house technical skills in selected MDAs and ITIM class, in topics of database management, Microsoft applications, digital service delivery, data analytics and data science-related subjects, among others.
- iv. Financing to expand the Smart Workplace, a virtual working solution for government employees and civil service providers, to enable more flexible work setup and ensure continuity of government operations.
- v. Financing ICT equipment and data analytics tools in the selected MDAs, if deemed necessary.

1.2.2.3 Component 3. Support for Digital Transformation of Productive Strategic Sector

This component is to strengthen the local digital entrepreneurship ecosystem and talent base. The activities will support better innovation ecosystem coordination, better service provision by

Entrepreneur Support Organizations (ESOs), expand access to early-stage financing, and promoted advanced digital innovation capabilities. By strengthening the local digital entrepreneurial and innovation ecosystem, this component will contribute to COVID-19 pandemic response and recovery by supporting startups that can aid the development of data-driven digital products and services. The activities will leverage and complement the interventions proposed by also encouraging the use of new public dataset made available and public goods introduced, taking into account recommendations for the WDR 2021 on Data for Better Lives. A stronger local entrepreneurship ecosystem will also aide in developing locally relevant content and services that can help stimulate digital adoption and uptake of digital services. Furthermore, this component will support specifically the agriculture sector as a pilot to unlock the digital transformation of key productive sectors. Each subcomponent aims to provide end-to-end support to set up a proof-of-concept of how other sectors can also leverage and reap the full benefit of digital solutions to drive more robust and inclusive sector growth and diversified economy.

Subcomponent 3.1. Scaling up Ghana’s Digital Entrepreneurship and Innovation Ecosystem (US\$33 million)

This sub-component aims to improve the survival and growth rates of digital technology-enabled startups and strengthen Ghana’s position as a regional ‘test bed’ for innovation. The proposed activities are in line with the Ghana Integrated Digital Transformation Blueprint (2021-2030) action plans to develop a policy, strategy, and implementation framework to expand and create a thriving tech ecosystem, and actively support and collaborate with ESOs focused to promote digital businesses. Support will be provided to create an enabling strategic, policy, regulatory and institutional environment that is conducive to stimulating growth of digital innovation, businesses and startups, positioning Ghana as a regional digital entrepreneurship hub in West Africa. Mechanisms to strengthen the quality, sustainability, and range of ESOs and related services available will be financed, including support for acceleration services that can strengthen international market linkages. All support provided will consider the challenges that startups and young firms have been facing due to COVID-19 pandemic as well as specific needs of entrepreneurs at different stages of the firm’s business lifecycle¹². Interventions made will help create a more robust and attractive pipeline of viable startups poised for scale-up and strengthen Ghana’s digital innovation capacity, contributing to wider job creation and productivity gains critical to COVID-19 recovery.

Key activities to be financed include:

- i. Support for enabling strategies, policies, and institutions for digital innovation (US\$1 million). TA in support of enabling strategies, policies and institutions for digital innovation, specifically to finalize the Start-Up Act and develop a clear regulatory and/or policy framework to incentivize growth of BPOs.
- ii. Performance-based grants for ESOs that serve digital startups (US\$6 million), which aim to encourage quality-based and self-sustaining ESO models that offer better services, and

¹² Firm’s business lifecycle traditionally identifies the following five stages: pre-seed/seed; start-up; early growth; growth; developed/established.

entrepreneurship support programs. This activity aims to develop a second generation of Digital Hubs that can expand outside of Accra and support existing programs in collaboration with the Ghana Enterprise Agency (GEA) and other relevant stakeholders (such as NEIP). Performance-based grants will be with particular focus on hubs providing incubation services for digital startups. All innovation and training grants administered by the tech hubs will follow the requirements of the Grants Manual.

- iii. Launch of an international accelerator program that serves digital startups (US\$16 million), with financing support provided to attract a high-quality international player to the local market. It is expected that competitively selected international acceleration program will work in close cooperation with select local partner(s) to ensure knowledge transfer and local institutional capacity building. To encourage eligible women applicants, a comprehensive outreach and media strategy will target women entrepreneurs by profiling role models and leveraging women's networks.
- iv. Early-stage finance mobilization for digital innovation (US\$10 million). Early-stage finance mobilization for digital innovation and climate smart innovations, including support for investment events, and establishment of an early-stage financing window to be managed by the Ghana Venture Capital Trust Fund (VCTF).¹³

Subcomponent 3.2. Digital Transformation in Agriculture Sector (US\$18 million)¹⁴

This subcomponent aims to support end-to-end digital transformation in agriculture sector, as it is a dominant productive sector in Ghana. Ghana has significant potential to successfully transform the agriculture sector towards a more digitally enabled and highly productive sector, while at the same time recreate jobs in agriculture to become more dynamic and attractive for youth and innovation. The private sector is a key driver of digital innovation in agriculture in Ghana; however, the initiatives remain largely fragmented and disconnected. The proposed activities support a more coherent and strategic development of the digital agriculture ecosystem, including support to the Ministry of Food and Agriculture (MoFA) to become leaders in the use of data and digital solutions to improve efficiency and services to farmers, with benefits for digital transformation across other countries in West Africa. Key challenges in the sector include among others improving extension services to farmers, precision agriculture to improve productivity of farmland, scaling crop insurance programs, traceability of export crops (with a focus on cocoa production), and traceability systems for natural resource management, including soil, water and forests.

Key activities to be financed include.

- i. Sector Assessment and Digital Transformation Strategy (US\$1.5 million): Building on current initiatives, TA to support the development of an in-depth digital agriculture ecosystem assessment and feasibility study for transforming Ghana to a digital agriculture innovation hub in West Africa;

¹³ Under GETP, VCTF has already established two investment mechanisms, StartUp Catalyst Fund and Strategic Industry Fund, that can be utilized to open a window for investments in digital firms.

¹⁴ Discussions are ongoing to include support to Business Process Operations (BPO) or Knowledge with initial allocation of US\$5 million.

- ii. Support for Ghana Digital Agriculture Innovation Hub (US\$5 million)¹⁵ for fostering the adoption of ICT-based solutions for more productive, resilient and sustainable agriculture systems. TA to support the transformation of Ghana into a regional digital agriculture hub that serves the digital agriculture ecosystem by providing links to international partners, training and capacity-building programs on climate-resilient agricultural practices and technologies with emphasis on women and youth, hosting innovation challenges and hackathons to solve key challenge in the sector through digital solutions¹⁶;
- iii. Early-stage financing for climate-smart agriculture technologies (US\$8 million) including support to AgTech start-ups and entrepreneurs to develop and commercialize innovative and green technologies contributing to lowering emission, improved used of agriculture inputs like water and fertilizers, GHG reduction and carbon credits;
- iv. Strengthening data management, sharing and analytics (US\$3.5 million) including TA to support the development of enabling legal, strategic and policy frameworks through feasibility studies, data sharing guidelines, templates, standards, and protocols as well as related training; operationalization of the Agriculture Open Data Digital Platform for the Ministry of Agriculture and Food (MoFA), and strategic implementation of big data use cases in agriculture (for example advanced extension services, forest/palm tracking, disease tracking, satellite monitoring of deforestation, value chain traceability).

Activities will be done in coordination with the WB Agriculture and Food Global Practice and ongoing initiatives in Ghana, including the Accelerating the Impacts of CGIAR Climate Research for Agriculture (AICCRA, P173398) project, Food Systems Resilience Program (FSRP, P172769) and work in the cocoa sector.

Subcomponent 3.3. Skills for Digital Jobs and Inclusion (US\$15 million equivalent)

This subcomponent will take an ecosystem approach to equip Ghanaians with digital skills to support digital service uptake and provide access to job opportunities enabling greater participation in the digital economy. This subcomponent will also support advanced digital skills development to provide a quality pipeline of ICT workers and digital entrepreneurs in the labor market. The WB is working with an IFC investment team to identify skills gaps and strengthen engagement with the private sector. By building the local digital talent pipeline and equipping Ghanaians with skills for jobs of the future, this sub-component will actively help stem the rise in youth unemployment expected on account of Covid-19.

Key activities financed under this subcomponent include:

¹⁵ Digital Innovation Hubs (DIHs) are one-stop-shops that help businesses to become more competitive regarding their business/production processes, products or services using digital technologies. A DIH is a regional multi-partner endeavour (of RTOs, universities, industry associations, chambers of commerce, incubator/accelerators, regional development agencies and even governments) to enable access to the latest knowledge, expertise and technology. A DIH operates in close vicinity to their users/clients being thus the first regional point of contact to business as to strengthen the regional innovation ecosystem.

¹⁶ This program aims to replicate successful platforms like the One-Million Farmer Initiative in Kenya, and similar programs in India.

- i. TA to conduct a digital skills supply and demand gap analysis (US\$1 million), aiming to provide a baseline assessment of the immediate and future gaps between skills and opportunities to offer trainings on the most viable digital skills.
- ii. Financing for a digital skills and job platform development (US\$2 million). The project will support the development of a data driven solution to periodically assess demand and supply gap of digital skills. This solution will be initially managed by the MoCD and will allow for collaboration with relevant training providers to develop the appropriate digital competencies based on real-time market needs (e.g., Singapore, Kenya, Paraguay’s job-matching, skills gap monitoring portal).
- iii. Digital skills training for employment pathways (US\$8 million). A comprehensive and targeted digital skills training program will be provided at various skill levels. In addition to training material development, the financing will also support facility upgrades and IT equipment to the training centers, including the Kofi Annan center, Community Information Centers (CICs), and selected tech hubs. Main targeted beneficiaries of the skills training will include youth, women, young girls, and rural population.
- iv. Digital inclusion programs for Persons with Disabilities (PwDs) (US\$4 million). This activity will support tailored digital skills training for people with disabilities (PWDs) in order to improve their access to and utilization of digital technologies, as well as to enable them to participate actively in the broader labor market. The project will finance the delivery of the targeted training, including the facility upgrades, provision of assistive technologies, accessible devices, and reasonable adjustments to online training materials to meet accessibility standards.

1.2.2.4 Component 4. Project Management and Implementation Support

This component will provide support for the management and implementation of project-associated activities. It will finance activities related for recruitment of consultants in areas of project management, project coordination, fiduciary specialists (e.g., procurement, financial management), Monitoring and Evaluation (M&E), Environment and Social (E&S) Safeguards, project communication, and citizen engagement. This component will also cover modest office equipment and independent audits and third-party verification agent to verify the achievements of the PBCs, and learning/training for key beneficiaries (e.g., the Project Coordination Unit and the Technical Committee) up to the official closing date of the project. Moreover, Special attention will be devoted to promoting equal participation of women in all decision-making bodies under the project and contributing to tackling barriers in recruitment, retention, and promotion. It is also anticipated consultant’s Terms of References (ToR) clearly stipulate knowledge transfer and hands on training to ministry staff.

1.2.2.5 Component 5: Contingent Emergency Response Component

In the context of the COVID-19 crisis, a Contingent Emergency Response Component (CERC) is added to the project structure to provide support to the Government to swiftly respond to an eligible

crisis, including climate or natural disasters and public health emergencies¹⁷. Including CERC at the preparation stage, albeit with zero funding, provides for flexibility for an agile response to an imminent or actual emergency (such as COVID-19) through quick disbursement of uncommitted balances from other components. The crisis response expenditures could cover, for instance, the facilitation of emergency payments to vulnerable groups of population using mobile money or ensuring business continuity of core government functions, when civil servants are required to continue home-based work. The CERC is not expected to finance civil engineering works that can induce risks and/or negative environmental and social impacts. However, CERT component is not added to finance any activities that include adverse environmental and social risks and impacts.

1.3 Project Oversight and Implementation Arrangement

A Project Coordination Unit (PCU) within the MoCD will provide project oversight and lead the day-to-day management of the project. The proposed PCU will utilize the existing e-Transform Project Implementation Unit (PIU) and take advantage of experience and institutional memory accumulated from the current and previous WB-funded projects. The current e-Transform PIU will be expanded and become a PCU responsible for the implementation of both the e-Transform Project (until October 2023) and the GDAP. The PCU will consist of a Project Coordinator, fiduciary specialists (FM and Procurement), Deputy Project Coordinator, Safeguards Specialists (Environmental and Social), Technical specialists (at least one per component), and specialists to cover other PCU functions such as M&E, Communications, etc. The technical specialists will work directly with the Technical Implementing Agencies (TIAs) to ensure that each TIA is provided with the technical, financial, procurement, and political support required to achieve desired outcomes for the project. The proposed project will use the experience and lessons learned from the eTransform Project (e.g., the Technical Committee, the Project Steering Committee, and the Inter-Ministerial Oversight Committee) and strengthen the coordination role of the Ministry.

Technical Implementing Agencies (TIAs) consist of the implementing institutions for the overall project. Each TIA will designate a project focal point who will receive technical support from the relevant Technical Specialists within PCU.

A Technical Committee (TC) will provide strategic, facilitative, and problem-solving support to the project and will be comprised of each TIA focal point, with discussions led by the Project Coordinator. This committee will be chaired by the Chief Director of MoCD and consist of the relevant TIA focal points and key beneficiary institutions. A Terms of Reference (ToR) explaining roles and responsibilities, objective, and expected output will be prepared. The Project Coordinator will serve as the Secretary and lead for technical and operational discussions.

A Project Oversight Committee (POC) will provide strategic guidance to MoCD and oversight to ensure minister-level support and effective coordination across the Government. This committee

will (i) oversee the project implementation and advise PCU, (ii) have the composition of relevant Ministers, stakeholders, and private sector representatives, and (iii) be co-chaired by the Ministry of Finance and MoCD. The mandate of the oversight committee will include (i) responsibility for review of project progress, (ii) provision of strategic guidance and recommendations over project implementation, and (iii) coordination of the involvement of the relevant Ministries. **Figure 1.1** shows the proposed project coordination structure.

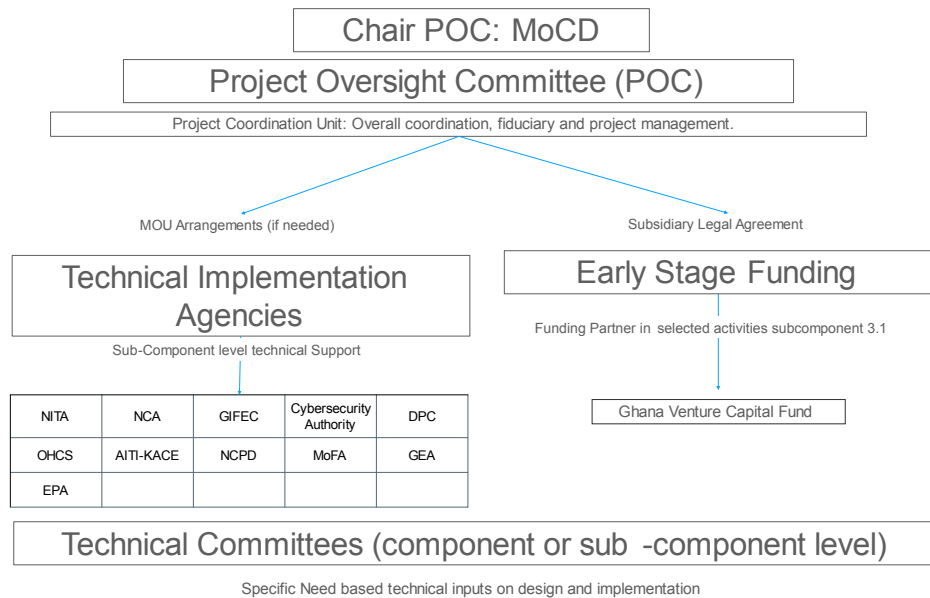


Figure 1-1: Proposed Project Coordination Structure

1.4 Results Monitoring and Evaluation Arrangements

The PCU will have responsibility for results Monitoring and Evaluation (M&E). Project M&E will be led by each component technical lead supported by PCU M&E specialist who will provide guidance and support to all components. An annual public event to report on project results, including both technical and financial, will be organized by PCU.

The MoCD will present comprehensive reports reflecting M&E findings to WB and the oversight committee on a quarterly basis, and a comprehensive report showing progress towards outcomes will be submitted semi-annually. The quarterly report should be tied to the submission of the financial and procurement reports. The project will build on successful M&E lessons from the implementation of the e-Transform project. The team will use new ICT-based tools (i.e., GEMS Initiative) and mobile-based beneficiary feedback mechanisms to strengthen monitoring facilities of the project and to build citizen engagement. The M&E will thus provide a window to illustrate which districts and regions have well-performing programs. The M&E team will work in conjunction with the Policy, Planning and M&E (PPME) Directorate of MoCD.

In terms of tracking user experience of selected digital services supported by the project, real time feedback tools and functions will be embedded directly in the design of service delivery. Feedback received from end-users will be tracked over time and will be reflected in the system update or upgrade.

1.5 Project Sustainability

The project’s sustainability will be ensured by using private sector-led and market-based mechanisms for resource allocation to digital connectivity and digital entrepreneurship, and by supporting capital investments in shared public infrastructure/ platforms that can reduce the long-run costs of public services delivery. Project sub-component targeting digital connectivity and access will (i) address market failures, and (ii) stimulate demand that can mobilize greater private sector financing, create new markets in underserved and low-income market segments where none currently exist. Legal, regulatory, and institutional support will be focused on creating an enabling environment that will outlive the project’s lifecycle. Project-funded capital investments in new digital public infrastructure and systems are designed to factor in the need for long-run maintenance. For instance, the proposed “whole-of-government” approach allows for more sustainable investment than maintaining several individual siloed information systems. Finally, investing in human capital through skill development programs and knowledge transfers with government staff will help build capabilities that will also outlive the project’s lifecycle. Continuous efforts are already underway to liaise with external partners and donors that could further support continuation of project activities (maintenance, operational expenses etc.) post-completion. **Table 1-2** provide the sustainability mechanism by project components.

Table 1-2: Sustainability Mechanisms by Component

Component	Sustainability Mechanisms
Component 1: Ensuring Inclusive and Safe Digital Transformation	<ol style="list-style-type: none"> 1. The policy, regulatory, institutional strengthening for the digital economy is to address any market barriers and help ensure a level-playing field for various segments of the ICT sector, incentivizing expanded and continued digital services provision by the private sector. 2. Project funds will supplement existing resources of GIFEC for extending the rural coverage. Access to broadband for targeted unserved and underserved communities will be facilitated through a competitive bidding process that either (i) awards long-term supply contracts for internet capacity or (ii) provide Capex subsidy for network deployment to winning bidders. The long-term IRU contract will continue long after project closing. 3. Increased cybersecurity and data protection capacity will ensure investments from other components to sustain and sustainable development of the cyber ecosystem.
Component 2: Modernizing Digital Government Services	<ol style="list-style-type: none"> 1. The shared infrastructure, platforms, and services approach will allow for significant savings compared to each MDAs maintaining independent IT infrastructure, platforms, and applications, though continuous funding will be needed for operations, maintenance, and upgrading. 2. Phased transfers of OpEx costs emanating from World Bank-supported activities. 3. Capacity built in training of government officials within MDAs will be retained after project closing.
Component 3: Support for Digital Transformation of Strategic Sectors	<ol style="list-style-type: none"> 1. International accelerator to collaborate with local partners to allow for knowledge transfer and local ownership and demonstrate self-sustainability by year 5 of the project. 2. Interventions to catalyze market-based approaches to boost early-stage finance.

Component	Sustainability Mechanisms
	3. Digital learning and talent platform will continue to operate after project closing. The platform will be widely promoted to crowd in potential employers at the local and regional markets. 4. Digital learning contents and modules will be retained after project closing.
Component 4: Project Management	1. Implementation will leverage existing structures/teams/processes wherever possible to avoid creating an additional burden on the government. 2. Capacity building within the government through training would allow for sustainable continuation of the activities beyond the project lifecycle.

1.6 Purpose of the ESMF

The primary purpose of this Environmental and Social Management Framework (ESMF) is to assist MoCD in examining the environmental and social risks and impacts of the GDAP's subprojects. It guides the MoCD to assess potential environmental and social risks and impacts of GDAP's interventions when subprojects' locations cannot be determined during project preparation. In absence of detail information on subprojects to be supported by GDAP, this ESMF sets out the principles, rules, guidelines, and procedures to assess the potential environmental and social risks and impacts. It contains measures and plans to reduce, mitigate and/or offset adverse risks and impacts, provisions for estimating and budgeting the costs of such measures, and information on the agency or agencies responsible for addressing project risks and impacts, including on its capacity to manage environmental and social risks and impacts. It includes adequate information on the area in which subprojects are expected to be sited, including any potential environmental and social vulnerabilities of the area; and on the potential impacts that may occur and mitigation measures that might be expected to be used. This ESMF include Labor Management Procedure (LMP), outline for preparing and implementing sound Resettlement Action Plan (RAP) and chance finding procedures.

This ESMF also provided E&S screening tool (see **Appendix 1-1**) that the project will utilize when identifying the potential E&S risks and impacts of subprojects and determine which environmental and social planning instruments will be required to mitigate site specific impacts on the environment and Project Affected Persons (PAPs) including Resettlement Plans/ Livelihood Restoration Plans etc.

1.7 Approach and Methodology

The Environmental and Social Assessment is multifaceted, requiring many methods and approaches. The ESMF has been prepared in accordance with WB's Environmental and Social Framework (ESF) requirements and applicable Ghana environmental assessment procedures. The following approach and techniques were used in the development of the ESMF:

- Data gathering through desktop study;
- Participatory public consultations and discussions with relevant sector institutions including Ministries, Departments and Agencies (MDAs) private and public innovation ecosystem providers, telecom providers, vulnerable groups and Non-Governmental Organizations (NGOs);

- Data analysis for risks/ impacts identification and guidelines for the preparation of subprojects Environmental and Social Management Plans (ESMPs);
- Review of comments and feedback from stakeholders; and
- Finalization of the ESMF for disclosure.

1.8 Project Scope and Duration

The GDAP activities seek to support a strong enabling environment for fast-tracked digitization by accelerating country-wide digital transformation, focusing on critical digital enablers that promote the digital economy and build on existing digital foundations. The project is expected to be implemented during the period 2022 - 2028.

1.9 Structure of the ESMF

The outline of the report includes the following:

- A non-technical executive summary;
- An introduction describing the proposed project, with an emphasis on project scope, ESMF purpose, objectives, approach and methodology;
- Policy, legal and institutional framework;
- Overview of ESS5 concerning land acquisition, restrictions on land use and involuntary resettlement;
- Overview of ESS2 concerning labor and working conditions;
- Baseline environmental and socio-economic conditions;
- Potential environmental and social issues and impacts;
- Analysis of alternatives;
- Proposed mitigation measures/ options;
- Environmental and Social Management Plan (ESMP) requirements;
- Environmental and Social Management Framework (ESMF) implementation plan;
- Capacity building and training required to implement the ESMF;
- Grievance Redress Mechanism (GRM);
- Public consultations, participation and information disclosure;
- Institutional Arrangement for ESMF implementation;
- Bibliography; and
- Appendices to support ESMF implementation (e.g., criteria for environmental and social screening of subprojects, labor management procedures, e-waste management procedures, chance find procedures, correspondence, resettlement plan guideline etc.).

2 POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

The GDAP will strictly adhere to and follow the World Bank’s Environmental and Social Framework (ESF) as well as the legal and regulatory frameworks of Ghana. This section provides an overview of relevant policies, laws and regulations.

The key environmental policies, legal framework and procedures considered as relevant under the GDAP are presented hereunder.

2.1 National Environmental Policy Framework

The national policies identified as relevant or applicable to the GDAP are presented in this section in **Table 2-1** and these include:

- The Coordinated Program of Economic and Social Development Policies (CPESDP) - Agenda for Jobs: Creating Prosperity and Equal Opportunity for All 2017-2024, October 2017
- National Environmental Policy (NEP), 2014;
- National Environmental Action Plan (NEAP), 1991
- National Land Policy (NLP), 1999;
- National Water Policy (NWP), 2007;
- Forest and Wildlife Policy, 2012;
- Ghana National Climate Change Policy (GNCCP), 2013;
- Riparian Buffer Zone Policy (RBZP), 2014;
- National Sanitation Policy, 2010;
- National Health Policy (NHP), 2020;
- National Workplace HIV/AIDS Policy, 2012;
- National Employment Policy (NEmP), 2014;
- National Labor-Intensive Public Works Policy, 2016; and
- National Gender Policy, 2015.

Table 2-1: Relevant National Policies and Applicability to the Proposed Project

No.	Policy and Key Requirements	Applicability/ Relevance to Proposed Project
1	<p><u>The Coordinated Program of Economic and Social Development Policies (CPESDP) 2017-2024- Agenda for Jobs: Creating Prosperity and Equal Opportunity for All</u></p> <p>The Agenda for Jobs is the medium-term national development policy framework of Economic and Social Development Policies (CPESDP), 2017-2024 – An Agenda for Jobs: Creating Prosperity and Equal Opportunity for All. It serves as the implementation framework to guide the overall economic and social development of the country.</p> <p>This vision is informed by the need for a strong economy that expands opportunities, inspires people to start businesses, stimulates expansion of existing businesses that ultimately leads to creation of jobs, increased economic growth and higher incomes. The vision also takes cognisance of Ghana’s international commitments such as the African Union (AU) Agenda 2063 and the United Nations Sustainable Development Goals (SDGs).</p>	<p>The proposed project involves expansion of internet access in the country, improve digitalisation and associated employment generation and thus in line with the policy objectives</p>

No.	Policy and Key Requirements	Applicability/ Relevance to Proposed Project
2	<p><u>National Environmental Policy (NEP), 2014</u> The ultimate aim of the National Environmental Policy of Ghana is to improve the surroundings, living conditions and the quality of life of the entire citizenry, both present and future. It seeks to promote sustainable development through ensuring a balance between economic development and natural resource conservation.</p>	<p>The proposed project seeks to promote sustainable development by including biophysical environment, economic, social and institutional considerations in the project formulation.</p>
3	<p><u>National Environmental Action Plan (NEAP), 1991</u> The NEAP defined a set of policy actions, related investments, institutional mandates and strengthening activities to make Ghana's development approaches environmentally sustainable. The adoption of the NEAP in 1991 led to several significant developments necessary to ensure sound resource management in the following major areas: Land management; Forestry and wildlife; Water management; Marine and coastal ecosystems; Industrial pollution; Mining; Hazardous chemicals control; and Human settlements. The NEAP was thus the strategy through which the key issues to the protection of the environment and better management of renewable resources were to be pursued. Some of the specific resultant developments from the NEAP was the establishment of the Ghana Environmental Protection Agency (EPA) with more enhanced mandate than its predecessor Environmental Protection Council (EPC), to regulate, set standards and enforce them, etc; and, the establishment of the Water Resources Commission, and subsequent adoption of policy framework for water abstraction for different uses, water law, and control of waste discharges into water bodies, etc.</p>	<p>The proposed project seeks to promote sustainable development</p>
4	<p><u>National Land Policy (NLP), 1999</u> The Land Policy of Ghana aims at the judicious use of the nation's land and all its natural resources by all sections of the Ghanaian society in support of various socio-economic activities undertaken in accordance with sustainable resource management principles and in maintaining viable ecosystems. One key objective is to ensure that every socio-economic activity is consistent with sound land use through sustainable land use planning in the long-term national interest.</p>	<p>The construction and operation of the proposed project will occur mainly within existing Right-of-Way (RoW). However, other project activities will require land take while campsites will require temporary occupation of land and/ or expropriation.</p>
5	<p><u>National Water Policy (NWP), 2007</u> The National Water Policy of Ghana provides a framework for the sustainable development of Ghana's water resources. The policy also recognises the various cross-sectoral issues related to water-use and the links to other relevant sectoral policies such as those on sanitation, agriculture, transport and energy among others.</p>	<p>The project's Environmental and Social Management Plan (ESMP) will include mitigation measures against traversing water bodies and against water pollution as well as complying with riparian buffer zones.</p>
6	<p><u>Riparian Buffer Zone Policy (RBZP), 2014</u> The Buffer Zone Policy is aimed at protecting, regenerating and maintaining the native /established vegetation in riparian buffer zones to improve water quality. The Policy also designates the following as water pollution hazards and must be setback from any stream or water body by the following distances:</p> <ul style="list-style-type: none"> • Storage of hazardous substances – 45m; • Raised septic systems – 75m; and • Solid waste landfills- 90m. 	<p>The project's ESMP will include mitigation measures to protect the streams buffer zones and against setting up workshops in the buffer zone. The setback distances provided to minimize water pollution will be applied especially at Work Camp locations.</p>
7	<p><u>Forest and Wildlife Policy, 2012</u> The policy aims at the conservation and sustainable development of forest and wildlife resources for the maintenance of environmental stability and continuous flow of optimum benefits from the socio-cultural and economic goods and services that</p>	<p>The proposed project/ subprojects may traverse Forest Reserves/ National Parks hence the need to</p>

No.	Policy and Key Requirements	Applicability/ Relevance to Proposed Project
	the forest environment provides to the present and future generations, whilst fulfilling Ghana's commitments under international agreements and conventions.	acquire entry permit(s) from the Forestry Commission (FC) or the Forest Services Division (FSD).
8	<p><u>Ghana National Climate Change Policy (GNCCP), 2013</u></p> <p>The objective of the policy is to mitigate and ensure an effective adaptation in key sectors of the economy, such as natural resources management, energy, industry and infrastructure among others. The main principles adduced in the policy for disaster preparedness and response regarding building of climate resilient infrastructure are:</p> <ul style="list-style-type: none"> • The development of infrastructure and associated facilities has a direct influence on the sustainable development of the nation; and • Incorporating climate-resilient codes into basic infrastructure will significantly reduce the vulnerability of the nation to climate change risks. 	The infrastructure to be provided will be climate resilient and to meet the mission of MoCD as well as ensuring climate smart service delivery- ensuring ease of weather forecasting etc.
9	<p><u>National Sanitation Policy, 2010</u></p> <p>The policy is aimed at developing and maintaining a clean, safe and pleasant physical environment in all human settlements, to promote the social, economic and physical well-being of all sections of the population. It comprises several complementary activities, including the construction and maintenance of sanitary infrastructure, the provision of services, public education, community and individual action, regulation and legislation.</p>	The implementation of the proposed project takes into consideration measures to promote healthy sanitary practices at the construction sites, workplaces and campsites.
10	<p><u>National Health Policy (NHP), 2020</u></p> <p>The National Health Policy (NHP) document which aims at creating wealth through health, among other things places emphasis on improvements in personal hygiene, the practice of safe sex and the prevention of injuries at both workplaces and on the road. The policy objectives include among others to: (i) encourage the adoption of healthy lifestyles; (ii) improve the physical environment; (iii) improve the socio-economic status of the population.</p>	The proposed project will ensure provision of community health and safety and occupational health and safety compliant measures at the workshops/ work camps including safety awareness creation and HIV/ AIDS and Covid-19 prevention
11	<p><u>National Workplace HIV/AIDS Policy, 2012</u></p> <p>The policy goal is to provide broad national guidelines to direct the formulation and implementation of workplace HIV and AIDS policies and programs. The broad objectives of the policy are to:</p> <ul style="list-style-type: none"> • provide protection from all forms of stigma and discrimination in the workplace, to people with real or perceived HIV infection. • prevent the spread of HIV amongst workers and their families and dependents; and • provide access to treatment, care and support for persons infected and affected by HIV and AIDS. 	The proposed project will ensure provision of occupational health and safety measures at the workplaces that will include HIV/ AIDS awareness creation and prevention
12	<p><u>National Employment Policy (NEmP), 2014</u></p> <p>The National Employment Policy indicates that poverty is still high at about 28.5% and that there is a strong correlation between the employment situation and poverty. The policy states that the key source of demand for labor emanates from the productive sectors of the economy, namely, agriculture, industry and service.</p>	The project will provide employment and skills development opportunities for Ghanaians during the pre-construction, construction and operational phases.
13	<p><u>National Labor-Intensive Public Works Policy, 2016</u></p> <p>Access to employment opportunities, gradual increase in income, and stability in economic and social securities of the economically active poor and the vulnerable are the key performance indicators of the LIPW Policy. The LIPW Policy is intended to reduce Ghana's over reliance on external financial flows for investment projects, provide public infrastructure and income earning opportunities for local economic development by relying on the available abundant low-skilled unemployed labor pool rather than sophisticated equipment. The Policy, however, recognises that not all</p>	The proposed project will ensure opportunities to apply labor intensive labor where possible

No.	Policy and Key Requirements	Applicability/ Relevance to Proposed Project
	public goods and services can be delivered entirely using labor-intensive techniques. The method will be applied only where feasible, in the delivery of selected public goods.	
14	<p><u>National Gender Policy, 2015</u> The National Gender Policy aims at mainstreaming gender equality concerns into the national development processes by improving the social, legal, civic, political, economic and socio-cultural conditions of the people of Ghana. It also seeks to empower the vulnerable groups particularly women, children, and people with special needs such as persons with disabilities and the marginalized.</p>	The employment of Ghanaians under the project will not discriminate against women and the vulnerable. The criteria for selecting workers will include gender and disability in as far as the person can perform the task assigned.

2.2 Relevant Legal and Regulatory Framework

The relevant environmental laws and regulations to guide MoCD from the conceptualization stage of the project to implementation and monitoring as well as decommissioning are as presented in **Table 2-2** and they include the following:

Environmental Protection, Planning and Permitting:

- The Constitution of the Republic of Ghana, 1992;
- Ghana Investment Promotion Center Act 2013, Act 865;
- Environmental Protection Agency Act 1994, Act 490;
- Environmental Assessment Regulations 1999, LI 1652;
- Fees and Charges (Amendment) Instrument 2019, LI 2386;
- Water Resources Commission Act 1996, Act 522;
- Water Use Regulations, 2001, LI 1692;
- Forestry Commission Act, 1999 (Act 571);
- Forestry Protection (Amendment) Act 2002, Act 624;
- Wild Animals Preservation Act, 1961, Act 43
- Ghana Meteorological Agency 2004, Act 687;
- Hazardous and Electronic Waste Control and Management Act 2016, Act 917;
- Hazardous, Electronic and Other Wastes (Classification) and Management Regulations 2016, LI 2250;
- Abandoned Property (Disposal) Act 1974, NRCD 308; and
- Ghana Standards on Environmental Quality:
 - GS 1236:2019- Environment and Health Protection – Requirements for Ambient Air Quality and Point Source/ Stack Emissions;
 - GS 1222:2018- Health Protection – Requirements for Ambient Noise Control; and
 - GS 1212:2019- Environmental Protection Requirements for Effluent Discharge (General Industry).

Health/Safety

- Ghana National Fire Service Act 1997, Act 537;
- The Fire Precaution (Premises) Regulations 2003, LI 1724; and
- Factories, Offices and Shops Act 1970, Act 328.
- Labor Rights/Issues

Labor Rights/Issues

- The Labor Act 2003, Act 651;
- Workmen’s Compensation Law 1987, PNDCL 187;
- Persons with Disability Act 2006, Act 715; and
- The Children’s Act 1998, Act 560.

Land Acquisition/Land Use

- Land Act 2020, Act 1036;
- State Lands Regulation of 1962, LI 230;
- Lands (Statutory Wayleaves) Act 1963, Act 186;
- Lands (Statutory Wayleaves) Regulation of 1964, LI 334;
- Lands Commission Act 2008, Act 767;
- Ghana Highway Authority Act 1997, Act 540;
- Land Use and Spatial Planning Act 2016, Act 925; and
- National Building Regulation 1996, LI 1630.

Local Governance and Alternative Dispute Resolution

- Local Governance Act 2019, Act 936;
- Alternative Dispute Resolution Act 2010, Act 798.

Table 2-2: Relevant Legal Framework and Applicability to the Proposed Project

No.	Legal Framework and Key Compliance Requirements	Applicability to Proposed Project
<i>Environmental Protection, Planning and Permitting</i>		
1	<p><u>The Constitution of the Republic of Ghana, 1992</u> The implementation of the proposed project involves expropriation of land and/ or development of the right of way by the Government through MoCD. Since the Constitution provides for the protection of property rights and safeguarding natural resources all affected properties and natural resources along the proposed project corridor/ route will be appropriately identified, properly valued and adequate compensation paid as outlined in clause 20 of 1992 Republican Constitution. The Constitution includes some provisions to protect the right of individuals to private property, and also sets principles under which citizens may be deprived of their property in the public interest (described in Articles 18 and 20).”</p>	<p>MoCD will ensure that the project complies with relevant constitutional provisions. Relocation of temporary structures, demolition of permanent structures and expropriation of land will be adequately compensated for.</p>
2	<p><u>The Ghana Investment Promotion Center (GIPC) Act 2013</u> The Ghana Investment Promotion Center (GIPC) Act 2013 (Act 865) which repeals the GIPC Act 1994 (Act 478) requires Ministries, Departments and Agencies</p>	<p>For such an investment, the other laws mentioned in the above</p>

No.	Legal Framework and Key Compliance Requirements	Applicability to Proposed Project
	(MDAs) to collaborate with GIPC in the performance of its duties under the Act. The Act further specifies that “A person who intends to establish an enterprise for the purposes of this Act shall incorporate or register the enterprise in accordance with the Companies Act 1963, Act 179 and other laws that are relevant to the establishment of the enterprise.”	statement may include EPA Act 1994, Act 490 and the Environmental Assessment Regulation (EAR) 1999, LI 1652 and in compliance with the 1992 Constitution of Ghana.
3	<p><u>Environmental Protection Agency (EPA) Act 1994, Act 490</u></p> <p>The Environmental Protection Agency (EPA) Act 1994 (Act 490) gives mandate to the Agency to ensure compliance of all investments and undertakings with laid down Environmental Assessment (EA) procedures in the planning and execution of development projects, including compliance in respect of existing ones. The Environmental Protection Agency (EPA) Act 490 Section 12 of 1994 confers enforcement and control powers on the EPA to compel existing companies to submit environmental or pollution management plans on their operations as a management tool for effective pollution control. The EPA is the responsible for issuing environmental permits for operations such as this project subject to EPA review.</p>	The EIA study for sub-projects including this ESMF concerning the implementation of proposed project will be in compliance with the Environmental Assessment (EA) procedures requiring approval by EPA.
4	<p><u>Environmental Assessment Regulations 1999, LI 1652</u></p> <p>The Environmental Assessment Regulations 1999 (LI 1652) enjoins any proponent or person to register an undertaking with the Agency and obtain an Environmental Permit prior to commencement of the project. This regulation allows the EPA to place proposed undertakings at the appropriate level of environmental assessment. The LI 1652 seeks to ensure that development is undertaken in a sustainable environment.</p> <p>Part 1 of the Environmental Assessment Regulations, 1999 LI 1652 on Environmental Permit describes undertakings requiring registration and issuance of environmental permit, as:</p> <p>‘1. (1) No person shall commence any of the undertakings specified in Schedule 1 to these Regulations or any undertaking to which a matter in the Schedule relates, unless prior to the commencement, the undertaking has been registered by the Agency and an environmental permit has been issued by the Agency in respect of the undertaking.</p> <p>2. No person shall commence activities in respect of any undertaking which in the opinion of the Agency has or is likely to have adverse effect on the environment or public health unless, prior to the commencement, the undertaking has been registered by the Agency in respect of the undertaking.’</p> <p>The list of undertakings requiring environmental assessment is provided in the Appendix 2-1 together with the list of environmentally sensitive areas, Appendix 2-2 in which developments are to a large extent, prohibited.</p>	<p>The project/ sub-projects is required to do the following:</p> <ol style="list-style-type: none"> 1. Register with the EPA; 2. Undertake scoping study; 3. Undertake EIA study including an EMP; 4. Obtain Environmental Permit from EPA <p>Project activities cannot occur in an environmental sensitive area (Appendix 2-2).</p> <p>The administrative flow chart suggesting a total process time of 90 working days is shown in Appendix 2-3. The procedures are statutorily recognized.</p>
5	<p><u>Fees and Charges (Amendment) Instrument 2019 (L.I. 2386)</u></p> <p>The Fees and Charges (Amendment) Instrument 2019 (L.I. 2386) provides comprehensive rates, fees and charges collectable by Ministries, Department and Agencies (MDAs) for goods and services delivered to the public. The LI 2386, therefore, repeals the Environmental Assessment Regulations (Amendment) 2002 (LI 1703) which originally stipulated the fees and charges to be paid by proponents with respect to Environmental Permits and Certificates.</p>	All stipulated fees and charges including Processing and Permit Fees shall be paid by the proponent in order to obtain the environmental permit from EPA.
6	<p><u>Water Resources Commission (WRC) Act 1996, Act 522</u></p> <p>The Water Resources Commission Act, 1996 (Act 522) establishes and mandates the Water Resources Commission (WRC) as the sole agency responsible for the regulation and management of the utilisation of water resources and for the co-ordination of any policy in relation to them. Section 13 prohibits the use of water (divert, dam, store, abstract or use water resources or construct or maintain any works for the use of water resources) without authority. Section 16 empowers the</p>	The proposed project will involve traversing water courses, sourcing water from nearby streams, diverting and/ or obstructing the flow of the nearby streams for construction purposes. The

No.	Legal Framework and Key Compliance Requirements	Applicability to Proposed Project
	Commission to grant Water Rights (water use permits) to prospective users. The Act states under Section 24 that any person who pollutes or fouls a water resource beyond the level that the EPA may prescribe, commits an offence and is liable on conviction to a fine or a term of imprisonment or both.	appropriate authorization will be sought from the WRC prior to the commencement of work(s).
7	<u>Water Use Regulations 2001, LI 1692</u> The Water Use Regulations 2001, LI 1692 prohibits the use of water resources without authority from the Water Resources Commission. The Act provides under section 16 for any person to apply to the Commission in writing for the grant of water right. The Regulations also prescribe the raw water charges and processing fees to be paid by prospective water users with respect to the water use permits. The Commission is also mandated to request for evidence that an EIA or an EMP has been approved by the EPA before issuance of the Water Use Permit.	The MoCD and contractors will be required to acquire a water use permit after obtaining the environmental permit for the abstraction of water for construction purposes
8	<u>Forestry Commission Act, 1999 (Act 571)</u> This Act provides for the management of the forest and wildlife resources in the country. The Commission is responsible for the regulation of the utilization of forest and wildlife resources, the conservation and management of those resources and the co-ordination of policies related to them. The Commission regulates the utilization of forest and timber resources, manage the nation's forest reserves and protected areas by proper planning for the protection, harvesting and development of forest and wildlife resources in a sustainable manner.	The MoCD and contractors will ensure compliance with the requirements of this Act i.e., traversing any forest and use of forest products for construction
9	<u>Forestry Protection (Amendment) Act 2002, Act 624</u> It is an offence under the Forest Protection (Amendment) Act, 2002, Act 624 for any person to enter into a Forest Reserve or protected area without the written consent of a competent forest authority to undertake any activity within the reserve or protected area.	The MoCD and contractors will ensure compliance with the requirements of this Act i.e., traversing any forest
10	<u>Wild Animals Preservation Act, 1961, Act 43</u> This is the principal Act relating to wild animals, birds and fish preservation and trade in Ghana. It empowers the Forestry Commission to set regulations and provides guidelines to the conservation of wild animal, birds and fish. Under Subsection 6, A person shall not use a motor vehicle or an aircraft, including aircraft lighter than air for the purpose of hunting, killing or capturing animals or in a manner that would drive, stampede or disturb the animals including that of filming or photographing. Under Subsection 7, A person shall not surround animals by fires for hunting purposes.	The MoCD and contractors will ensure compliance with the requirements of this Act i.e., protection of wild animals
11	<u>Wildlife Conservation Regulations, 1971, LI 685</u> The Wildlife Conservation Regulation, 1971 (LI 685) specifies the wildlife species that are completely protected from hunting, capturing and destruction of any form. The Regulation under Restriction on Hunting- Regulation 1 (Animals wholly protected), stipulates that, no person shall at any time hunt, capture or destroy any wild animal species whose protection, whether owing to their rarity or threatened extermination may be considered necessary.	The MoCD and contractors will ensure compliance with the requirements of this Act i.e., protection of wild animals
12	<u>Ghana Meteorological Agency 2004, Act 687</u> This Act establishes the Ghana Meteorological Agency (GMet), which replaces the Meteorological Services Department. The Agency is to provide meteorological information, advice, and warnings for the benefit of agriculture, civil and military aviation among others to mitigate the effects of natural disasters such as floods, storms and droughts on socio-economic development and projects. The Agency is to provide accurate date on climatic data which are relevant for establishing climate change trends.	The MoCD will work closely with the GMet especially in seeking meteorological information and advice
13	<u>Hazardous and Electronic Waste Control and Management Act 2016, Act 917</u> The Act prohibits the importation, exportation, transportation, selling, purchasing or dealing in hazardous wastes or other waste, or depositing of hazardous wastes or	All hazardous and electronic waste arising out of the proposed project implementation will have to

No.	Legal Framework and Key Compliance Requirements	Applicability to Proposed Project
	other wastes on any land in the country or in the territorial waters of Ghana except as otherwise provided for in the Act.	comply with this law. Waste oils, e-waste chemical additives/ admixtures for construction and chemicals that have expired and requiring disposal will fall under this law
14	<p><u>Hazardous, Electronic and Other Waste (Classification) and Management Regulations 2016, LI 2250</u> Regulations for the management of hazardous, electronic and other waste including collection, treatment and disposal etc.</p>	All hazardous and electronic waste arising out of the proposed project implementation will have to comply with this law. Waste oils, e-waste chemical additives/ admixtures for construction and chemicals that have expired and requiring disposal will fall under this law
15	<p><u>The Abandoned Property (Disposal) Act 1974, NRCD 308</u> The NRCD 308 provide for the vesting of scrap metal, the manner in which scrap metal should be dealt with, and for related matters. The act applies to how scrap metal, timber, hoarding and signboards that are on public land, roads and or obstruct a road user may be removed by an authorized officer and disposed of. The Act provides the procedures by which such “abandoned property” could be disposed of by an authorized officer. The Act further indicates that, any authorized officer may if deem fit cause the immediate removal to the nearest safe place of any property to which this Decree applies, if such property is found in any place where it may constitute a danger or obstruction: Provided that when the property is so removed to a safe place, any notices required by this Decree shall be affixed to the property as if such property had not been removed.</p>	The MoCD may invoke this law when required to move any abandoned property in the project area in the implementation of the proposed project
<i>Health/Safety</i>		
16	<p><u>Ghana National Fire Service Act 1997 (Act 537)</u> The Act re-establishes the National Fire Service to provide for the management of undesired fires and to make provision for related matters. The objective of the Service is to prevent and manage undesired fire. For the purpose of achieving its objective; the Service is to organise public fire education programs to create and sustain awareness of the hazards of fire, heighten the role of the individual in the prevention of fire and provide technical advice for building plans in respect of machinery and structural layouts to facilitate escape from fire, rescue operations and fire management. The GNFS has a rural fire department responsible for the control and management of bushfires.</p>	This act requires MoCD and contractors to register with GNFS who will provide services in the management of fire outbreaks at the project sites and facilities. The GNFS is mandated to create awareness and sensitization programs on fire prevention and control as well as issue fire permits for proposed project sites and facilities.
17	<p><u>The Fire Precaution (Premises) Regulations 2003, LI 1724</u> The Fire Precaution (Premises) Regulations 2003 (LI 1724) requires all premises intended for use as workplaces to have Fire Certificates and confers enforcement powers on the Ghana National Fire Service (GNFS) to demand a fire certificate for premises that are put to use as a place of work.</p>	The Regulation requires a Fire certificate to be obtained for the implementation of the proposed project
18	<p><u>Factories, Offices and Shops Act 1970, Act 328</u> The Factories, Offices and Shops Act of 1970 (Act 328), as amended by the Factories Offices and Shops (Amendment) Law 1983 PNDCL 66, the Factories Offices and Shops (Amendment) Law 1991 PNDCL 275 s.1 (a), and the Ghana National Fire Service Act, 1997 (Act 537) requires all proponents to register every factory/workplace with the Chief Inspector of Factories Inspectorate Division. The Act requires all factories, offices and shops to among others, notify the Chief</p>	The Act requires that the proposed project is registered with the Factories Inspectorate Division (FID), post the abstract of the act at a prominent place at the work premises and notify the Chief

No.	Legal Framework and Key Compliance Requirements	Applicability to Proposed Project
	Inspector of accidents, dangerous occurrences and industrial diseases, post in a prominent position in every factory the prescribed abstract of the act and other notices and documentations, as well as outlines the regulations to safeguard the health and safety of workers.	Inspector of any accidents, dangerous occurrences and industrial diseases.
<i>Labor Rights/Issues</i>		
19	<p><u>The Labor Act 2003, Act 651</u> Section 118(1) of the Labor Act 2003 (Act 651) stipulates that it is the duty of an employer to ensure that every worker employed works under satisfactory, safe and healthy conditions. Act 651 contains several specific provisions relating to an employer’s duty of care to its workers. These include providing and maintaining “at the workplace, plant and system of work that are safe and without risk to health” and taking “steps to prevent contamination of the workplaces by, and protect the workers from, toxic gases, noxious substances, vapours, dust, fumes, mists and other substances or materials likely to cause risk to safety or health”. A worker is required to report situations that he believes may pose “an imminent and serious danger to his or her life, safety or health”. The law prohibits persons below the age of eighteen from employment to operate any lifting machine driven by mechanical power or to give signals to its operator.</p>	This Act requires the MoCD to ensure the welfare of workers. The MoCD and contractors will be committed to ensure the safety and health of its workers by providing a safe working environment and providing the required apparatus and measures to mitigate impacts.
20	<p><u>Workmen Compensation Law 1987, PNDCL 187</u> The law holds employers responsible for the payment of compensation to workmen for personal injuries caused by accidents arising out and in the course of their employment.</p>	The Law enjoins the employers to ensure and be responsible for the safety of its workers and provide compensation to its workers for injuries arising in the course of work in accordance with this Law
21	<p><u>Persons with Disability Act, 2006 Act 715</u> The Act covers key thematic provisions such as rights, accessibility, employment, education and transportation for Persons with Disabilities (PWDs) amongst others. Section 6 states that the owner or occupier of a place to which the public has access shall provide appropriate facilities that make the place accessible to and available for use by a person with disability. Section 10 of the Act 10. (1) The Government shall grant a person who employs a person with disability an annual tax rebate of the taxable income in respect of each person with disability employed as shall be prescribed in Regulations made under this Act.</p>	The MoCD and contractors will be guided by this Act in the design of the facilities including buildings and employment of labor for the proposed project and will ensure all labor engaged by the contractors do not discriminate against PWDs
22	<p><u>The Children’s Act 1998, Act 560</u> The Act spells out the rights of the child, quasi-judicial/ judicial child adjudication, parentage/ custody/ access/ maintenance, fosterage/ adoption and employment of children issues. The Act defines a child as a person below the age of 18 years. The minimum age for admission of a child to employment is fifteen years and the minimum age for the engagement of a person in hazardous work is eighteen years. No person shall engage a child in exploitative labor; labor is exploitative of a child if it deprives the child of its health, education or development.</p>	The MoCD and contractors will be guided by this Act in the employment of labor for the proposed project and will ensure all labor engaged by the contractors are not below the minimum age.
<i>Land Acquisition/Land Use</i>		
23	<p><u>Land Act, 2020 (Act 1036)</u> The Land Act, 2020 (Act 1036) repeals the State Lands Act, 1962 (Act 125), and other related laws. The Land Act (Act 1036) vests in the State the authority to compulsorily acquire land for public purposes via an Executive Instrument (EI) and shall ensure the prompt payment of fair and adequate compensation for the acquisition. It also declares that the Lands Commission shall act on behalf of the State with regard to the compulsory acquisition of land under the Act. The basis for the assessment of compensation and other considerations for compensation determination include among others:</p> <ul style="list-style-type: none"> • Market value considerations 	The valuation of assets and provision of resettlement package to PAPs will be in accordance with this law.

No.	Legal Framework and Key Compliance Requirements	Applicability to Proposed Project
	<ul style="list-style-type: none"> • Any improvement to the property of the claimant as a result of the acquisition; • Any damage sustained or likely to be sustained by the claimant as a result of the acquisition; • The need of the claimant to change residence or place of business and reasonable expenses incurred as a result of the change; • Any other cost that is necessary for the compulsory acquisition; and • The resettlement of a displaced claimant on the suitable alternative land. 	
24	<p><u>State Lands Regulation of 1962 (LI 230)</u> The State Lands Regulation of 1962 (LI 230) provides general guidelines and directions regarding compulsory acquisition of land and consequential compensation. Regulation LI 230 calls for the establishment of Site Advisory Committees (SACs), which are technical bodies whose task it is to consider all requests for compulsory acquisition of lands and advise on the suitability of the lands for the intended projects. The SACs are composed of professionals from state land agencies, public work departments, and utilities. The recommendations of the SACs are forwarded to the Regional Minister for approval.</p>	The procedures and regulations guiding the compulsory acquisition of land for this project will be in line with this regulation.
25	<p><u>Lands (Statutory Wayleaves) Act 1963 (Act 186)</u> The Lands (Statutory Wayleaves) Act, 1963 (Act 186), details the process involved in occupation of land for the purpose of the construction, installation and maintenance of works of public utility, and for the creation of right-of-ways (RoWs) for such works.</p>	The creation of the right-of-ways where necessary for the proposed project corridor will be in line with this Act.
26	<p><u>Lands (Statutory Wayleaves) Regulation of 1964 (LI 334)</u> The Lands (Statutory Wayleaves) Regulation of 1964 (LI 334) restates the principles of the Act 186, in that the State retains the power to compulsorily acquire any area of land for public use if necessary and pay prompt and appropriate compensation to the original owner(s) of said land. LI 334 also establishes provisions for Wayleave Selection Committees to determine the optimal routing and to ensure that the selected wayleaves are consistent with urban and rural planning.</p>	Occupiers of current RoWs have no right to compensation under Ghanaian law if they occupied the RoW after its formal declaration.
27	<p><u>Lands Commission (LC) Act 2008, Act 767</u> This Act provides for the management of public lands and other lands and for related matters. The Commission manages public lands and any other lands vested in the President by the Constitution or by any other enactment or the lands vested in the Commission. The Commission advises the Government, local authorities and traditional authorities on the policy framework for the development of particular areas to ensure that the development of individual pieces of land is coordinated with the relevant development plan for the area concerned. The commission has the following divisions:</p> <ul style="list-style-type: none"> • Survey and Mapping; • Land Registration; • Land Valuation; • Public and Vested Lands Management; and • Any other Division the Commission may determine. 	The Lands Commission will be involved in the demarcation of the right-of-way limits, marking of properties within the right-of-way, approval of valuation figures prior to payment, grievance resolution of right-of-way/land acquisition matters.
28	<p><u>The Ghana Highway Authority (GHA) Act 1997, Act 540</u> The Ghana Highway Authority (GHA) was established as a body corporate by GHA Degree 1974 (NRC D 298). NRC D 298 was repealed by GHA Act 1997 (Act 540) which, however, continued the Authority in existence with responsibility for the administration, control, development and maintenance of the country's trunk road network.</p>	The implication for the proposed project is that MoCD will have to work closely with GHA, the other road agencies (DUR and DFR) and other utilities that have installations in the project area especially, Ghana Water Company Limited (GWCL), Electricity

No.	Legal Framework and Key Compliance Requirements	Applicability to Proposed Project
		Company of Ghana Limited (ECG), Northern Electricity Development Company (NEDCo), Ghana GRID Company (GRIDCo), as well as the Telecoms (MTN, Vodafone, TigoAirtel) and other telecom companies as far as their cables and the use of the RoWs is concerned
29	<p><u>The Land Use and Spatial Planning Act 2016, Act 925</u> The Act seeks to revise and consolidate the laws on land use and spatial planning, provide for sustainable development of land and human settlements through a decentralized planning system, ensure judicious use of land in order to improve quality of life, promote health and safety in respect of human settlements and to regulate national, regional, district and local spatial planning, and generally to provide for spatial aspects of socio-economic development and for related matters.</p> <p>This Act therefore repeals the following: (i) Town and Country Planning Act 1945 CAP 84; (ii) Part II of Act 462 on Planning Functions; (iii) Towns Act of 1892, CAP 86; and Towns and Country Planning (Amendment) Act 1960, Act 33.</p>	The design of the proposed project facilities must conform with the planning regime of LUSPA including the clauses on blighted areas.
30	<p><u>National Building Regulations 1996, LI 1630</u> The National Building Regulations, LI 1630 provides guidance and standard to any person who intends to erect any building; or make any structural alteration to any building; or executes any works or installs any fittings in connection with any building. As per clause 14.14 of the National Building Regulations, "...buildings of four floors and over shall be subject to such requirements as may be laid down by the District Planning Authority for each particular case". The process of obtaining a development permit makes it contingent on the issuance of an environmental permit by the EPA.</p>	The implication of this Act is that a Development Permit may have to be obtained from the relevant MMDAs
<i>Local Governance and Alternative Dispute Resolutions</i>		
31	<p><u>Local Governance Act 2016, Act 936</u> The Local Governance Act 2016, which repeals the Local Government Act 1993 (Act 462) re-establishes and regulates the local government system and gives authority to the Regional Coordinating Council (RCC) and the District Assembly (DA) to exercise political and administrative power in the Regions and District, provide guidance, give direction to, and supervise all other administrative authorities in the regions and district respectively. The Assembly is mandated to initiate programs for the development of basic infrastructure and provide municipal works and services as well as be responsible for the development, improvement and management of human settlements and the environment in the district.</p> <p>The Local Governance Act 2016 also empowers the Assemblies to establish Waste Management Departments to be responsible for the development and management of waste disposal within their areas of jurisdiction. Therefore, the management of waste at the construction and operational stages of the proposed project will have to be done in conjunction with the relevant MMDAs</p>	The relevant MMDAs will be closely consulted in the implementation of the proposed project.
32	<p><u>Alternative Dispute Resolution Act 2010, Act 798</u> The purpose of the Act is to "...provide for the settlement of disputes by arbitration, mediation and customary arbitration, to establish an Alternative Dispute Resolution Center and to provide for related matters." The Act further defines Alternative Dispute Resolution "as the collective description of methods of resolving disputes otherwise than through the normal trial process" (Section 135). The ADR Act covers both domestic and international arbitration in Ghana and the enforcement of both domestic and foreign arbitral awards within the jurisdiction.</p>	The proponent will ensure that the alternative dispute resolution option is used to address disputes and conflicts within the frame of the GRM proposed instead of the more expensive and time-consuming legal court system.

2.2.1 Ghana Standards on Environmental Quality

The Ghana Standards Authority (GSA) has in collaboration with the EPA and through various National Technical Committees issued Ghana Standard (GS) requirements for Noise Control and Measurements, and Air Quality, and Requirements for Effluent Discharge (General Industry) as follows:

1. GS 1236:2019- Environment and Health Protection – Requirements for Ambient Air Quality and Point Source/ Stack Emissions;
2. GS 1222:2018- Health Protection – Requirements for Ambient Noise Control; and
3. GS 1212:2019- Environmental Protection Requirements for Effluent Discharge (General Industry).

2.2.1.1 GS 1236:2019

The GS 1236:2019 provides for permissible levels for a variety of air pollutants as shown in **Table 2-3**.

Table 2-3: National Ambient Air Quality – GS 1236:2019

NO.	SUBSTANCE	TIME WIGHTED AVERAGE, (TWA)	AVERAGING TIME
1.	Sulphur Dioxide (SO ₂)	520 µgm ⁻³ 50 µgm ⁻³	1hr 24hrs
2.	Nitrogen Oxides (measured as NO ₂)	250 µgm ⁻³ 150 µgm ⁻³	1hr 24hrs
3.	Total Suspended Particulate (TSP/SPM)	150 µgm ⁻³ 80 µgm ⁻³	24hrs 1yr
4.	PM ₁₀	70 µgm ⁻³ 70 µgm ⁻³	24hrs 1yr
5.	PM _{2.5}	35 µgm ⁻³	24hrs
6.	Carbon Monoxide (CO)*	100 mg/m ³ 60 mg/m ³ 30 mg/m ³ 10 mg/m ³	15mins 30mins 1hr 8hrs

(Source: GSA, 2019)

*.....Fenceline Air Pollutant Standard

2.2.1.2 GS 1222:2018

The GS 1222:2018 provides for permissible night and day noise levels as shown in **Table 2-4**.

Table 2-4: Ambient Noise Control Levels

ZONE	DESCRIPTION OF AREA OF NOISE RECEPTION	PERMISSIBLE NOISE LEVEL IN dB(A)	
		DAY 0600 - 2200	NIGHT 2200 – 0600
A	Residential areas	55	48
B	Educational and health facilities, office and law courts	55	50
C	Mixed Use	60	55
D	Areas with some light industry	65	60
E	Commercial areas	75	65
F	Light industrial areas	70	60
G	Predominantly heavy industrial areas	70	70

ZONE	DESCRIPTION OF AREA OF NOISE RECEPTION	PERMISSIBLE NOISE LEVEL IN dB(A)	
		DAY 0600 - 2200	NIGHT 2200 – 0600
Ensure that maximum noise level near the construction site does not exceed 66dB(A) in other areas and 75dB(A) in an industrial area			

(Source: GSA, 2018)

2.2.1.3 GS 1212:2019

The environmental protection- requirements for effluent discharge are as provided in **Table 2-5**.

Table 2-5: Environmental Protection - Requirements for Effluent Discharge for General Industries

Parameter	Unit	GS 1212:2019+
Turbidity	NTU	75
Temperature	°C	≤ 3° above ambient
Colour	Hz	200
pH	pH Units	6 – 9
Conductivity	µS/cm	1,500
Alkalinity	mg/l	150
Total Suspended Solids (TSS)	mg/l	50
Total Dissolved Solids (TDS)	mg/l	1,000
Total Phosphorus	mg/l	2
Nitrate (NO ₃ -N)	mg/l	50
BOD	mg/l	50
COD	mg/l	250
Oil/ Grease	mg/l	5
Total Coliform	counts/100ml	400

(Source: GSA, 2019)

2.2.2 Project Standards

The GDAP will apply the stricter of either national laws or the WBG standards (EHS Guidelines). The Project standards for emissions and performance therefore are the stricter of:

- Ghana standards; and
- Applicable standards of the World Bank Group EHS Guidelines.

2.2.2.1 Relevant International Conventions and Protocols

The following international laws and conventions which Ghana is a signatory are considered applicable to this proposed Project:

- African Charter on Human and Peoples' Rights (adopted 1998, entered into force 2005)
- African Convention on the Conservation of Nature and Natural Resources (adopted 1968, entered into force 1969)
- International Covenant on Economic, Social and Cultural Rights (adopted 1966, entered into force 1976)
- International Labor Organization's (ILO) Core Labor Standards on
- Freedom of association and collective bargaining; conventions 87 (1950) and 98 (1951)
- Elimination of forced and compulsory labor; conventions 29 (1932) and 105 (1959)

- Elimination of discrimination in respect of employment and occupation; conventions 100 (1953) and 111 (1960)
- Abolition of child labor; conventions 138 (1976) and 182 (2000)
- United Nations Convention on the Protection of the Rights of All Migrant Workers and Members of their Families (adopted 1990, entered into force 2003)
- United Nations Framework Convention on Climate Change (adopted 1992, entered into force 1994)
- Kyoto Protocol to the United Nations Framework Convention on Climate Change (adopted 1997, entered into force 2005)
- United Nations Convention on Biological Diversity (adopted 1992, entered into force 1993)

2.2.3 Paris Agreement

The Paris Agreement was adopted in 2015 as an international agreement to address climate change that required deeper emissions reduction commitments from all countries both developed and developing. It seeks to hold global warming to below 2.0°C above pre-industrial levels and pursue further to limit this to 1.5°C. The Paris Agreement calls for sustainable development by providing opportunities for the Parties to reduce their emissions through economy-wide and sectoral mitigation actions, in accordance with their state of development, their national circumstances, and in full compliance with the principles and provisions of the UN Framework Convention on Climate Change (UNFCCC) through their Nationally Determined Contributions (NDCs). In their NDCs, countries communicate actions they will take to reduce their Greenhouse Gas emissions in order to reach the goals of the Paris Agreement. Countries also communicate in the NDCs, actions they will take to build resilience to adapt to the impacts of rising temperatures. The transport sector is one of Ghana's focal areas for climate change mitigation of which the proposed ATMP will take cognizance of to develop sustainable and resilient infrastructure.

2.2.4 GHA-Nationally Determined Contributions (NDCs): 2020 – 2030

Ghana's NDCs sought to reduce emissions by 15% to 45% below business-as-usual scenario by 2030 and strengthen climate resilience in close alignment with its development priorities. In all, 20 mitigation and 11 adaptation actions were outlined to take place across seven priority economic sectors - energy, agriculture, industry, transport, waste, and forestry and other land uses. The 20 mitigation measures have strong development imperatives and aim to scale up renewable energy, promote clean cooking and lighting, double energy efficiency in households and industry, promote mass urban transportation, reduce emissions from deforestation and forest degradation (REDD+), and promote alternative solid waste management. The 11 adaptation measures aim to build resilience in vulnerable agriculture landscapes, enhance value addition in the utilization of forest resources, promote resilient infrastructure, promote early warning systems and disaster prevention; manage climate-induced health risk; promote integrated waste management, and address gender considerations. The proposed ATMP when completed will facilitate inter-and intra-city mass transportation modes.

2.2.5 The Convention on Wetlands of International Importance, especially as Waterfowl Habitat (Ramsar Convention)

The Ramsar Convention was signed and adopted in 1971 in the Iranian City of Ramsar and came into force in 1975 for the conservation of wetlands of national and international importance. It is the only international treaty that addresses a specific ecosystem (wetland). Originally, the treaty focused on the conservation of the habitats for waterbirds but with time, the treaty has broadened its horizon and covers all aspects of wetland conservation.

The objective of the Ramsar Convention is to conserve, protect and ensure the wise use of wetlands through local, regional and national actions and international cooperation.

As of June 2021, there were 2422 wetlands in the list of wetlands of international importance worldwide. In Ghana, there are six (6) designated Ramsar sites namely; (i) Sakumo, (ii) Densu Delta, (iii) Muni-Pomadze, (iv) Owabi Wildlife Sanctuary (v) Keta Lagoon Delta Complex and the (vi) Songor following the enforcement of the convention in Ghana in 1988.

2.2.6 Convention on Biological Diversity (1992)

The Convention of Biological Diversity (CBD) was signed by 150 government leaders at the 1992 Rio Earth Summit, dedicated to promoting sustainable development. Conceived as a practical tool for translating the principles of Agenda 21 into reality, the convention recognize that biological diversity is not only about plants, animals and microorganisms and their ecosystems but also about people and our need for food security, medicines, fresh air and water, shelter and a clean and health environment in which we live in. The objective of CBD is to ensure preserving and sustaining biological diversity.

2.2.7 Convention Concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention), Paris (1975)

The World Heritage Convention is an international convention administered by the United Nations Educational, Scientific and Cultural Organization (UNESCO) and aimed at identifying and conserving the world's cultural and natural heritage. The most significant feature of the 1972 World Heritage Convention is that it links together in a single document the concepts of nature conservation and the preservation of cultural properties. The Convention recognizes the way in which people interact with nature, and the fundamental need to preserve the balance between the two. The Convention defines the kind of natural or cultural sites which can be considered for inscription on the World Heritage Site, which is a landmark or area with legal protection by the Convention. World Heritage Sites are designated by UNESCO for having cultural, historical, scientific or other form of significance. The sites are judged to contain cultural and natural heritage around the world and considered to be of outstanding value to humanity.

The Convention sets out the duties of state 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.

2.2.8 Convention Concerning the Protection of Workers Against Occupational Hazards in the Working Environment due to Air Pollution, Noise, and Vibration, 1977 (ILO Convention No. 148)

The Convention encourages employers that in consultation with their workers, they should understand project hazards related to air pollution, noise pollution, and vibrations. Under the Convention No 148, national laws or regulations shall prescribe those measures be taken for the prevention and control of, and protection against, occupational hazards in the working environment due to air pollution, noise and vibration.; and provisions concerning the practical implementation of the measures so prescribed may be adopted through technical standards, codes of practice and other appropriate methods.

2.2.9 The United Nations Convention of the Child

The United Nations Convention of the Child is an important agreement by countries who have promised to protect children's rights. It defines a child as any person under the age of 18 years. The Convention explains who children are, all their rights, and the responsibilities of governments. All the rights are connected, they are all equally important and they cannot be taken away from children. All children have all these rights, no matter who they are, where they live, what language they speak, what their religion is, what they think, what they look like, if they are a boy or girl, if they have a disability, if they are rich or poor, and no matter who their parents or families are or what their parents or families believe or do. No child should be treated unfairly for any reason.

2.3 Applicable World Bank's Environmental and Social Standards (ESS)

The World Bank published a revised version of the safeguard policies in its Environmental and Social Framework (ESF) document (August 2016) in 2018. The ESF sets out the World Bank's commitment to sustainable development, through a Bank Policy and a set of Environmental and Social Standards (ESS) that are designed to support Borrowers' projects, with the aim of ending extreme poverty and promoting shared prosperity. The ESF comprises:

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

The World Bank Environmental and Social Policy for Investment Project Financing (IPF) sets out the requirements that the Bank must follow regarding projects it supports through IPF. It also sets out the policy of the Bank to support borrowers to develop and implement environmentally and socially sustainable projects as well as build capacity in the assessment and management of environmental and social impacts and risks associated with the implementation and operation of projects. The World Bank, as part of the ESF also has environmental and social standards that

borrowers must comply with in order for projects to be sustainable, non-discriminatory, transparent, participatory, environmentally and socially accountable as well as conform to good international practices. There are ten (10) Environmental and Social Standards (ESS) that establishes the standards that the Borrower and the project will meet through the project life-cycle and they are summarized in **Table 2-6**.

There are no Indigenous People in Ghana hence ESS 7 does not apply to the proposed project as well as ESS 9.

Table 2-6: Summary of WB Environmental and Social Standards

Standard	Summary of Core Requirements
ESS 1	Assessment and Management of Environmental and Social Risks and Impacts
ESS 2	Labor and Working Condition
ESS 3	Resource Efficiency and Pollution Prevention and Management
ESS 4	Community Health and Safety
ESS 5	Land Acquisition, Restrictions on Land Use and Involuntary Resettlement
ESS 6	Biodiversity Conservation and Sustainable Management of Living Natural Resources
ESS 7	Indigenous Peoples/Sub-Saharan African Historically Underserved Traditional Local Communities
ESS 8	Cultural Heritage
ESS 9	Financial Intermediaries
ESS 10	Stakeholder Engagement and Information Disclosure

These ESS replaces the following Operational Policy (OP) and Bank Procedures (BP):

- OP/BP4.00, Piloting the Use of Borrower Systems to Address Environmental and Social Safeguard Issues in Bank-Supported Projects;
- OP/BP4.01 on Environmental Assessment;
- OP/BP4.04 on Natural Habitats;
- OP4.09 on Pest Management;
- OP/BP4.10 on Indigenous Peoples;
- OP/BP4.11 on Physical Cultural Resources;
- OP/BP4.12 on Involuntary Resettlement;
- OP/BP4.36 on Forests; and
- OP/BP4.37 on Safety of Dams.

This Framework does not replace OP/BP4.03, Performance Standards for Private Sector Activities, OP/BP7.50, Projects on International Waterways, and OP/BP7.60, Projects in Disputed Territories.

These ESS are further expatiated hereunder:

ESS1 – Assessment and Management of Environmental and Social Risks and Impacts. ESS 1 places the responsibility of ameliorating the environmental impacts of a Bank-financed project on the borrower. Specifically, the objectives of ESS1 are to:

- Identify, evaluate, and manage the environment and social risks and impacts of a Bank financed project in a manner consistent with the Bank’s Environmental and Social Standards. ESS1 recommends the following hierarchy in the amelioration of impacts (a) Anticipate and avoid risks and impacts; (b) Where avoidance is not possible, minimize or reduce risks and impacts to acceptable levels; (d) Once risks and impacts have been minimized or reduced, mitigate; and (e) Where significant residual impacts remain, compensate for or offset them, where technically and financially feasible.
- To adopt differentiated measures so that adverse impacts do not fall disproportionately on the disadvantaged or vulnerable, and they are not disadvantaged in sharing development benefits and opportunities resulting from the project.
- To utilize national environmental and social institutions, systems, laws, regulations and procedures in the assessment, development, and implementation of projects, whenever appropriate.
- To promote improved environmental and social performance, in ways which recognize and enhance Borrower capacity.

ESS 1 is relevant because sub-project activities under components 1 2 and 3 are expected to cause some impacts on the environment and these impacts will be mitigated accordingly. Thus, ESS 1 is the basis for the preparation of this ESMF.

ESS 2 – Labor and Working Conditions. Employment creation, income generation and welfare of labor are the core of ESS2. It recognizes the importance of these in the pursuit of poverty reduction and economic growth. It requires management to treat workers fairly and provide them with safe and healthy working conditions to enhance the development benefits of projects.

The specific objectives of ESS 2 are to:

- Promote safety and health at work.
- Promote the fair treatment, non-discrimination, and equal opportunity of project workers.
- Protect project workers, including vulnerable workers such as women, persons with disabilities, children (of working age, in accordance with this ESS) and migrant workers, contracted workers, community workers and primary supply workers, as appropriate.
- Prevent the use of all forms of forced labor and child labor.
- Support the principles of freedom of association and collective bargaining of project workers in a manner consistent with national law.
- Provide project workers with accessible means to raise workplace concerns.

ESS 2 is applicable to the following categories of labor: people employed or engaged directly by the Borrower (Project staff); people employed or engaged through third parties (contractors, sub-contractors, brokers, agents and intermediaries) to perform work related to core functions of the project, regardless of location; people employed or engaged by the Borrower’s primary suppliers (suppliers who, on an ongoing basis, provide directly to the project goods or materials essential for the core functions of the project); and, people employed or engaged in providing community

labor. ESS2 applies to people engaged on the project on full-time, part-time, temporary, and seasonal basis as well as migrant workers.

Activities under Component 1,2 and 3 of the proposed project will make use of direct workers, contracted workers and community workers, thus making ESS 2 relevant to the project.

ESS 3 – Resource Efficiency and Pollution Prevention and Management. ESS 3 sets out the requirements to address resource efficiency and pollution prevention (air, water and land pollution and management arising out of economic activities and urbanization) throughout the project life-cycle consistent with Good International Industry Practice (GIIP). The specific objectives of this ESS are: To promote the sustainable use of resources, including energy, water, and raw materials; To avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing pollution from project activities; To avoid or minimize project-related emissions of short and long-lived climate pollutants; To avoid or minimize generation of hazardous and non-hazardous waste; and, To minimize and manage the risks and impacts associated with pesticide use. ESS3 enjoins the borrower to consider ambient conditions and apply technically and financially feasible resource efficiency and pollution prevention measures in accordance with the mitigation hierarchy. The measures are expected to be proportionate to the risks and impacts associated with the project and consistent with GIIP, in the first instance the Environment, Health and Safety Guidelines of the Bank.

Based on the nature of anticipated project activities, the project may result in multiple small and diverse sources of emissions, as well as the generation of e-waste, thus, making ESS 3 relevant to this project.

ESS 4 – Community Health and Safety. ESS4 addresses the potential health, safety, and security risks and impacts of Bank financed projects (resulting from project activities, equipment, and infrastructure) on project-affected communities. It places a responsibility on the Borrower to avoid or minimize such risks and impacts, with particular attention to people who, because of their circumstances, may be vulnerable. The specific objectives of ESS4 are to: anticipate and avoid adverse impacts on the health and safety of project-affected communities during the project life-cycle from both routine and non-routine circumstances; promote quality and safety, and considerations relating to climate change, in the design and construction of infrastructure, including dams; avoid or minimize community exposure to project-related traffic and road safety risks, diseases and hazardous materials; have in place effective measures to address emergency events; ensure that the safeguarding of personnel and property is carried out in a manner that avoids or minimizes risks to the project-affected communities.

ESS 4 is relevant because of the potential community health and safety issues under subcomponent 1.2, 1.3 and 2.3 as well as the potential risk for increased gender-based violence (GBV) due to an influx of workers at various project sites.

ESS 5: Land Acquisitions, Restrictions on Land Use, and Involuntary Resettlement. ESS5 recognizes that Bank funded projects may result in involuntary resettlement, which, if unmitigated

will lead to severe consequent undesirable socio-economic and environmental impacts on project communities. The specific objectives of ESS 5 are to: avoid involuntary resettlement or, when unavoidable, minimize involuntary resettlement by exploring project design alternatives; avoid forced eviction; mitigate unavoidable adverse social and economic impacts from land acquisition or restrictions on land use by: (a) providing timely compensation for loss of assets at replacement cost and (b) assisting displaced persons in their efforts to improve, or at least restore, their livelihoods and living standards, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher; improve living conditions of poor or vulnerable persons who are physically displaced, through provision of adequate housing, access to services and facilities, and security of tenure; conceive and execute resettlement activities as sustainable development programs, providing sufficient investment resources to enable displaced persons to benefit directly from the project, as the nature of the project may warrant; ensure that resettlement activities are planned and implemented with appropriate disclosure of information, meaningful consultation, and the informed participation of those affected.

ESS 5 will be applicable because the project activities relating to expansion and upgrade of broadband to rural areas under sub-component 1.2 may be associated with permanent or temporary physical and economic displacement resulting from land acquisition.

ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources. ESS6 recognizes that Bank funded projects could negatively impact on biodiversity and that protecting and conserving biodiversity and sustainably managing living natural resources are fundamental to sustainable development. The specific objectives of this ESS are to: protect and conserve biodiversity and habitats; apply the mitigation hierarchy and the precautionary approach in the design and implementation of projects that could have an impact on biodiversity; promote the sustainable management of living natural resources; support livelihoods of local communities, including Indigenous Peoples, and inclusive economic development, through the adoption of practices that integrate conservation needs and development priorities.

ESS 6 is relevant because the project is likely to involve small-scale civil works in a rural setting (under sub-component 3.1), only where the project seeks to expand rural last-mile connectivity.

ESS 8: Cultural Heritage. ESS 8 recognizes the importance of cultural heritage (natural areas with cultural and/or spiritual value such as sacred groves, sacred bodies of water and waterways, sacred mountains, sacred trees, sacred rocks, burial grounds, and sites) as a source of valuable scientific and historical information, as an economic and social asset for development, and as an integral part of people's cultural identity and practice. It provides continuity in tangible and intangible forms between the past, present and future and reflects constantly evolving values, beliefs, knowledge, and traditions. The specific objectives of this ESS are to: protect cultural heritage from the adverse impacts of project activities and support its preservation; address cultural heritage as an integral aspect of sustainable development; promote meaningful consultation with stakeholders regarding cultural heritage; and, promote the equitable sharing of benefits from the use of cultural heritage. The requirements of this ESS 8 will apply to all projects that are likely to have risks or impacts on cultural heritage, regardless of whether it has been legally protected or

previously identified or disturbed. This will include a project which: (a) Involves excavations, demolition, movement of earth, flooding or other changes in the physical environment; (b) Is located within a legally protected area or a legally defined buffer zone; (c) Is located in, or in the vicinity of, a recognized cultural heritage site; or (d) Is specifically designed to support the conservation, management and use of cultural heritage.

ESS 8 is relevant to this project because the support to expand and upgrade broadband network to rural areas under sub-component 1.2 could lead to some physical activities occurring at areas where tangible cultural heritage could be found such archaeological relics, graves, shrines, sacred trees or groves that may require attention of relevant government agencies.

ESS 10: Stakeholder Engagement and Information Disclosure. This ESS places premium on open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice. The specific objectives ESS 10 are to: establish a systematic approach to stakeholder engagement that will help Borrowers identify stakeholders and build and maintain a constructive relationship with them, especially project affected parties; assess the level of stakeholder interest and support for the project and to enable stakeholders' views to be taken into account in project design and environmental and social performance; promote and provide means for effective and inclusive engagement with project-affected parties throughout the project life-cycle on issues that could potentially affect them; ensure that appropriate project information on environmental and social risks and impacts is disclosed to stakeholders in a timely, understandable, accessible and appropriate manner and format; and, provide project-affected parties with accessible and inclusive means to raise issues and grievances, and allow Borrowers to respond to and manage such grievances.

ESS 10 is relevant to the project because of the project will engage diverse stakeholders at the project design, planning and project implementation stages. The Project will be guided by this standard in undertaking all project-related consultations and engagements given that this enhances the environmental and social sustainability of the Project. In line with this, a standalone Stakeholder Engagement Plan (SEP) has been prepared.

2.3.1 Gap Analysis – Comparison of Ghana’s Regulations/ Policies and World Bank ESF for Handling Environmental and Social Risks

From the above discussions, it is clear that significant gaps exist between Ghanaian national regulations and the applicable World Bank ESSs. These are summarized in **Tables 2-7 & 2-8**. Table 2-8 relates to gap bridging measures for ESS5 only. These gap bridging measures are to ensure compliance with the ESSs.

Table 2-7: Comparison of Ghana’s Regulations/ Policies and World Bank ESF for Handling Environmental and Social Risks

Scope/Objective	Description of Bank Policy	Description of Government of Ghana Regulation	Gaps Identified	Gap Bridging Actions
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts				
<ul style="list-style-type: none"> Identify, evaluate and manage the environment and social risks and impacts of the project in a manner consistent with the ESSs. To adopt a mitigation hierarchy approach to: Anticipate and avoid risks and impacts Where avoidance is not possible, minimize or reduce risks and impacts to acceptable levels; Once risks and impacts have been minimized or reduced, mitigate; and Where significant residual impacts remain, compensate for or offset them, where technically and financially feasible. 	The standard provides guidance on assessing the Project’s potential environmental and social risks and impacts and addressing potential impacts through planning and mitigation hierarchy approach.	Environmental Assessment. Regulation 1 (2) of LI 1652 mandates that no person shall commence an undertaking which in the opinion of the Agency has or is likely to have adverse effects on the environment or public health unless, prior to the commencement, the undertaking has been registered by the EPA and an environmental permit has been issued by the Agency in respect of the undertaking.	Even though the regulation seeks to anticipate and mitigate/avoid risks and impacts, it does not fully address potential impacts and mitigation hierarchy approach e.g., content wise it does not address impacts on the vulnerable	<ul style="list-style-type: none"> Assistance/compensations will be provided for the affected parties by government through the district and municipal assemblies at various project locations. The MDA’s and MMDAs will be fully involved in the project preparatory stage through consultations for them to become abreast with project components roles they will play during implementation. The capacities of the MDAs staff on world bank ESF will also be built at the early stage of project implementation to enable them collaborate effectively in addressing this gap
ESS2: Labor and Working Conditions				
<ul style="list-style-type: none"> To promote safety and health at work, fair treatment, non-discrimination and equal opportunity of project workers 	ESS2 promotes the fair treatment, non-discrimination and provision of equal opportunities for workers	<ul style="list-style-type: none"> The Labor Act 2003 (Act 651) provides for the rights and duties of employers and workers; legal or illegal strike; 	Although the Commission makes provision for anticipated labor-related	<ul style="list-style-type: none"> The project will adopt and enhance and existing transparent GRM which addresses concerns promptly

Scope/Objective	Description of Bank Policy	Description of Government of Ghana Regulation	Gaps Identified	Gap Bridging Actions
<p>including vulnerable workers such as women, persons with disabilities, children</p> <ul style="list-style-type: none"> • To prevent the use of all forms of forced labor and child labor. • To support the principles of freedom of association and collective bargaining of project workers in a manner consistent with national law. <p>To provide project workers with accessible means to raise workplace concerns.</p> <p>OHS Hazard identification and right of employees to remove themselves from such workplaces without being punished.</p>	<p>engaged on projects it supports. It strongly encourages protection of all project workers, including vulnerable groups such as women, persons with disabilities, children (of working age) and migrant workers, contracted workers and primary supply workers, as appropriate. It provides certain requirements that the project must meet in terms of working conditions, protection of the work force (especially the prevention of all forms of forced and child labor), and provision of a grievance mechanism that addresses concerns on the project promptly and uses a transparent process that provides timely feedback to those concerned.</p> <p>Under ESS 2, workplace processes will be put in place for project workers to report work situations that they believe are not safe or healthy, and to remove themselves from a work situation which they have reasonable justification to believe presents an imminent and serious danger to their life or health. Project workers who remove themselves from such situations will not be required to return to work until necessary remedial action to correct the</p>	<p>guarantees trade unions the freedom of associations and establishes Labor Commission to mediate and act in respect of all labor issues. Under Part XV (Occupational Health Safety and Environment), the Act explicitly indicates that it is the duty of an employer to ensure the worker works under satisfactory, safe and healthy conditions.</p> <ul style="list-style-type: none"> • The Workmen's Compensation Law 1987 (PNDC 187) seeks to address the necessary compensations needed to be awarded to workers for personal injuries arising out of and in the course of their employment. <p>Section 78 of the Factories, Offices and Shop Act 1970 (Act 328), details the duties of persons employed. it is not part of the duties of persons employed to remove themselves from such unsafe working places and also silent on they not being retaliated against</p>	<p>complaints and redress, beneficiaries' access (distance and processes) to the commission at the district-level may be a challenge.</p> <p>The law does not explicitly mandate workers to remove themselves from such unsafe working places and also silent on they not being retaliated against if they should do so</p>	<ul style="list-style-type: none"> • It will also develop labor management procedures e.g., working conditions, occupational health and safety, child labor, etc. (section 5.4). which will guide project implementers in managing labor-related issues. For instance, in order to avoid child labor, the acceptable age will be 18 years and the Ghana 2010 risks assessment technique of child labor monitoring (CLM) described under (section 5.4.4) will also be observed to ensure that labor management procedures in respect of child labor is respected. <p>Labor management procedures has been prepared as part of this ESMF, which adequately takes care of ESS 2 provisions. Workers will be sensitized on the LMP and their rights to remove themselves from unsafe workplaces and will not be retaliated against if they do so in line with the LMP/ESS 2 provisions</p>

Scope/Objective	Description of Bank Policy	Description of Government of Ghana Regulation	Gaps Identified	Gap Bridging Actions
	situation has been taken. Project workers will not be retaliated against or otherwise subject to reprisal or negative action for such reporting or removal.			
ESS3: Resource Efficiency and Pollution Prevention and Management				
To achieve the sustainable use of resources, including implementing measures that avoids or reduces pollution resulting from project activities	The ESS3 provides requirements for projects to achieve the sustainable use of resources, including energy, water and raw materials, as well as implement measures that avoids or reduces pollution resulting from project activities. The standard places specific consideration on hazardous wastes or materials and air emissions (climate pollutants) given that the current and projected atmospheric concentration of greenhouse gases (GHG) threatens the welfare of present and future lives.	<ul style="list-style-type: none"> The Act 490 mandates the EPA to enforce compliance with established EIA procedures among companies and businesses in the planning and execution of development projects, including existing projects. 	To achieve the sustainable use of resources, including implementing measures that avoids or reduces pollution resulting from project activities	The ESS3 provides requirements for projects to achieve the sustainable use of resources, including energy, water and raw materials, as well as implement measures that avoids or reduces pollution resulting from project activities. The standard places specific consideration on hazardous wastes or materials and air emissions (climate pollutants) given that the current and projected atmospheric concentration of greenhouse gases (GHG) threatens the welfare of present and future lives.
ESS4: Community Health and Safety				
<ul style="list-style-type: none"> To anticipate and avoid adverse impacts on the health and safety of project affected communities during the project lifecycle from both routine and nonroutine circumstances. To promote quality and safety, and considerations relating to climate change, in the design and construction of infrastructure, including dams. To ensure that safeguarding of personnel and property is carried 	This standard recognizes that project activities, project equipment and infrastructure increase the exposure of project stakeholder communities to various health, safety and security risks and impacts and thus recommends that projects implement measures that avoids or limits the occurrence of such risks. It provides further requirements or guidelines on managing safety, including the	The Public Health Act, 2012, Act 851 revises and consolidates all the laws and regulations pertaining to the prevention of disease, promote, safeguard and maintain and protect the health of human and animals, and to provide for related matters. The law has merged all provisions in the criminal code, ordinances, legislative and executive instruments, acts, by-	The regulation does not consider assessment of events and measures to deal with occurrences and emergencies	<ul style="list-style-type: none"> The law provides the platform to engage with stakeholders. A stakeholder engagement plan has been prepared and will be in place for project implementation. Community needs with respect to project activities will be assessed and necessary measures taken. Project has developed a COVID-19 Response Plan to guide project implementation onsite.

Scope/Objective	Description of Bank Policy	Description of Government of Ghana Regulation	Gaps Identified	Gap Bridging Actions
out in a manner that avoids or minimizes risks to the project-affected communities.	need for projects to undertake safety assessment for each phase of the project, monitor incidents and accidents and preparing regular reports on such monitoring. ESS4 also provides guidance on emergency preparedness and response.	laws of the District Assemblies etc. The Act enjoins the provision of sanitary stations and facilities, destruction of vectors including mosquitoes, protection of water receptacles and the promotion of environmental sanitation.		
ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources				
<ul style="list-style-type: none"> To protect and conserve biodiversity and habitats. To apply the mitigation hierarchy and the precautionary approach in the design and implementation of projects that could have an impact on biodiversity. To promote the sustainable management of living natural resources. <p>To support livelihoods of local communities, including Indigenous Peoples, and inclusive economic development, through the adoption of practices that integrate conservation needs and development priorities.</p>	ESS6 promotes the conservation of biodiversity or natural habitats. and supports the protection and maintenance of the core ecological functions of natural habitats and the biodiversity they support. It also encourages projects to incorporate into their development, environmental and social strategies that address any major natural habitat issues, including identification of important natural habitat sites, the ecological functions they perform, the degree of threat to the sites, and priorities for conservation.	The 1994 Forest and Wildlife Policy was revised in 2011 and subsequently approved in 2012 aims at the conservation and sustainable development of forest and wildlife resources for the maintenance of environmental stability and continuous flow of optimum benefits from the socio-cultural and economic goods and services that the forest environment provides to the present and future generations, whilst fulfilling Ghana's commitments under international agreements and conventions.	Adequate provisions made under national laws and policies.	The project will take measures to protect and conserve biodiversity and habitats and all requirements specified in the ESS6
ESS8: Cultural Heritage				
<ul style="list-style-type: none"> To protect cultural heritage from the adverse impacts of project activities and support its preservation. To address cultural heritage as an integral aspect of sustainable development. 	This standard sets out general provisions on cultural heritage preservation and recommends protecting cultural heritage from the adverse impacts of project activities. It addresses physical or tangible cultural resources, which are defined as movable or immovable objects, sites,	The Fourth Republic Constitution (1992) recognizes culture as a necessary tool for national integration and development and, under the Directive Principles of State Policy (Article 39), declares as follows:	The regulations and policies do not address cultural heritage as an integral part of sustainable development and promotion of equitable sharing of benefits	The National commission on culture provides a platform for collaboration with Chiefs, opinion leaders and community representatives and other institutions to protect cultural assets. The project will go by the procedures outlined by the Commission in respect of

Scope/Objective	Description of Bank Policy	Description of Government of Ghana Regulation	Gaps Identified	Gap Bridging Actions
<ul style="list-style-type: none"> To promote meaningful consultation with stakeholders regarding cultural heritage. To promote the equitable sharing of benefits from the use of cultural heritage. 	<p>structures, groups of structures, and natural features and landscapes that have archaeological, paleontological, historical, architectural, religious, aesthetic, or other cultural significance. Physical cultural resources may be in urban or rural settings, and may be above or below ground, or underwater. It also addresses intangible cultural heritage such as practices, representations, expressions, instruments, objects and cultural spaces that communities recognize as part of their cultural heritage. Projects involving significant excavations, demolition, movement of earth, flooding, or other environmental changes are to take cognizance of this standard in the ESMF.</p>	<p>(1) Subject to clause (2) of this article, the State shall take steps to encourage integration of appropriate customary values into the fabric of national life through formal and informal education and the conscious Introduction of cultural dimensions to relevant Aspect of national planning.</p> <p>(2) The State shall ensure that appropriate customary and cultural values are adapted and developed as an integral part of the growing needs of the society as a whole; and in particular, that traditional practices which are injurious to the health and well-being of the person are abolished.</p> <p>(3) The State shall foster the development of Ghanaian languages and pride in Ghanaian culture.</p> <p>The Ghana cultural policy (2004) enjoins the National Commission on Culture to undertake the following actions to protect and preserves monument, forests reserves, national parks and recreational facilities</p>		<p>cultural assets. The project will also go the extra mile to complement this collaboration with stakeholder engagement procedures enshrined in the SEP to educate communities to appreciate the role of cultural values and assets in sustainable development and also the need to share benefits accruing from the use of cultural assets.</p>
ESS10: Stakeholder Engagement and Information Disclosure				
<ul style="list-style-type: none"> To establish a systematic approach to stakeholder engagement that will help Borrowers identify stakeholders and build and maintain a constructive relationship with 	<p>ESS10 seeks to encourage open and transparent engagement between the Borrower and the project stakeholders project-affected parties) throughout the project life cycle. The standard</p>	<ul style="list-style-type: none"> The key laws most relevant to stakeholder engagement are: Article 21(1) (f) of the 1992 Constitution of Ghana which recognizes the right to information for all citizens as a 	<p>The regulations to the RTI Act, has not been developed to fully operationalize mechanisms for disclosure or dissemination of</p>	<ul style="list-style-type: none"> The project has developed a stakeholder Engagement Plan. The SEP also includes a GRM based on an existing grievance redress mechanism

Scope/Objective	Description of Bank Policy	Description of Government of Ghana Regulation	Gaps Identified	Gap Bridging Actions
<p>them, in particular project-affected parties. To assess the level of stakeholder interest and support for the project and to enable stakeholders' views to be taken into account in project design and environmental and social performance</p> <ul style="list-style-type: none"> • To promote and provide means for effective and inclusive engagement with project-affected parties throughout the project life cycle on issues that could potentially affect them. • To ensure that appropriate project information on environmental and social risks and impacts is disclosed to stakeholders in a timely, understandable, accessible and appropriate manner and format. <p>To provide project-affected parties with accessible and inclusive means to raise issues and grievances and allow Borrowers to respond to and manage such grievances.</p>	<p>establishes a systematic approach to stakeholder engagement that potentially helps the Borrower to identify stakeholders and build and maintain a constructive relationship with them, as well as disclose information on the environmental and social risks and impacts to stakeholders in a timely, understandable, accessible and appropriate manner and format. It recommends that stakeholder engagements are commenced as early as possible in the project development process and continued throughout the lifecycle of the Project. This allows for stakeholders' views to be considered in the project design and environmental and social performance. The Borrower is also expected to implement a grievance mechanism to receive and facilitate resolution of concerns and grievances.</p>	<p>fundamental human right. To fully operationalized the right to information, people need to be effectively engaged and provided with information on issues that affect their lives.</p> <ul style="list-style-type: none"> • The <i>Right to Information Act, 2019 (Act 989)</i>, which was also passed into law in 2019 by Ghana's parliament is meant to put into effect the aforementioned article in the constitution of the Republic of Ghana. • <i>Articles 40 to 48 of the Local Governance Act, 2016 (Act 936)</i>, mandate local authorities to create opportunities for residents and other stakeholders to access information and to participate in decision making. • Stakeholder engagement is an integral part of the Environmental Impact Assessment process. <i>Ghana Environmental Assessment Regulation LI 1652 (1999)</i>, as amended (2002), requires effective public consultation and participation as an integral component of Environmental and Social Impact Assessment (ESIA) procedures. <p>Strategic goal 4 of the National Environmental Policy, which focuses on participation and coordination in environmental</p>	<p>information and grievance redress.</p>	<p>for resolving grievances for the GDAP.</p> <ul style="list-style-type: none"> • The GRM is a decentralized and transparent system which ensured quick resolution of complaints and disputes, it also has the structure for disclosing vital information to requisite stakeholders • It also provides means for effective and inclusive engagement. This instrument which satisfies almost all the requirements of ESS 10 will be applied during project implementation to bridge the gaps in national regulations and policies

Scope/Objective	Description of Bank Policy	Description of Government of Ghana Regulation	Gaps Identified	Gap Bridging Actions
		governance, charges the lead institutions in environmental governance to ensure active participation in all environmental matters.		

Table 2-8: Gaps Between Ghana Regulations and WB ESS5 and Measures for Bridging the Gaps

Topic	Ghana Legislation Requirement	WB Requirement	Gaps	Project Actions to Align with International Standards
Resettlement planning and documentation	Where compulsory acquisition of land results in displacement of inhabitants, a land acquisition and resettlement plan must be prepared	Various resettlement instruments such as ESMF encompassing resettlement issues, resettlement plan (ARAP/ RAP) and or livelihood restoration plan can be used depending upon the nature and degree of displacement.	The focus of the resettlement instrument in the Ghanaian context is on resettlement of displaced inhabitants. There is no regulations or guidelines for the preparation of the land acquisition and resettlement plan.	Appropriate resettlement instrument, i.e., RAP, in line with WB provisions will be used.
Consultation	A compulsory acquisition of land shall not be undertaken by the State without consultations with relevant stakeholders (i.e., persons with interest in the land, occupiers of the land, Traditional Authorities, and community leaders.	Displaced persons and their communities are consulted on resettlement options, resettlement planning and implementation	Ghanaian legislation does not detail consultation procedures as compared to ESS 5. The consultation is focused on compulsory land acquisition by the State and is to be undertaken by the Lands Commission.	Consultation procedures throughout project cycle shall be implemented in accordance with ESS 5.
Disclosure	A copy of the consultation report for compulsory land acquisition and the land acquisition and resettlement plan shall be made available at the traditional authority, District assembly of the area and affected persons (Act 1036).	Draft resettlement instrument, e.g., RAP, should be submitted for public disclosure purposes	The Ghanaian laws clearly mentions the stakeholders which must be given copies of the land acquisition and resettlement plan document and the consultation report for compulsory land acquisition including displaced persons.	The RAP document shall be disclosed in a format and location accessible to affected persons for a minimum period as required by ESS 5.

Topic	Ghana Legislation Requirement	WB Requirement	Gaps	Project Actions to Align with International Standards
Monitoring	No requirement under Ghanaian law, although due processes have to be followed.	Displaced persons and their communities are offered opportunities to participate in monitoring resettlement.	A monitoring system to evaluate the implementation of the RAP is not required under Ghanaian law.	An appropriate monitoring and evaluation system to cover the resettlement activities will be implemented.
Census and Asset Inventory	Where inhabitants' displacement will not lead to resettlement, census and asset inventory is not a requirement. The focus is to assess the value of the interest in the affected land for compensation payment.	In all cases of resettlement or relocation or displacement, census and asset inventory is required.	Ghanaian law focuses on the person or persons with interest in the land.	ESS 5 requirement will be followed.
Cut-off Date	No clear provision	Cut-off date should be established and disclosed to displaced or affected persons for eligibility.	The Ghanaian laws need to align with the WB ESS 5 requirements to effectively guarantee the rights of all project affected persons.	WB ESS 5 requirement will be followed
Security of Tenure	No clear provision	Requires some security of tenure to displaced persons at resettlement sites.	-	WB ESS 5 requirement will be followed
Replacement Housing / Land	No clear provision or considerations for land for land or house for house replacement as options to be considered.	Land for land or house for house replacement are options to be considered.	Monetary compensation is the focus where compulsory acquisition of land does not result in displacement of inhabitants	Monetary compensations will be considered first under this project. However, in kind compensations is not ruled out and may be considered as appropriate.
Timing of compensation payment	Prompt	Prior to displacement	Compensation payment could be before or after displacement. It is left open.	Compensation payments will be done prior to displacement (or commencement of civil works on the impacted land) Compensation payment should be timely/ prompt to avoid undue delays
Calculation of compensation	Fair and adequate -Market value is to be used where land is acquired for public	Full replacement cost	The market value could be affected by depreciation of the asset.	The Replacement Cost Approach (RCA) will be adopted for the calculation of compensation

Topic	Ghana Legislation Requirement	WB Requirement	Gaps	Project Actions to Align with International Standards
	purposes and monetary compensation is involved			
Squatters	No provision. Are deemed not to be eligible.	Are to be provided resettlement assistance (but no compensation for land)	Squatters are considered unlawful occupants under Ghanaian law and not eligible for any form of compensation	Squatters, including settlers/migrants will be compensated for loss of asset and provided resettlement assistance (but no compensation for land).
Owners of Non-permanent Structures	There are not constitutionally or legislatively recognized resettlement rights or assistance for those without recognized (formal) legal rights to land. Those without recognized legal rights are given some limited time to move their properties from the right-of-way or project site without any assistance.	For those without formal legal rights to lands or claims to such land or assets that could be recognized under the laws of the country, Bank policy provides for resettlement assistance in lieu of compensation for land, to help improve or at least restore their livelihoods	When the allotted time to remove such properties from the project site expires, the State will forcefully remove such properties from the site and not liable for any damages to such properties or compensation thereof.	Owners of temporary structures shall be provided resettlement assistance (relocation cost and supplemental assistance for reinstatement period) to help improve or at least restore their livelihoods.
Owners of Permanent Structures	The Land Valuation Division (LVD) is responsible for the computation of compensation on the basis of market value in the case of land and replacement value for houses and other properties damaged or destroyed as a result of the acquisition.	Entitled to in-kind compensation or cash compensation at full replacement cost including labor and relocation expenses, prior to displacement.	The State will destroy any such unlawful permanent structures from the site and not responsible for any liability thereof. No assistance or compensation is given to owners of unlawful permanent structures.	Owners of permanent structures shall be paid cash compensation at the full replacement cost (including labor and relocation expenses) without consideration for depreciation (as if new) prior to displacement

Topic	Ghana Legislation Requirement	WB Requirement	Gaps	Project Actions to Align with International Standards
Resettlement	In the event where inhabitants have to be physically displaced, the State is to resettle them on “suitable land with due regard for their economic well-being and social and cultural values”	Affected people who are physically displaced are to be provided with residential housing, or housing sites, or, as required, agricultural sites at least equivalent to the old site. Preference to be given to land-based resettlement for displaced persons whose livelihoods are land-based	No major gaps for physical displacement provisions. However, additional resettlement assistance is not specifically and directly mentioned in Ghanaian law.	Physically displaced PAPs are to be provided with housing sites at least equivalent to the old site. Preference to be given to land-based resettlement for displaced persons whose livelihoods are land-based (i.e., farmers, etc.). Periodic monitoring is required during project life to ensure that the PAPs have adjusted to their new environment
Resettlement assistance	No specific provision with respect to additional assistance and monitoring	Affected people are to be offered support after displacement, for a transition period	Not specifically and directly mentioned.	Affected people will be offered resettlement support to cover a transition period. For example, psycho-social counselling could be provided for PAPs to help them accept the changes
Vulnerable groups	No specific provision	Particular attention to be paid to vulnerable groups, especially those below the poverty line, the landless, the elderly, women and children	Supplementary assistance for vulnerable persons that cannot accomplish resettlement task not catered for in Ghanaian law.	Particular attention to be paid to vulnerable groups, especially those below the poverty line, the landless, the elderly, women and children
Improve or Restore Conditions / Livelihoods and Provide Associated Transitional Support	There are no specific laws or regulations specifying support for livelihood restoration and transition and moving allowances. However, the resettlement should take cognizance of	Livelihoods and living standards are to be restored in real terms to pre-displacement levels or better.	There are no regulations to provide guidance on how the State should take cognizance of the economic well-being of displaced persons. It is not clear if livelihoods are to be restored or improved upon.	The project will implement a livelihood restoration and assistance program to help restore the livelihoods and living standards of PAPs in real terms to pre-displacement levels or better

Topic	Ghana Legislation Requirement	WB Requirement	Gaps	Project Actions to Align with International Standards
	the economic well-being of the displaced persons			
Information and consultation	The owner/occupier of the land must be formally notified at least a week in advance of the intent to enter, and be given at least 24 hours' notice before actual entry	Displaced persons and their communities are provided timely and relevant information, consulted on resettlement options, and offered opportunities to participate in planning, implementing, and monitoring resettlement		Displaced persons and their communities will receive timely and relevant information, consulted on resettlement options, and offered opportunities to participate in planning, implementing, and monitoring resettlement
Grievance	-Access to Court of Law -Use of Alternative Dispute Resolution (ADR Act 2010)	Appropriate and accessible grievance mechanisms to be established	The informal grievance redress mechanism or procedures not clearly established and easily accessible.	Appropriate and accessible grievance mechanisms will be established. The GRM will be accessible, reliable and transparent

2.4 World Bank Environment, Health and Safety (EHS) Guidelines

The World Bank Group (WBG) Environmental, Health, and Safety (EHS) Guidelines (General EHS Guidelines, April 30, 2007) are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP). The industry sector EHS guidelines are designed to be used together with the General EHS Guidelines document. The applicable EHS guidelines include:

1. General EHS Guidelines
2. EHS Guidelines for Construction Materials Extraction

2.4.1 General EHS Guidelines

The General EHS Guidelines (April 30, 2007) provides guidance to users on common EHS issues potentially applicable to all industry sectors. The general guidelines provide GIIP advice relating to the following elements to protect human health and the environment:

Environmental

- Air Emissions and Ambient Air Quality;
- Wastewater and Ambient Water Quality;
- Water Conservation;
- Hazardous Materials Management;
- Waste Management;
- Noise; and
- Contaminated Land.

Occupational Health and Safety

- General Facility Design and Operation;
- Communication and Training;
- Hazards- Physical, Chemical, Biological and Radiological;
- PPE Usage; and
- Monitoring.

Community Health and Safety

- Water Quality and Availability;
- Structural Safety of Project Infrastructure;
- Life and Fire Safety;
- Traffic Safety; and
- Emergency Preparedness and Response.

The WBG General EHS Guidelines are relevant to the proposed project as they provide internationally accepted GIIP for relevant EHS issues. The recommendations contained in the guidelines are to be reviewed during ESIA/ EIA and ESMP/ EMP preparations for sub-projects and will be incorporated into the prescribed management and mitigation measures as appropriate.

2.4.2 EHS Guidelines for Construction Materials Extraction

The EHS Guidelines for Construction Materials Extraction (April 30, 2007) include information relevant to construction materials extraction activities such as aggregates, limestone, slates, sand, gravel, clay, gypsum, feldspar, silica sands, and quartzite, as well as to the extraction of dimension stone. It addresses stand-alone projects and extraction activities supporting construction, civil works, and cement projects. Although the construction materials extraction guidelines emphasize major and complex extraction schemes, the concepts are also applicable to small operations.

The EHS Guidelines of the World Bank relevant to this project are further expatiated hereunder:

Air Emissions and Ambient Air Quality: This guideline applies to facilities or projects that generate emissions to air at any stage of the project life cycle. It complements the industry-specific emissions guidance presented in the Industry Sector Environmental, Health, and Safety (EHS) Guidelines by providing information about common techniques for emissions management that may be applied to a range of industry sectors. This guideline provides an approach to the management of significant sources of emissions, including specific guidance for assessment and monitoring of impacts. It is also intended to provide additional information on approaches to emissions management in projects located in areas of poor air quality, where it may be necessary to establish project-specific emissions standards.

Hazardous Material Management: These guidelines apply to projects that use, store, or handle any quantity of hazardous materials (HAZMATs), defined as materials that represent a risk to human health, property, or the environment due to their physical or chemical characteristics. HAZMATs can be classified according to the hazard as explosives; compressed gases, including toxic or flammable gases; flammable liquids; flammable solids; oxidizing substances; toxic materials; radioactive material; and corrosive substances. The potential use of agrochemicals in the implementation of the Climate Change sub-project makes this guideline relevant to the project.

Waste Management: These guidelines apply to projects that generate, store, or handle any quantity of waste across a range of industry sectors. It is not intended to apply to projects or facilities where the primary business is the collection, transportation, treatment, or disposal of wastes. Construction (excavated spoils) and domestic waste (from the numerous beneficiaries to be engaged) expected to be generated from various sites makes this guideline relevant to the project's implementation.

Noise Management: This guideline addresses impacts of noise beyond the property boundary of the facilities or projects being implemented. Thus, it seeks to address the public health risks of noise generated from the project and not the occupational health risks.

Occupational Health and Safety: This guideline provides guidance and examples of reasonable precautions to implement in managing principal risks to occupational health and safety. Although the focus is placed on the operational phase of projects, much of the guidance also applies to construction and decommissioning activities. Guidance provided under this guideline will be helpful in managing such risks.

Community Health and Safety: Specific guidelines provided under traffic safety, water quality and availability, disease prevention and construction and decommissioning presented in this guideline are relevant to the implementation of the project's sub-project activities.

2.5 World Bank COVID-19 Guidelines

The World Bank COVID-19 guidelines emphasize the importance of careful scenario planning, clear procedures and protocols, management systems, effective communication and coordination and the need for high levels of responsiveness in a changing environment due to the COVID 19 pandemic. It recommends assessing current situation of projects, putting in place mitigation measures to avoid or minimize the chances of spread of the virus. Recommendations are made to cover cleaning and waste disposal, medical services and general hygiene for the workforce together with management of site entry and exit points, work practices and medical supplies for site workers. The guidelines acknowledge that national and local laws may impose social distancing, restriction on movement and large gatherings as measures to minimize the spread of COVID 19 together with the fact the general public may be averse to large gathering as they protect themselves from COVID 19. The Bank further acknowledges that COVID-19 spread, and restrictions can adversely affect the extent to which the project can meet the requirements of ESS10.

3 OVERVIEW OF ESS5- LAND ACQUISITION, RESTRICTIONS ON LAND USE AND INVOLUNTARY RESETTLEMENT

This section presents an overview of the World Bank standard on Land Acquisition, Restrictions on Land Use and Involuntary Resettlement (ESS5). It presents the objectives, scope and requirements and the key elements in addressing resettlement issues in the proposed project.

The project will therefore avoid forced eviction and mitigate unavoidable adverse social and economic impacts from land acquisition or restrictions on land use by providing timely compensation for loss of assets at replacement cost and assisting displaced persons in their efforts to improve or restore their livelihoods and living standards.

ESS5 recognizes that project-related land acquisition and restrictions on land use can have adverse impacts on communities and PAPs. Project related land acquisition or restrictions on land use may cause physical displacement (relocation, loss of residential land or loss of shelter), economic displacement (loss of land, assets or access to assets, leading to loss of income sources or other means of livelihood), or both.

Where compulsory acquisition of land results in displacement of inhabitants, a land acquisition and resettlement plan must be prepared i.e., a Resettlement Action Plan (RAP) outlining the processes and procedures for resettlement/ compensation including livelihood restoration measures. **Appendix 3-1** presents a template for preparing a RAP.

3.1 Objectives of ESS5

The objectives of ESS5 are to:

- Avoid involuntary resettlement or, when unavoidable, minimize involuntary resettlement by exploring project design alternatives.
- Avoid forced eviction.
- Mitigate unavoidable adverse social and economic impacts from land acquisition or restrictions on land use by: (a) providing timely compensation for loss of assets at replacement cost and (b) assisting displaced persons in their efforts to improve, or at least restore, their livelihoods and living standards, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher.
- Improve living conditions of poor or vulnerable persons who are physically displaced, through provision of adequate housing, access to services and facilities, and security of tenure.
- Conceive and execute resettlement activities as sustainable development programs, providing sufficient investment resources to enable displaced persons to benefit directly from the project, as the nature of the project may warrant.

- Ensure that resettlement activities are planned and implemented with appropriate disclosure of information, meaningful consultation, and the informed participation of those affected

3.2 Scope of Application

This ESS5 applies to permanent or temporary physical and economic displacement resulting from the following types of land acquisition or restrictions on land use undertaken or imposed in connection with project implementation:

1. Land rights or land use rights acquired or restricted through expropriation or other compulsory procedures in accordance with national law;
2. Land rights or land use rights acquired or restricted through negotiated settlements with property owners or those with legal rights to the land, if failure to reach settlement would have resulted in expropriation or other compulsory procedures;
3. Restrictions on land use and access to natural resources that cause a community or groups within a community to lose access to resource usage where they have traditional or customary tenure, or recognizable usage rights. This may include situations where legally designated protected areas, forests, biodiversity areas or buffer zones are established in connection with the project;
4. Relocation of people without formal, traditional, or recognizable usage rights, who are occupying or utilizing land prior to a project specific cut-off date;
5. Displacement of people as a result of project impacts that render their land unusable or inaccessible;
6. Restriction on access to land or use of other resources including communal property and natural resources such as marine and aquatic resources, timber and non-timber forest products, fresh water, medicinal plants, hunting and gathering grounds and grazing and cropping areas;
7. Land rights or claims to land or resources relinquished by individuals or communities without full payment of compensation; and
8. Land acquisition or land use restrictions occurring prior to the project, but which were undertaken or initiated in anticipation of, or in preparation for, the project.

3.3 Eligibility Classification

Affected persons may be classified as persons: (a) Who have formal legal rights to land or assets; (b) Who do not have formal legal rights to land or assets, but have a claim to land or assets that is recognized or recognizable under national law; or (c) Who have no recognizable legal right or claim to the land or assets they occupy or use.

3.3.1 Eligibility Criteria and Entitlement Framework

In line with the ESS5 requirements, eligibility for resettlement entitlements is determined by land ownership and severity of the resettlement impacts (land take, displacement, loss of livelihoods etc). Land ownership includes Allodial Title, Customary Freehold, Customary Tenancies, The Common Law Freehold and The Leasehold. The severity of the resettlement impacts may range from minor to severe. Minor resettlement impacts occur when “less than 10% of the PAPs productive assets are lost,” with no physical relocation. Severe impact is when more than 10% of land (or resources) is taken, physical relocation occurs from one’s residence or place of business, or people suffer significant loss of livelihood and income. The type of ownership or claim, in combination with the severity of impact, determines the relevant resettlement entitlements, which are generally defined in proportion to the resettlement impact on displaced persons.

Project Affected Persons and Cut-Off-Date

Project Affected Persons (PAPs) are described as persons affected by land acquisition, relocation, or loss of incomes associated with the acquisition of land and/or other assets as well as the restriction of access to legally designated sites and protected areas. In this project, affected persons include owners of landed or fixed assets, businesses within immovable structures, farm crops (i.e., farmers), temporary structures, moveable trading chattels i.e., “permanent” street vendors” and community ownership of economic trees as well as women and vulnerable groups. The category of losses suffered will be identified through the various interests and rights derived from customary laws, common law and international conventions.

GDAP will establish a Cut-Off-Date (COD) following an initial notification to PAPs and other relevant stakeholders. The Cut-Off Date could be the last day on which the appointed Licensed Valuer (private or from LVD) would complete the property impact identification, verification and valuation process. Any cultivation or improvement of property after this date is deemed ineligible for compensation/ livelihood restoration.

Eligibility Criteria and Proof of Eligibility

In conformance with ESS5, any person who suffers loss of or damage to an asset or loss of access to productive resources, as a consequence of the implementation of the proposed project would be considered eligible for compensation and/or resettlement assistance, provided the damage or loss is caused by the project and satisfies the conditions of the cut-off date. Thus, all project affected persons irrespective of their status or whether they have formal titles, legal rights or not, squatters or otherwise are eligible for assistance if they occupied the land before the cut-off date.

GDAP and LVD will consider various forms of evidence as proof of eligibility. The proof of eligibility will cover affected persons with formal legal rights, documented in the form of land title registration certificates, leasehold indentures, tenancy agreements, rent receipts, building and planning permits, business operating licenses, and utility bills, among others will be eligible. However unprocessed/unregistered formal legal documents will not bar eligibility. Procedures for

confirming authenticity of any such documents are established by LVD. These affected persons may include house owners and owners of residential plots with no formal or recognized legal rights. The criteria for establishing non-formal, undocumented, unrecognized claims to eligibility are one's (PAP's) presence on the corridor during the PAP census survey within the declared COD.

Entitlement Matrix

The Entitlement Matrix establishes the basis of what is to be paid as compensation and will be determined by identifying the most appropriate entitlement for each loss. Based on the entitlements, compensation options will be selected in accordance with ESS5. Entitlement packages for the various categories of PAPs would include:

- Cash Compensation;
- Cash Supplementary Assistance and/or Allowances; and
- Livelihood Assistance.

Table 3-1 presents the Entitlement Matrix, which sets the measures for compensation for all losses or impacts. The Entitlement Matrix lists the type of loss, criteria for eligibility and specified entitlement.

Table 3-1: Entitlement Matrix

	Type of Loss	Entitled Units	Eligibility Criteria	Entitlement
LAND	Permanent acquisition of land (agricultural, residential, or commercial)	Landowner (individual, household or stool) i.e., various interest and rights – allodial title holder, freeholder, leaseholder, tenant, licensee	Own the affected plot in a recognized manner under Ghanaian law (which includes ownership under both common and customary laws)	<ol style="list-style-type: none"> 1. Replacement by a piece of land of equivalent potential (if agricultural) located in the vicinity of the affected plot or Cash compensation at full replacement value if there is substantial evidence that the piece of land taken is not critical to the landowners’ or user’s livelihood. Compensation to be negotiated based on valuation by LVD or certified valuer 2. Disturbance allowance (10%)
	Acquisition of easement rights	Landowner (individual, household or stool)	Own the affected plot (same as above)	<ol style="list-style-type: none"> 1. Cash compensation of the restriction of use resulting from the easement. Compensation to be negotiated based on valuation by LVD or certified valuer 2. Disturbance allowance (10%)
	Temporary occupation of land	Landowner (individual, household or stool)	Own the affected plot (same as above)	<ol style="list-style-type: none"> 1. Full reinstatement to pre-Project conditions 2. Rent to be agreed upon for the period during which land is occupied
CROPS	Destruction of standing crops	Landowner or tenant / sharecropper	Have grown the affected crop (regardless of related plot ownership)	<ol style="list-style-type: none"> 1. Cash compensation for standing crops that cannot be harvested prior to land entry, counted at cut-off date and negotiated based on LVD rates 2. Disturbance allowance (10%)
	Damage to crops	Landowner or tenant / sharecropper	Have grown the affected crop (regardless of plot ownership)	<ol style="list-style-type: none"> 1. Cash compensation for damaged crops counted at cut-off date and negotiated based on LVD rates 2. Disturbance allowance (10%)
STRUCTURES	Destruction of permanent immovable structures	Owner	Evidence of ownership of the affected structure (regardless of ownership of the plot where the structure is located)	<ol style="list-style-type: none"> 1. Resettlement to a similar dwelling in similar location or Cash compensation at full replacement value of structure 2. Cost of moving 3. Disturbance allowance (10%)
		Occupant	Live in the affected structure on a permanent basis (tenant)	<ol style="list-style-type: none"> 1. Cost of moving belongings from the property 2. Disturbance allowance (equal to three monthly rents or 10% of moving cost)
	Temporary displacement of moveable structures	Owner	Own the affected structure (regardless of related plot ownership)	<ol style="list-style-type: none"> 1. Cost of displacing the affected structure 2. Cost of moving the affected structure back to Project-affected land 3. Disturbance allowance (10%)

	Type of Loss	Entitled Units	Eligibility Criteria	Entitlement
LIVELIHOODS	Agriculture	Farmer (may be distinct from the affected land owner)	Use Project affected land for agriculture, regardless of the ownership situation (includes squatters)	<ol style="list-style-type: none"> 1. Cash compensation of any loss of income incurred as a result of the Project, including during the transition period where the farmer is resettled 2. Assistance to livelihood restoration up to pre-Project conditions and related monitoring
	Businesses	Business person (may be distinct from owner of structure where business takes place)	Operate a business on Project affected land, regardless of the land ownership situation (includes squatters)	<ol style="list-style-type: none"> 1. Cash supplemental assistance of temporary loss of income incurred because of the Project during the period required to re-establish the business to pre-Project conditions 2. Assistance to livelihood restoration up to pre-Project conditions, if necessary, and related monitoring
	Use of communal resources	User of such resources (can be individuals or communities)	Use communal resources as an element of livelihood	<ol style="list-style-type: none"> 1. Assistance in identifying and accessing similar resources elsewhere 2. Cash compensation of temporary loss of income incurred because of the Project during the period required to access similar resources elsewhere\
	Loss of Employment	Worker being redeployed/ severance	In formal employment of the organization (employer) undergoing changes that will necessitate involuntary resettlement	<ol style="list-style-type: none"> 1. Redundancy Payment as per prescription of Act 651 (section 65)

3.4 Livelihood Restoration and Support Initiatives

The proposed project will fulfil the WB requirement to at least restore PAPs livelihood. Some displacement impacts will be addressed by means of the project design through, for example, making livelihood restoration an integral part of the project resettlement and impact mitigation process. These will include providing some employment opportunities for interested PAPs; i.e. re-training in alternative skills for the establishment of new livelihoods; training and capacity building to enhance current economic activities; establishment of utilities and services for the relocation sites (e.g., electricity, water, sanitation, transport, health, education, etc.); and environmental management aimed at the sustainable use of resources (water, land, fisheries, agriculture, etc.). The livelihood restoration and support initiatives are described in detail hereunder.

Optimization of Employment Opportunities

Interested PAPs that will be displaced will be considered for unskilled work during the construction phase of the project. PAPs with relevant skills and qualification will be offered opportunities to be engaged for positions such as carpentry, masonry, plumbing, clerks, secretaries for secretarial duties, health and safety officers, etc. This will help them to also acquire the necessary skills in the construction sector and also prepare them for future construction projects.

Support for Development of Farms (Affected Farm Lands)

GDAP will provide support for development of new farms where applicable by affected farmers who would like to continue with the usual farming activity. Such affected farmers however, will be required to secure land for such purposes outside the subproject location. Farmers will be given an additional support in the form of agricultural inputs such as seeds and fertilizers.

GDAP will liaise with Ministry of Food and Agriculture (MoFA) to support affected farmers with technical knowledge to boost their farming businesses. Where possible, planting materials and fertilizers will be provided as well. In the event that an entire farm is impacted, GDAP will provide the necessary support to the affected farmers for re-establishment of their farms. In this scenario, the farmers will be required to secure suitable land outside subproject location for their farming activities.

Opportunities for Affected Women Traders to Sell Near Construction Sites

Female PAPs, for instance, will be given the opportunity to sell near the construction site to earn additional income. Again, in collaboration with NGOs and the District Assemblies (DAs), financial assistance will be made easily accessible to PAPs, especially women to invest in any business venture of their choice that is profitable and sustainable.

Other Livelihood Restoration Programs

Other livelihood restoration programs that can be offered to PAPs include:

- Financial training for sustainable use of cash compensation;
- Agricultural extension training to increase production;
- Livestock rearing training to increase production; and
- Business skills training, agricultural business skills training, and training on how to venture into alternative income generating activities.

The proposed project will do these in collaboration with already existing institutions and programs with recognized bodies such as NGOs in specific fields, the Ministry of Gender, Children and Social Protection (MGCSP), Metropolitan, Municipal and District Assemblies (MMDAs), EPA, MoFA, the Ministry of Trade and Industry (MOTI), the National Board for Small Scale Industries (NBSSI), Business Advisory Centers (BACs), the Women in Agricultural Development Project, Youth in Agriculture (for 18-35 year olds), the National Youth Employment Program (NYEP), Technology Transfer Facilitation Centers (for repairs of small hand machines), and GRATIS Foundation (fabrication of simple hand tools).

Interested employees, apprentices and helpers of businesses that will be displaced and cannot be considered for employment as laborers during the construction phase of the subproject will be offered some training of their choice such as dressmaking, hairdressing, soap making, carpentry, welding, etc. to further enhance their skills.

3.5 Vulnerabilities

Vulnerability is a pre-existing condition independent of the proposed project, which is reflected in an individual or group's ability to access socioeconomic or environmental resources, or low status in certain socioeconomic indicators (health, education, income etc.). Vulnerable individuals and groups are often less able to adapt to socioeconomic or bio-physical change and usually find it hard to access benefits from Project related changes.

Some groups of people stand a higher chance or risk of becoming vulnerable due to the displacement, compensation, and resettlement process. These group or people include, but not limited to:

- disabled persons, whether mentally or physically;
- the elderly, usually above 60 years;
- widows;
- children;
- orphans;
- female heads of households.
- Squatters????

It is imperative that during implementation of GDAP, special attention is paid to vulnerable PAPs who may lose the support of their benevolent and social networks especially where cash

compensation is opted for by PAPs. This calls for careful screening to help vulnerable groups improve or at least re-establish their lives and livelihoods. In addition, adequate relocation expenses including moving allowances, transportation, special assistance and health care should be provided for the vulnerable persons as part of their livelihood restoration program.

3.5.1 Vulnerable PAPs – Factors Used in Assessment

Four (4) main indicators may be applicable in assessing the vulnerability level of PAPs and they are as follows:

1. Female-Headed Household: Female PAPs who are household heads (breadwinners) and are taking care of the household (there are no child headed households).
2. Disability: PAPs with disability, i.e., PAPs who have impediment in seeing (blindness), walking, hearing, etc.
3. Poverty: Households with incomes falling under the generally accepted indicator of poverty (Less than \$2 per day).
4. Age: PAPs who are 60 years old and above are considered old and cannot work as they used to.

3.6 Grievance Mechanism

The Borrower will ensure that a grievance mechanism for the project is in place, as early as possible in project development to address specific concerns about compensation, relocation or livelihood restoration measures raised by displaced persons (or others) in a timely fashion. Where possible, such grievance mechanisms will utilize existing formal or informal grievance mechanisms suitable for project purposes, supplemented as needed with project-specific arrangements designed to resolve disputes in an impartial manner.

3.7 Stakeholder Engagement

Stakeholder engagement refers to a process of sharing information and knowledge related to the project activities, seeking to understand and respond to the PAPs concerns and building relationships based on collaboration. It will be the responsibility of MoCD and the PCU to keep everyone involved, motivated and updated about the project activities, ensuring that there is a shared understanding of meaning and minimizing the opportunity for rumors and gossip.

A resettlement stakeholder engagement plan taking cognizance of the SEP already prepared and disclosed should be prepared as part of the Resettlement Action Plan (RAP).

3.8 Monitoring and Evaluation

This section describes how the implementation of the RAP will be supervised internally and externally and evaluated at longer intervals and at the end of implementation. Monitoring involves

regular checking to ascertain whether activities are going according to the Plan. It provides the feedback necessary for the project management to keep the programs on schedule. By contrast, evaluation is essentially a summing up assessment of whether those activities actually achieved their intended aims. Internally, monitoring and evaluation will be undertaken by a team from MoCD, PCU, EPA and LVD. Its objectives are to monitor specific situations arising from implementation; and to evaluate the short- and long-term impacts of the implementation of the project RP on PAPs. This should be done in line with the overall project safeguards monitoring.

3.8.1 Purpose of Monitoring

The purpose of monitoring is to provide project management and PAPs with well- timed, concise, analytic information on whether compensation, resettlement and other impact mitigation measures are on track to achieve sustainable restoration and improvement in the welfare of PAPs, or that adjustments are needed. In short, monitoring answers the question: Are Project resettlement/ compensation and other impact mitigation measures on time and having the intended effects?

Monitoring verifies that:

- Actions and commitments for resettlement/ compensation, land access and development in the RP are implemented fully and on time;
- Eligible PAPs receive their full compensation on time, prior to the start of the main project activities on the corridors;
- RAP actions and compensation measures have helped the PAPs who sought cash compensation in restoring their lost incomes and in sustaining/improving pre-project living standards;
- Compensation and livelihood investments are achieving sustainable restoration and improvement in the welfare of PAPs and communities;
- Complaints and grievances are followed up with appropriate corrective action and, where necessary, appropriate corrective actions are taken; if necessary, changes in RP procedure are made to improve delivery of entitlements to PAPs; and
- Vulnerable persons are tracked and assisted as necessary.

3.8.2 Internal Monitoring and Evaluation

The objective of the internal monitoring and evaluation is to ascertain that:

- The specific actions and commitments described in the RP are fully implemented;
- PAPs receive their compensation;
- Complaints and grievances lodged by affected persons are given priority and resolved; and
- Record of experiences is kept for future reference.

Internal monitoring of the resettlement activities will be undertaken by the Monitoring and Evaluation Team (MET) to be led by the Safeguards Specialist who will be expected to develop and implement a Monitoring and Evaluation Plan (MEP). This plan will include the measurements

of some main indicators such as: the impacts on the affected persons, households to be maintained at their pre- project standard of living and the management of disputes or conflicts.

The internal monitoring will look at inputs, outputs and outcomes of resettlement/ compensation and other impact mitigation measures. Input monitoring will establish if staff, organization, finance, equipment, supplies and other inputs are on schedule, in the requisite quantity and quality. Output monitoring will establish if agreed outputs are realized on time for:

- Communication with PAPs;
- Agreed resettlement and compensation policy, procedures, and rates;
- Compensation for crops, structures and business;
- Livelihood program delivery and uptake;
- Grievance resolution; and
- Attention to vulnerable people.

Outcome (or effectiveness) monitoring will determine the degree to which the program objectives and performance targets have been achieved as summarized in **Table 3-2**.

Table 3-2: Internal Performance Monitoring Milestones

Results Levels	Indicators
Input	Payment of Compensation
	Site visits to encourage PAPs to move
Output	Number of PAPs relocated
	Number of temporary structures removed
Outcome	PAPs relocated
	Grievance redress procedures established and working
	Monitoring results produced

Field supervision will be the responsibility of the Safeguards Specialist as well as other members of the MET who will undertake the routine internal monitoring and evaluation of the implementation of the resettlement issues so as to ensure that all the responsible teams follow the schedule and comply with the principles of the RP. A record of activities shall be captured regularly by the MET, which will be subject to review by the Project Coordinator and other key specialists at MoCD. The Safeguards Specialist will continuously discuss reports received and assess solutions proposed. This will ensure that the resettlement is successfully implemented.

3.8.3 External Monitoring and Evaluation

The EPA and an NGOs operating in the area of a subproject will undertake external monitoring of the resettlement plan. The presence of representatives of the WB will further ensure on-going external monitoring. The WB team will receive and review reports from the Safeguards Specialist and conduct occasional missions to assess the proposed project. The external monitoring will:

- Determine compliance of RP implementation with RP objectives and procedures;

- Ascertain whether the resettlement entitlements are appropriate for meeting the objectives, and whether the objectives are suitable to PAPs' conditions;
- Determine compliance of RP implementation with applicable national laws and regulations and compliance with ESS5;
- Determine RP impact on standard of living, with a focus on the “no worse-off if not better off” objective;

Verify results of internal monitoring;

- Assess whether resettlement objectives have been met: specifically, whether Livelihood Programs have restored the livelihoods of the PAPs and their living conditions have improved;
- Assess the resettlement efficiency, effectiveness, impact and sustainability, drawing lessons for future resettlement activities and recommending corrections in the implementation process; and
- Assess grievance records, to identify implementation problems and status of grievance resolution.

3.9 Implementation Completion Report

The MoCD through the PCU shall commission an external party to undertake an evaluation of RP's physical inputs to ensure and assess whether the outcome of RP complies with the WB ES5. The completion audit shall be undertaken after RP inputs. The audit shall verify that all physical inputs committed in the RP have been delivered and all services provided. It shall evaluate whether the mitigation measures prescribed in the RP have achieved the desired effect. The completion audit should bring to closure MoCD/PCU's implementation of the resettlement.

To provide guidance for lessons learnt, an implementation completion report will be submitted upon the full resettlement of the PAPs by the Safeguards Specialist. This will capture the objectives, processes and implementation challenges of the resettlement/ compensation procedure, outstanding issues (if any) and grievances yet to be addressed as well as the key lessons learnt from the process.

3.10 Institutional Responsibilities and Budget for Implementation

An institutional Framework and Budget for implementing the RP should be provided based on (i) total compensation to PAPs.

4 OVERVIEW OF ESS2- LABOR AND WORKING CONDITIONS

This section presents an overview of the ESS on Labor and Working Conditions (ESS2). It presents the objectives, scope and requirements and the key elements in addressing labor issues in the proposed project.

ESS2 recognizes the importance of employment creation and income generation in the pursuit of developmental projects. It seeks to promote sound worker-management relationships and enhance the development benefits of a project by treating workers in the project fairly and providing safe and healthy working conditions.

4.1 Objective of ESS2

The objectives of ESS2 are to:

- To promote safety and health at work;
- To promote the fair treatment, nondiscrimination and equal opportunity of project workers;
- To protect project workers, including vulnerable workers such as women, persons with disabilities, children (of working age, in accordance with this ESS) and migrant workers, contracted workers, community workers and primary supply workers, as appropriate;
- To prevent the use of all forms of forced labor and child labor;
- To support the principles of freedom of association and collective bargaining of project workers in a manner consistent with national law; and
- To provide project workers with accessible means to raise workplace concerns.

4.2 Scope of Application of ESS2

The scope of application of ESS2 depends on the type of employment relationship between the project and the project workers, which refers to:

- people employed or engaged directly by the project to work specifically in relation to the project (direct workers);
- people employed or engaged through third parties to perform work related to core functions of the project, regardless of location (contracted workers);
- people employed or engaged by the project primary suppliers (primary supply workers); and
- people employed or engaged in providing community labor (community workers).

4.3 Requirements

Under ESS2, it is expected that the project will develop and implement written Labor Management Procedures applicable to the project. These procedures set out the way in which project workers will be managed, in accordance with the requirements of national laws and ESS2. The procedures address the way in which ESS2 applies to different categories of project workers including direct workers, and the way in which the project will utilize third parties to manage their workers.

It is envisaged that the proposed project activities will involve three types of employment including:

- i. direct workers - the Program Coordination Unit (PCU), who will be directly engaged on a permanent basis;
- ii. contracted workers through third parties, such as people employed or engaged through third parties (contractors, sub-contractors, brokers, agents and intermediaries) to perform work related to core functions of the project, regardless of location; and
- iii. primary supply workers – who will be engaged by the construction company’s primary suppliers. There will also be community workers involved in the project.

4.4 The Labor Management Procedure

A Labor Management Procedure (LMP) has been prepared for GDAP in line with the requirements of ESS2 (see **Appendix 4-1**). This LMP provide an overview of the applicable national legislative and World Bank Environmental and Social Standard 2 (ESS2) provisions and how the risks and issues related to labor will be managed in the implementation of GDAP. It is expected that Labor Management Plans for the individual components will be prepared by the relevant contractors and will be reviewed and cleared by the Safeguards Specialist/PCU as appropriate. The LMP will ensure that the labor policy is respected and that all workers benefit from the project. The Health and Safety Management Plan will be prepared to make sure the work is conducive to health and the work place and working conditions are safe and materials including Personal Protective Equipment (PPE) are in good conditions and are adequately taken care of.

5 ENVIRONMENTAL AND SOCIAL BASELINE CONDITIONS OF GHANA

5.1 General

Ghana is situated on the west coast of Africa and lies close to the equator within longitudes 3°5'W and 1° 10'E and latitudes 4°35'N and 11°N, with a total area of 238,535km². The country has a north-south extent of about 670 km and a maximum east-west extent of about 560 km. It shares borders with Côte d'Ivoire to the west, Burkina Faso to the north, and Togo to the east. To the south is the Gulf of Guinea which form part of the larger Atlantic Ocean. The country has 16 administrative regions (see **Figure 5-1**) and 260 Metropolitan, Municipal and District Assemblies (MMDAs).



Figure 5-1: Map of Ghana Showing the 16 Administrative Regions

5.2 Physical Environment

5.2.1 Climate and Weather Conditions

The climate of Ghana is characterized by dry and wet seasons, a typical tropical monsoonal climate. Rainfall in this region is mainly associated with mesoscale convective systems and controlled by the advection of moisture from the Gulf of Guinea in the low-level atmosphere. This system is usually referred to as the West African Monsoon (WAM), and it is driven by the energy and temperature gradient between the Gulf of Guinea and the Sahara. The maritime tropical air mass, which originates from the Atlantic Ocean, is moisture laden and converges with the dry northeast continental tropical air mass, usually along the Inter-Tropical Discontinuity (ITD). Therefore, the spatial pattern of annual rainfall is closely related to the north- and south-ward migration of the ITD, resulting in changes in the rainfall regime from the south to north of the country. This gives rise to two rainfall regimes: bi-modal in the south, consisting mainly of coastal and the forest zones, and uni-modal in the northern part of the country, consisting of part of the transition and savannah zones (Amekudzi et al, 2015).

Using the average characteristics of rainfall, temperature, and humidity for a period of 25 – 30 years, Ghana has been classified into four main climatic regions - the South-western Equatorial Climatic Zone, Dry Equatorial Climatic Zone, Wet-semi–Equatorial Climatic Zone and Tropical Continental (savannah) Climatic Zone.

Southwestern Equatorial Climatic Zone: It is the wettest climatic zone in Ghana with a double maxima rainfall regime. Mean annual rainfall is above 190cm and an average monthly precipitation of not less than 2.5cm. The highest monthly temperature of about 30oC is recorded between March and April and the lowest of about 26oC in August. Monthly relative humidity (average) of 75-80% during the two rainy seasons and the lowest of 70-80% during the rest of the year. (Dickson and Benneh, 1988). Average annual wind speed, sunshine hours and solar radiation 133 km/day, 6.2 hours and 18.1 MJ/m² /day respectively. (EPA, 2002).

Dry Equatorial Climatic Zone: This Climatic zone has a more marked dry season even though it also has double rainfall maxima. Between 74 and 89cm of mean annual rainfall are recorded. Despite its location, this zone is the driest in the country. Temperatures recorded are however just like that of the South Western Equatorial Climatic Zone - mean monthly temperatures of 30oC between March and April and 26oC in August. Highest average relative humidity does not exceed 75%, with the lowest being about 60% (Dickson and Benneh, 1988). Average annual wind speed, sunshine hours and solar radiation are 251 km/day, 6.5 hours and 18.6 MJ/m² /day respectively. Annual potential evaporation is about 1504 mm, respectively. (EPA, 2002).

Wet-semi–Equatorial Climatic Zone: This zone is also characterized by double maxima rainfall regime but has a mean annual rainfall of between 125 and 200cm. Some of the wetter areas include the Akwapim-Togo Ranges and the Southern Voltaian Plateau where annual rainfall exceeds 165cm. The first rainy season is from May to June and the second rainy season is from September to October. With a more pronounced dry season, temperatures and relative humidity are, however,

as in the south-western equatorial and the dry equatorial climatic zone (Dickson and Benneh, 1988). Average annual wind speed, sunshine hours and solar radiation are 138 km/day, 7.3 hours and 19.6 MJ/m² /day respectively. Potential evaporation is 1720 mm per annum. (EPA, 2002).

Dry Equatorial Climatic Zone: The characteristics of this climatic zone are in sharp contrast with all the others. This is the only climatic region with a single rainy season which starts in May and ends in October, followed by six months of dry season. Mean annual rainfall of between 100 and 115cm is recorded. Mean annual temperatures vary from about 36°C in March to about 27°C in August. Relative humidity of between 70 and 90% may be recorded during the rainy season but may fall to as low as 20% during the dry season (Dickson and Benneh, 1988). Average annual wind speed, sunshine hours and solar radiation are 81 km/day, 7.9 hours and 20.4 MJ/m² /day respectively. Potential evaporation is 1652 mm per annum and the annual aridity index is 0.60.(EPA, 2002).

Climate Change. Projections made in Ghana's Third National Communication Report to the United Nations Framework Convention on Climate Change (UNFCCC) indicates the following while **Table 5-1** provides the summary of climate change risks for the different ecological zones in Ghana.:

- Ghana will continue to get warmer.
- Mean temperature is projected to increase by 1.0°C -3.0°C by 2060, and 1.5°C to 5.2°C by the 2090s. The projected rate of warming is more rapid in the northern inlands than the coastal regions.
- All projections indicate substantial increases in the frequency of days and nights that are considered 'hot'. There are likelihoods that 'hot' days will occur on 18%-59% of days by 2060.
- Most projections indicate decreases in the frequency of days and nights that are considered cold.
- Rainfall will continue to be uncertain and difficult to predict.
- Projections of mean annual rainfall from different models predict wide range of changes. About half of the models predict increases while the other half project decreases.
- The proportion of total annual rainfall that falls in heavy events tends towards an increase in the ensemble projections.
- Projected changes in 1-and 5-day rainfall maxima trend towards increases, but projection ranges between both increase and decrease in all seasons.
- Sea level rise will continue intensely in already vulnerable coastal areas.
- Scenarios of sea level changes with respect to 1999 mean, predicts an average rise of 5.8cm, 16.5cm and 34.5cm. by 2020, 2050 and 2080 respectively.

Further assessments suggest that vulnerabilities in Ghana due to Climate Change are not evenly nationwide, but greatly influenced by the following: economic sectors, ecological zones (geographic spread) and poverty levels (see **Figure 5-2**).

Agriculture

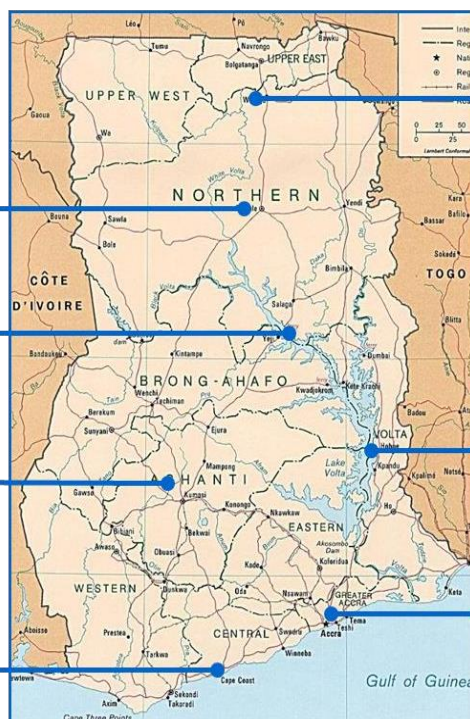
- Change in precipitation and temperature reduce yields

Water

- Variable precipitation increases water stress

Coastal areas

- Rising sea levels increase danger of flooding and coastal erosion



Health

- Changes increase risk of malnutrition, poor sanitation, diseases, and natural disasters

Energy

- Droughts endanger hydro power supply (60-70% of power)

Cities and infrastructure

- Floods and heat impact roads and buildings

Figure 5-2: Spread of Climate Change Vulnerabilities in specific localities in Ghana (Source: (EPA, 2015) 2015 Climate Change Report. Ghana's Third National Communication to the UNFCC)

Table 5-1: Climate Change risk in the different ecological zones in Ghana (Source: 3rd National Communication Report to UNFCC, 2015)

Ecological zone	Identified risk	Risk level (ranking)
Coastal Savannah	Sea level rise	High
	Out-migration	Medium
	Weak livelihood support	Medium
	Sea erosion	Extreme
High forest	Erratic rainfall	Medium
	Late start of rains	High
	Early termination of rains	High
	Drought spell	Low
Transition	Low rainfall	High
	Rainfall extremes	High
	Crop failures	High
	Reduced minor rains	Low
Guinea and Sudan Savannah	Long dry spell	High
	Frequent flooding	High
	Out-migration	Extreme
	Erratic rainfall	Medium
	Rising temperature	High

5.2.2 Topography and Landscape

The physiographic regions of Ghana are broadly classified into the following: Coastal Plains, the Forest Dissected Plateau, the Savannah High Plains, the Voltaian Sandstone Basin (VSB) and the ridges and escarpments bordering the VSB.

The Forest Dissected Plateau: Many years of intensive erosion have reduced this area to uniformly low height between 240m and 300m above sea level. The different rock formations in this region have given rise to different relief types, ranging from hills that stand up to 60-90 meters above sea level to steep sided hills rising above 240m above the flat valley bottom (Dickson and Benneh, 1988).

The Savannah High Plains: The topography is gently rolling with average height of the plain ranging between 180m and 300m above sea level. Small rounded hills composed mainly of granite are scattered on this plain (Dickson and Benneh, 1988).

Voltaian Sandstone Basin (VSB): Covering an area of about 112,768km², the VSB is made up of an almost flat extensive plain with heights ranging between 60m and 150m in that part of the basin south of the east-west Black Volta and up to about 180m above sea level in that part north of the river (Dickson and Benneh, 1988).

Ridges and Escarpments: These comprise the Southern Voltaian Plateau (SVP), the Gambaga escarpment and the Akwapim-Togo Ranges. The SVP marks the southern boundary of the Volta Basin while the Gambaga scarp marks the northern limit of the VSB. Average elevation does not exceed 450m above sea level. The Akwapim-Togo Ranges are fold mountains forming the eastern boundary of the VSB. The ranges start from near the mouth of the Densu, West of Accra, and run in a north-easterly direction across the Volta Region and Togo and beyond (Dickson and Benneh, 1988).

The low-lying coastal plains: The coastal plains, only about eight kilometers in width at its western end, stretches eastward through the Accra Plains, where it widens to more than eighty kilometers, and terminates at the south-eastern corner of the country at the lower end of the Akwapim-Togo Ranges. Almost flat and featureless, the Accra Plains descend gradually to the gulf from a height of about 150 meters. The topography east of the city of Accra is marked by a succession of ridges and spoon-shaped valley.

5.2.3 Vegetative Zones

The country is subdivided into twelve distinct vegetation zones (see **Figure 5-3**). The total land area consists of 69% of agricultural land and 41% of forest areas (FAO, 2020). Agricultural lands have increased from 55% of the total land area in 1990 to 69% in 2017 (World Bank, 2020). In the same vein, the share of arable land of the country's land area increased from 12% to 21%. Irrigated agricultural land constitutes only 0.2% of the total agricultural land. Agricultural machinery use is 4.5 tractors per 100km² of arable land. Forest lands, between 1990 and 2017, increased from 38% of the total land area to 41% (World Bank, 2020).

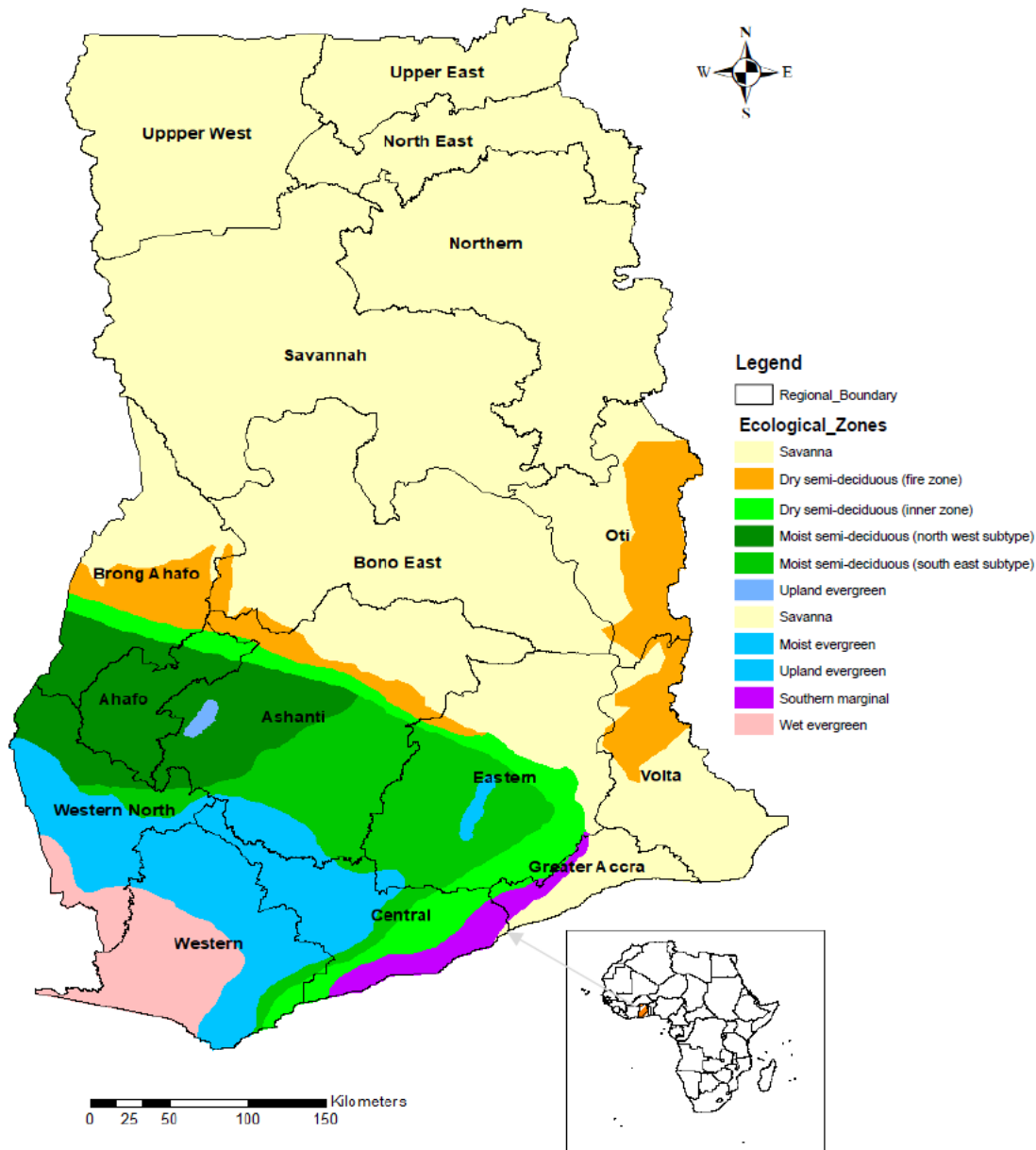


Figure 5-3: Map of Ghana Showing the 12 Vegetation Zones

5.2.4 Drainage and Water Resources

The major drainage basins in Ghana are the Volta River System (70%), South Western River System (22%) and Coastal River System (8%) (EPA, 2005). Nearly three-fourth of the total land surface area of Ghana lies Within the Volta River Basin, which can be subdivided into smaller basins – the Black Volta, the White Volta, the Oti and the Lower Volta. The Volta River system basin include the Oti, Daka, Pru, Sene and Afram Rivers. Many of the streams and tributaries of the major rivers in northern Ghana, all of which are tributaries of the Volta System dwindle in the dry season and flood in the rainy season (Dickson and Benneh, 1988). The Volta Lake, with a

surface of 8,500km², is one of the world's largest artificial lakes. The total renewable water resources are estimated to be 53.2 billion m³ per year (EPA, 2016).

The South Western River System comprise the Bia, Tano, Ankobra and Pra basins. The Pra has the largest basin in the closed forest. Unlike the rivers in northern Ghana, the forest rivers are perennial with higher flow pattern (Dickson and Benneh, 1988).

The Ochi Nakwa, Ochi Amissah, Ayensu, Densu and Tordzie rivers make up the coastal river system (EPA, 2016). The only area of internal drainage in Ghana is that around Lake Bosomtwi, a natural lake with a surface area of approximately 39km² and surrounded by hills. It is located about 34km to the South-East of Kumasi (Dickson & Benneh, 1988) where numerous streams flow into the lake.

The above characteristics of water bodies in the two halves of Ghana implies that any disturbance of water quality resulting from human activity (construction, etc) could exert severer effect in the northern half during the long dry season. The characteristic widespread seasonal flooding requires careful sub-project site selection. In the southern half, the regularity and high flow of rivers potentially enhance the assimilative and regenerative capacity of the water bodies to support aquatic life (MRH, 2007).

Compared to groundwater, surface water quality is below drinking water quality standards. This is mainly attributed to anthropogenic activities such as discharge of untreated waste materials into water bodies, farming along water systems and illegal artisanal mining (EPA, 2017).

The water quality in many of Ghana's surface water system has been declining since 2004. Water quality analyses conducted between 2005 and 2014 showed a decreasing water quality over the period (EPA, 2017). Studies conducted by (Ansa-Asare & Gordon, 2012) on the pollution of the Densu, Birim and Ayensu showed high level of concentration of ammonium and other nutrients in the rivers. These contaminants were largely from domestic and agricultural sources. In the case of the Birim, the poor quality is because of mining activities (EPA, 2017).

5.3 Socio-economic Environment

5.3.1 Population

According to the 2021 Population and Housing Census (PHC) report (GSS 2021a), Ghana's 2020 population is estimated at 30,832,019. The annual intercensal population growth rate between 2010 and 2021 is 2.1%, the lowest since independence in 1957. Population growth rate between 2010 and 2021 varies across regions, from 3.7% in the Northern Region to 1.0% in the Eastern Region. Urban population continues to grow, increasing from 12,545,229 (50.9%) in 2010 to 17,472,530 (56.7%) in 2021 with almost half (47.8%) of the increase in Greater Accra and Ashanti regions. Proportion of the population that is urban varies across the regions with the highest in Greater Accra Region (91.7%) and lowest in Upper East Region (25.4%). Seven regions are urbanized. That is, more than half of the population in those regions live in urban areas. Urban and rural populations increased in all regions between 2010 and 2021 except Eastern and Ahafo

regions where rural population decreased. Overall, there are more females (8,961,329) in urban areas than males (8,511,201). But in rural areas, there are slightly more males (6,689,239) than females (6,670,250). National population density, which is the number of persons occupying a square kilometer of area, increased by 26 persons between 2010 (103) and 2021 (129). Greater Accra region recorded the highest increase of 445 persons (from 1,236 to 1,681), while Savannah region recorded the lowest of 6 persons (from 13 to 19). Average household size is 3.6, the lowest recorded in the last six decades, and decreased by one person (0.9) since 2010 (4.5). Average household size decreased in all the regions with four regions (Northern, Savannah, North East and Upper West) reducing by two or more persons since 2010. Average household size decreased between 2010 and 2021 in both urban (from 4.1 to 3.3) and rural (from 5.0 to 4.0) areas.

Figure 5-4 presents the 2021 population distribution by regions in Ghana.

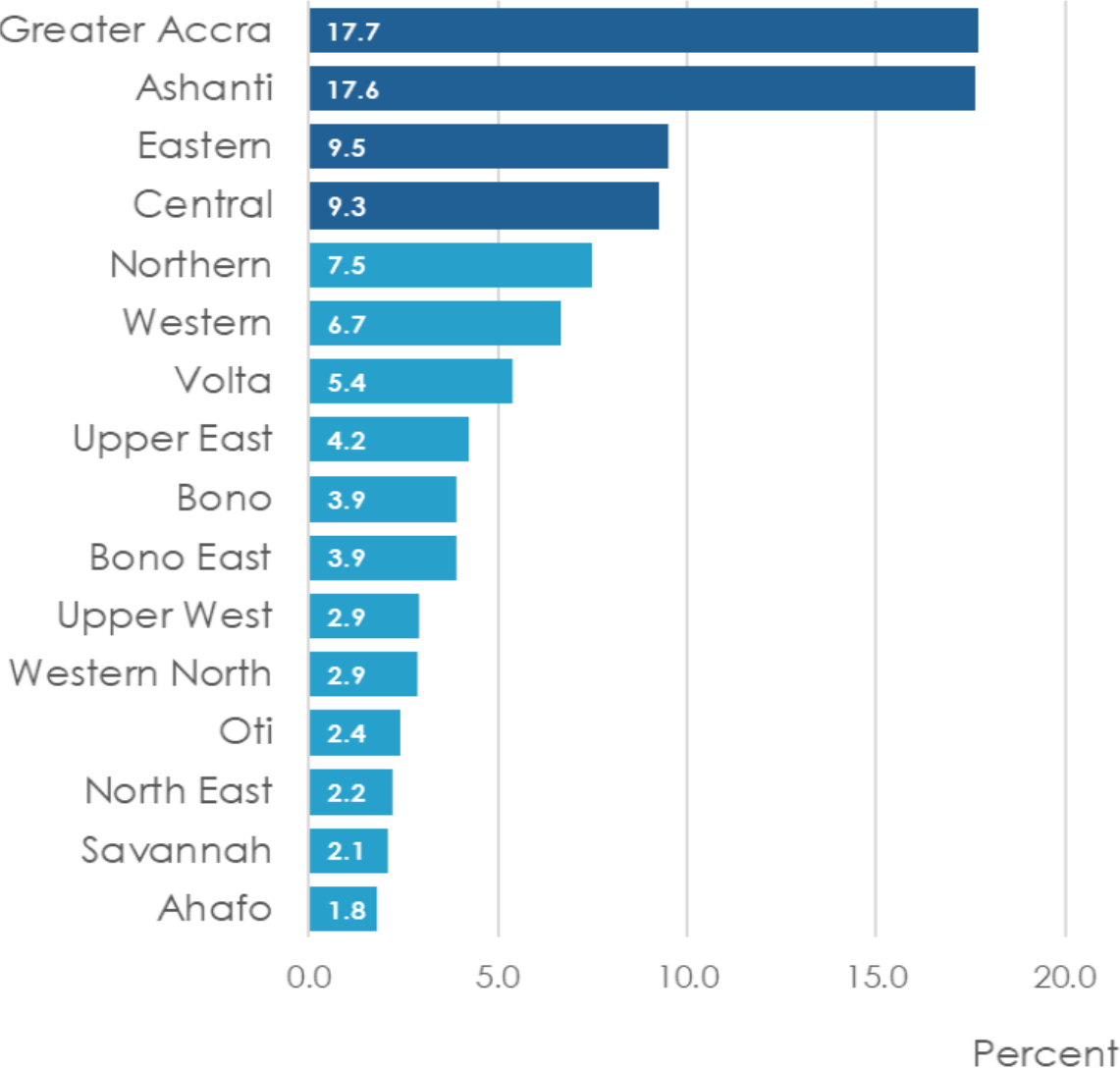


Figure 5-4: Population Distribution by Region in Ghana (2021 PHC)

5.3.2 Economic Activity

According to the 2021 Population and Housing Census (PHC) report (GSS 2021b), the labor force, which is the economically active population, is 11,541,355 (employed, 9,990,237 and unemployed, 1,551,118), representing 58.1% of persons 15 years and older. Economic activity among males (63.5%) is substantially higher than that of their female (53.0%) counterparts, with a more pronounced variation between males, (63.6%) and females (51.5%) in rural areas. About half a million persons 15 years and older are first time job seekers with almost equal numbers of males and females. More than two in five (45.5%) unemployed persons 15 years and older are available for work but not seeking for employment of which the youth (15-35 years) constitute two-thirds (65.8%). Close to 230,000 (3.2%) children (5-14 years) are engaged in economic activity with a substantially higher proportion in rural areas (5.7%) compared to urban (1.0%).

Involvement of children in economic activity in Oti Region (20.8%) is more than six times the national figure (3.2%) and is also prominent in five other regions: North East (11.4%), Savannah (9.9%), Upper West (9.3%), Northern (8.6%) and Upper East (6.1%). About three-quarters of the employed population 15 years and older are engaged in skilled agricultural, forestry and fishery (32.0%), services and sales (26.5%) and craft and related trades (16.1%), with a higher representation among females (81.3%) than males (68.9%). Professionals constitute less than a tenth (8.4%, 837,989) of employed persons 15 years and older of which four in five are in urban areas, and three in five are youth (15-35 years). Among children aged 5-14 years engaged in economic activity, almost 80% are involved in agriculture-related activities with the highest proportion in Savannah (89.8%) and the least in Greater Accra (26.2%). In Greater Accra Region, children's involvement in economic activity is predominantly in service and sales (42.6%). Only about 7% of employed persons 15 years and older are self-employed with employees compared to 60% for those without employees. In rural areas, population 15 years and older who are self-employed without employees represents about three-quarters of the employed population 15 years and older compared to half in urban areas. The public sector (government) engages about 10% of the employed population 15 years and older, of which almost 60% are males. Proportion of public sector employees in urban areas (12.4%) is more than twice that in rural areas (5.3%).

Unemployment rate among the population 15 years and older is 13.4% and is higher for females (15.5%) than males (11.6%). Among the population 15-35 years, unemployment rate is 19.7%, and is even much higher for young adults 15-24 years (32.8%). Across all the three age brackets (15-24 years, 15-35 years, and 15 years and older), unemployment rate is higher in urban than rural areas. Oti Region has the lowest unemployment rate across all the three age brackets: 15-24 years (14.9%), 15-35 years (9.4%), and 15 years and older (6.7%). Savannah Region has the highest rate in two age brackets: 15-35 years (28.4%) and 15 years and older (22.4%); while Upper East Region has the highest rate in the 15-24 age group (39.0%). More than half (53.3%) of the employed population 15 years and older are in the services sector, followed by agriculture (33.0%) with industry having the least (13.7%).

5.3.3 Gender Based Violence (GBV) in Ghana

According to the UN Gender Team in Ghana, a 2016 survey on domestic violence, indicated that 27.7% of Ghanaian women had experienced at least one form of domestic violence (physical, economic, psychological, social, and sexual violence). In addition, the survey shows that 38.2% of women aged 15-19, 40.4% of women aged 20-24, and 38.3% of women aged 30–39 reported having experienced at least one act of sexual violence. Further, the UN women global database reports that lifetime physical and/or sexual intimate partner violence in Ghana for this year stands at 24 % and physical and sexual intimate partner violence in the last 12months is 19%.

5.3.4 Collection, Treatment, and Disposal of e-Waste

About 95% of e-waste generated in Ghana is collected and recycled by the informal sector. This means that collection, recycling and disposal of e-waste are not regulated nor managed by the Government of Ghana but rather left to unskilled informal waste collectors. Large amounts of e-wastes end up in Old Fadama commonly known as Agbogbloshie’ a suburb in the capital of Ghana. this dumping site is popularly known as the epitome of improper e-waste recycling.

There are very few recycling businesses complying with the environmental and social standards. However, those that comply to the environmental and social standards have higher charges thus putting them at a disadvantage compared to the informal scrap collectors and deals, who ignore all the environmental and social standards, hence causing harm to people and the environment with their activities.

5.3.5 Internet Usage

Ghana has been recognized as one of the five major markets in Africa. The development of the Ghanaian economic market has been influenced by several factors including an increase in smartphone and internet penetration in Ghana is one of the factors seriously influencing the growth of the socio-economic market.

In recent times, the social-economic trend of the country has taken on a serious hike as a result of affinity for digital inventions. This has skyrocketed and streamlined social and business interactions in the country which has, in turn, contributed immensely toward national development.

The digital world comprising of the internet, websites, blogs, social media networks and mobile apps have actually transformed the way information is obtained and socialization with one another. The current internet usage population of Ghana as of January 2022 was 16.99 million. Ghana’s internet penetration rate stood at 53.0% of the total population at the start of 2022. Kepios analysis indicates that internet users in Ghana increased by 350 thousand (+2.1%) between 2021 and 2022. For perspective, these user figures reveal that 15.07 million people in Ghana did not use the internet at the start of 2022, meaning that 47.0% of the population remained offline at the beginning of the year.

Internet connection speeds in Ghana in 2022 according to data published by Ookla indicate that internet users in Ghana could have expected the following internet connection speeds at the start of 2022:

1. Median mobile internet connection speed via cellular networks: 8.09 Mbps; and
2. Median fixed internet connection speed: 26.93 Mbps.

Ookla's data reveals that the median mobile internet connection speed in Ghana decreased by 0.43 Mbps (-5.0 percent) in the twelve months of 2021 to the start of 2022. Meanwhile, Ookla's data shows that fixed internet connection speeds in Ghana increased by 6.79 Mbps (+33.7 percent) during the same period.

The current percentage of internet users aged 16 to 64 who own one kind of device in Ghana as of February 2022 are as hereunder presented:

- Any kind of mobile phone 99.7% year on year change +0.7% (+70BPS);
- Smart phone 99.3% year on year change +0.6% (+60BPS);
- Feature phone 17.8% year on year change +212.3% (+1,210BPS);
- Laptop or desktop computer 35.0% year on year change -6.9% (-260BPS);
- Tablet device 8.6% year on year change -25.9% (-300BPS);
- Games Console 4.3% year on year change -51.1% (-450BPS);
- Smartwatch or smart wristband 5.0% year on year change -36.7% (-290BPS);
- Tv streaming device 1.6% year on year change -59.0% (-230BPS);
- Smart home device 1.9% year on year change -47.2% (-170BPS); and
- Virtual reality device 1.3% year on year change -43.5% (-100BPS).

6 POTENTIAL ENVIRONMENTAL AND SOCIAL ISSUES AND IMPACTS

6.1 Project Influence

In the absence of site-specific detailed project designs and infrastructure locations and layouts at this stage, the ESMF gives an identification, qualitative assessment and classification of potential environmental and social impacts and their respective management options based on the general project design concepts. The GDAP will have positive and potential negative social, economic and environmental impacts at different levels in the country.

6.2 Geographical Area of Influence

The geographical area of influence will be the regions to benefit from the proposed project and the country as a whole. The immediate geographical area of influence in the project areas will be mainly the right of ways, under the jurisdiction of the Ghana Highway Authority (GHA), Department of Urban Roads (DUR) or the Department of Feeder Roads (DFR), where fiber optic network and cable laying may be required. In addition, cell sites at specific locations may be influenced.

6.3 Environmentally Sensitive Areas to be influenced

A preliminary assessment of potential project sites with Schedule 5 i.e., Regulation 30(2) of the Environmental Assessment Regulations 1999 (LI 1652) concerning Environmentally Sensitive Areas indicates that no environmentally sensitive areas are likely to be affected by the proposed project. Thus, no environmentally sensitive areas will be utilized by GDAP.

6.4 Influence on Communities and Vulnerable Groups

The main communities likely to be affected by GDAP are underserved regions in Ghana. Vulnerable groups are those at risk of becoming more vulnerable due to impacts from project implementation involving deployment of new ICT equipment, civil works in the right of ways and cell sites which could result in temporary and permanent displacements or disturbances, and this could lead to economic and physical hardships and other works. These vulnerable groups include, but not limited to:

- Communities living in remote areas that are difficult to access;
- Persons with Disability (PwDs);
- Elderly people;
- Very sick and or physically weak individuals; and
- Children.

6.5 Institutional Influence

The major institutions to be influenced or involved in the proposed project include:

1. Ministry of Communications and Digitalization (MoCD);
2. National Communications Authority;
3. Environmental Protection Agency;
4. Ghana Highway Authority
5. Department of Urban Roads;
6. Department of Feeder Roads;
7. Electricity Company of Ghana;
8. Ghana Grid Company (GRIDCo);
9. Regional Coordinating Councils; and
10. Metropolitan, Municipal and District Assemblies (MMDAs).

6.6 Project Activities of Environmental and Social Concern

6.6.1 Preparatory Phase Activities

Preliminary activities to be carried out prior to the implementation of the proposed project include:

1. Permit and license acquisition;
2. Survey works to determine the Right-of-Way (RoW) and other suitable installation sites;
3. Land acquisition; and
4. Consultations with relevant stakeholders and beneficiaries.

6.6.2 Constructional Phase Activities

Constructional phase activities include among others:

1. Site clearing (where necessary);
2. Excavation works;
3. Civil works;
4. Installation works;
5. Laying of cables and fiber network system;
6. Disposal of construction debris etc.;
7. Transportation of materials and equipment to project sites; and
8. Sanitation issues.

6.6.3 Operational Phase Activities

The main operational phase activities will be:

1. Maintenance and management of project facilities; and
2. Disposal of waste from operations especially electronic wastes.

6.7 Criteria of Impact Evaluation

6.7.1 Duration of the Impact

The duration of impact may be described as follows:

1. A temporary impact can last days, weeks or months, but must be associated with the notion of reversibility.
2. A permanent impact is often irreversible. It is observed permanently or may last for a very long term.

6.7.2 Extent of the Impact

The extent of the impact may be described as follows:

1. The extent is regional if an impact on a component is felt over a vast territory or affects a large portion of its population.
2. The extent is local if the impact is felt on a limited portion of the zone of the proposed project or by a small group of its population.
3. The extent is site-specific if the impact is felt in a small and well-defined space or by only some individuals.

6.7.3 Intensity of the Impact

The intensity of the impact may be described as follows:

1. The intensity of an impact is qualified as strong when it is linked to very significant modifications of a component.
2. An impact is considered of average intensity when it generates perceptible disturbance in the use of a component or of its characteristics, but not in a way to reduce them completely and are irreversible.
3. A weak intensity is associated with an impact generating only weak modifications to the component considered, without putting at risk some of its utilization or its characteristics.

6.7.4 Impact Severity

A description of the impact severity may include the following:

1. A 'negligible or nil impact' or an impact of negligible significance is where a resource or receptor will not be affected in any way by a particular activity, or the predicted effect is deemed to be imperceptible or is indistinguishable from natural background levels.
2. A 'minor impact' or an impact of minor significance is one where an effect will be experienced, but the impact magnitude is sufficiently small and well within accepted standards, and/or the receptor is of low sensitivity/value. In such instances, standard construction/ operational practices can address such impacts.

3. A ‘moderate impact’ or an impact of moderate significance is where an effect will be within acceptable limits and standards. Moderate impacts may cover a broad range, from a threshold below which the impact is minor, up to a level that might be just short of breaching an established (legal) limit. In such cases, standard construction practices can take care of these impacts but mitigation measures may also be required.
4. A ‘major impact’ or an impact of major significance is one where an accepted limit or standard may be exceeded, or large magnitude impacts occur to highly valued/sensitive resource/receptors. In such cases, alternatives are required to address such impacts otherwise mitigation measures should be adopted with strict monitoring protocols.

The above classification is largely subjective and may be overruled by new site-specific issues or information and detailed project activities not captured in this framework.

6.8 Potential Positive Impacts

The significant positive impacts of GDAP are outlined as follows:

Increased Effectiveness of Online Communication

The most beneficial impact will be at the human and social level and will be related to advanced, cost-effective online communication as a result of the implementation of GDAP.

Improved Safety and Security of Citizens

Safety and security within the country will be improved through increased institutional collaboration resulting in less crimes. Improved response to disasters and other emergencies through effective communication will also help preserve the life, health and property of citizens.

Employment Creation and Boost in Economic Activities

Jobs will be created for both skilled and unskilled labor during the construction and operational phases of the project. Activities of vendors, who will be attracted by the presence of workers during construction, is expected to increase and bring income to these vendors who are mostly locals. Landowners and the relevant traditional councils will equally benefit through rent mobilization or land acquisition.

6.9 Potential Negative Impacts

The potential adverse impacts are grouped under the following:

1. Preparatory phase impacts;
2. Construction phase impacts;
3. Operational phase impacts; and
4. Any potential impacts at the decommission phase.

6.9.1 Potential Preparatory Phase Adverse Impacts

The potential preparatory phase adverse impacts are provided in **Table 6-1**.

Table 6-1: Potential Preparatory Phase Adverse Impacts

No.	Potential Impact	Description of Impact	Extent	Duration	Intensity	Severity
1.	Occupational Health & Safety (OHS) issues	Workers/personnel may be at risk of accidents and injury during survey works to determine suitable locations for project facilities, especially within the RoW of highways, urban and feeder roads.	Site-specific	Temporary	Strong	Moderate
2.	Unwillingness/ disputes over land	Potential disputes among various landowners may occur over ownership of land required for fiber network. Some land owners may not be willing to release their lands for trenching and excavations.	Site-specific	Temporary / Permanent	Average	Moderate

6.9.2 Potential Constructional Phase Adverse Impacts

The potential constructional phase adverse impacts are provided in **Table 6-2**.

Table 6-2: Potential Constructional Phase Adverse Impacts

No.	Potential Impact	Description of Impact	Extent	Duration	Intensity	Severity
1.	Loss of vegetation and impacts on flora and fauna	<p>Vegetation clearance during trenching for the fiber network and installation of other equipment may result in loss of flora and disturbance of fauna at the construction sites.</p> <p>The project sites are mainly within the RoW of highways, urban and feeder roads. In urban centers, most of these sites are paved and have no vegetation and fauna. In the peri-urban and rural areas where there is vegetation, preliminary field studies show that these are common regenerated vegetation, hence the proposed project will not result in the loss of any species of conservation value.</p> <p>Vegetation will be restored through re-growth after construction works.</p>	Site-specific	Temporary	Weak	Minor
2.	Impacts to soil and sediment transport	Vegetation clearance, trenching and excavation for fiber network and installation of other equipment will expose and loosen up the topsoil, which may result in soil and sediment transport through erosion. There may also be contamination of the top-soil through fuels, oils and waste due to accidental spillage or negligence.	Local	Temporary	Average	Moderate

No.	Potential Impact	Description of Impact	Extent	Duration	Intensity	Severity
3.	Generation and disposal of waste	<p>Piles of soil from trenching and excavation works will form the bulk of waste produced during construction works. These will be reused for backfilling. Concrete debris may also be generated from trenching at paved/concreted areas.</p> <p>Other waste that may be generated will include used polythene bags and drinking water sachets from the workers.</p>	Site-specific	Temporary	Strong	Moderate
4.	Occupational Health & Safety (OHS) issues	<p>Construction workers will be at risk of accidents and injury from:</p> <ul style="list-style-type: none"> • working along RoWs of highways, urban and feeder roads; • use of machinery and equipment; and • workers will also be exposed to dust, noise and exhaust fumes from working along RoWs; • exposure to works at height; and • exposure to hazardous waste during demolition and waste handling. 	Site-specific	Temporary /Permanent	Strong	Major
5.	Public safety and traffic issues	<p><u>Public Safety</u> Poor management of construction activities may result in stagnant water in uncovered trenches for the fiber network extension. Unsecured excavations may also compromise public safety.</p> <p>Also, there is high potential for spread of COVID-19 among workers and the communities.</p> <p><u>Road Traffic Impacts</u> Construction activities along access roads and potential road cutting may cause traffic congestion if not managed properly. The effect of traffic disruptions includes increased travel time, congestion, social stress and agitations.</p> <p><u>Spread of Sexually Transmitted Diseases (STDs)</u> Construction workers may interact with community members which may lead to irresponsible sexual behaviour and promiscuity. This may lead to the spread of sexually transmitted diseases.</p>	Local	Temporary/permanent	Strong	Major
6.	Sanitation and hygiene	<p>Poor housekeeping at construction sites and improper disposal of waste (construction waste, polythene bags, leftover food, food packaging, drink cans, water sachet etc.) will create sanitation problems.</p>	Local	Temporary	Average	Moderate

No.	Potential Impact	Description of Impact	Extent	Duration	Intensity	Severity
7.	Damage to property	Permanent structures along RoWs include pavements and concreted entrances to shops. Sections of these structures within the fiber network to be extended will be affected. Other properties within the right of way are usually temporary moveable structures such as kiosks, containers, tables and will not be damaged.	Site-specific	Temporary	Average	Major
8.	Impacts from visual intrusion	Trenching, excavation and installation works, as well as the presence of construction workers may alter the landscape character and the scenic view, especially along the RoW of roads during construction works.	Local	Temporary	Weak	Minor
9.	Dust and noise nuisance	Dust generation from trenching and excavations may temporarily affect the air quality in areas close to the construction sites. Noise levels at construction sites are also expected to increase intermittently through the operation of concrete mixing machines, vehicular movement and interaction of workers.	Local	Temporary	Average	Moderate
10.	Disruption of utility service	Utility services may be disrupted through damage to utility lines and existing telecommunication lines within the RoW, especially during trenching for the fiber network extension and during excavation works.	Local	Temporary	Average	Moderate
11.	Fire risks	Fiber optic cables are not flammable and not highly combustible and may not pose any fire hazard as they do not conduct electricity. Fire risks during the construction stage may however be associated with uncontrolled fires from external sources such as from the activities of the public close to the work area and the use of faulty machines and equipment. Any uncontrolled fire within the construction zone may result in damage to equipment and the existing fiber cables.	Local	Temporary	Weak	Minor
12.	Conflicts/ public agitation	Trenching through private property (pavements/concreted entrances) and temporary movement of kiosks, tables, containers, obstruction of access to homes, shops etc. along the RoW could result in conflicts and agitations from affected persons if not managed properly. Traffic disruptions may also result in agitations from the affected persons.	Local	Temporary	Strong	Moderate

No.	Potential Impact	Description of Impact	Extent	Duration	Intensity	Severity
13.	Disruption of livelihoods	In urban centers where there are traders along the RoWs, trenching and installation works may require that traders shift their wares or relocate temporarily, which may temporarily affect their business. The construction works may also create inconvenience for customers which may affect patronage. Also, the acquisition of land for construction of mast and other project facilities may affect farms that would adversely affect the livelihoods of the farmers	Local	Temporary	Average	Moderate
14	Social order Disruption Family conflicts promiscuity and gender based violent	The influence of workers earning better in comparison to the majority of the community members cannot be underestimated in causing gender-based conflicts, sexual exploitation and harassment among the host communities leading to family breakdown. There is also a potential of increase alcohol consumption leading to higher chances of confrontations, etc.	Local	Temporary	Average	Moderate
15	Impacts on cultural heritage/ archaeological resources	Construction activities may encounter cultural and archeological resources or chance finds. Construction can also review buried resources necessitating salvage archeology for recovering and protection.	Local	Permanent	Strong	Major
16	Impact on vulnerable and marginalised groups	Construction activities may interfere with some vulnerable groups such as persons with disabilities and marginalized groups such as beggars which could temporarily impact on their livelihoods if trenches are dug across their access points	Local	Temporary	Average	Moderate

6.9.3 Potential Operation Phase Adverse Impacts

Constructional phase impacts such as (i) vegetation removal, (ii) sediment transport, (iii) waste disposal, etc. may also apply during the operational phase during maintenance activities depending on the site conditions. The additional operational phase potential adverse impacts are provided in **Table 6-3**.

Table 6-3: Potential Operational Phase Adverse Impacts

No.	Potential Impact	Description of Impact	Extent	Duration	Intensity	Severity
1.	Occupational health & safety issues	Maintenance activities, including trenching to fix damaged sections of the fiber	Site-specific	Temporary	Strong	Major

No.	Potential Impact	Description of Impact	Extent	Duration	Intensity	Severity
		network. will put workers at high risk of accidents. Workers may also be exposed to dust, exhaust fumes and noise.				
2.	Public safety and traffic issues	Occasional maintenance activities within the RoW of highways, urban and feeder roads may temporarily affect traffic flow. Uncovered trenches and dug outs from maintenance activities may also compromise public safety and could collect water for breeding of mosquitoes.	Local	Temporary	Average	Moderate
3.	Electric and magnetic fields	<p>Electric and magnetic fields are emitted by electrical devices. These fields increase in strength as the voltage increases. Radio waves and microwaves are forms of electromagnetic energy emitted by transmitting antennas/ cell sites.</p> <p>However, there is no empirical data demonstrating adverse health effects from exposure to typical electromagnetic frequency levels from transmission equipment.</p>	Local	Permanent	Weak	Minor

7 ANALYSIS OF ALTERNATIVES

Alternatives are options, choices, or courses of action meant to accomplish the selection of the best choice in an environmental and social assessment study.

The alternatives analysis is essentially, different ways in which the MoCD can feasibly meet the project's objectives, for example by carrying out a different type of action, choosing an alternative location or adopting a different technology or design for the project as well as the "no project option" and its adverse effect on the beneficiary communities/ population. At the more detailed level, alternatives merge into mitigating measures where specific changes are made to the project design or to methods of construction or operation to avoid, reduce or remedy environmental risks and impacts.

7.1 Options for Considerations

The following technical alternatives should be investigated to inform the proposed project:

1. Site Selection Options;
2. Fiber Network and Cable Deployment Options; and
3. Power Supply Options.

7.1.1 Site Selection Options

The proposed project is being implemented to use existing facilities and install new equipment. Already existing Right of Way (RoW), would not require any resettlement of the Project Affected Persons (PAPs). Thus, the option to use existing facilities than newly acquired government RoWs is preferred.

The choice of the existing corridor provides the opportunity to avoid paying huge compensation for land by the government if new land (greenfield) is to be accessed and developed for the proposed project facilities.

The proposed project design shall avoid traversing ecological sensitive ecosystems, national parks, forests reserves, parks, protected wetlands/ Ramsar sites, and buffer zone around water bodies.

7.1.2 Fiber Network Deployment Options

The methods for deployment proposed to be investigated for the fiber network are presented in **Table 7-1**.

Table 7-1: Fiber Network and other Cable Deployment Options

Option/Method of Deployment	Potential Environmental/ Social Implications	Potential Technological/ Economic Implications
Trenching only	<p>Advantages</p> <ol style="list-style-type: none"> 1. Improvement in social status for those who gain employment during construction work. <p>Disadvantages</p> <ol style="list-style-type: none"> 1. Greater damage to the environment through digging and excavation. 2. Damage to property during construction. 3. Interruption of social activities during construction works, especially in congested areas. 4. Can have traffic impacts through construction along and across feeder road networks. 5. Negative visual impacts during construction. 	<p>Advantages</p> <ol style="list-style-type: none"> 1. High labor required resulting in greater employment opportunities during construction. 2. The cables are protected from harsh weather conditions and damages therefore lasts longer <p>Disadvantages</p> <ol style="list-style-type: none"> 1. Potential of higher compensation/re-instatement cost due to affected property. 2. Longer time required to complete construction activities. 3. Can interrupt livelihood activities during construction, especially in congested areas.
Thrust boring only	<p>Advantages</p> <ol style="list-style-type: none"> 1. Less damage to the environment during construction. 2. Less damage to property during construction. 3. Less interruption of social activities during construction. 4. Less visual impacts during construction. 5. Less impacts on traffic during construction. <p>Disadvantages</p> <ol style="list-style-type: none"> 1. Noise from machine during boring activity. 	<p>Advantages</p> <ol style="list-style-type: none"> 1. Low/nil compensation/re-instatement cost as there is minimal damage to property. 2. Work can be completed faster. 3. Thrust boring can take place without interrupting livelihood activities. <p>Disadvantages</p> <ol style="list-style-type: none"> 1. High cost of construction due to highly skilled expertise and special machinery required. 2. Less labor required, resulting in less employment opportunities.
Combination of thrust boring and trenching	<p>Advantages</p> <ol style="list-style-type: none"> 1. Less environmental damage at areas where thrust boring is used. 2. Less obstruction to social activities as boring can be used for congested areas. 3. Less impacts on traffic during construction as thrust boring can be used across roads instead of cutting through urban/feeder roads. 4. Less visual impacts in areas where boring is used. <p>Disadvantages</p> <ol style="list-style-type: none"> 1. Damage to the environment in less urban areas where trenching is preferred. 2. Visual impacts in areas where trenching is used. 	<p>Advantages</p> <ol style="list-style-type: none"> 1. Low/nil compensation/re-instatement cost for urban areas where thrust boring is used. 2. Work can be completed faster. 3. Labor required for areas to be trenched, hence more jobs created. 4. Less interruption to livelihood activities in congested areas where thrust boring is used. <p>Disadvantages</p> <ol style="list-style-type: none"> 1. Skilled expertise, machinery and high labor required may result in higher construction cost

7.1.3 Power Supply

National Grid

Connection of proposed project facilities to the national grid will be cheaper and less easy to implement. However, a backup power source will be required to cater for periods of power outage.

Generator

The use of generators as the main power source to the proposed project facilities will require a person to be constantly monitoring the facilities to ensure there is always fuel in the generator. With regular maintenance and ensuring availability of fuel for the generator, power will be constantly available for the proposed project facilities. The use of generators as the main power source may however be more expensive to run compared to depending on the national grid. Generators may impact on the air quality through exhaust emissions and also generate noise. Generators may however be used as a backup power source for the proposed project facilities.

Solar

Solar energy may be harnessed to power the proposed project facilities through the installation of solar panels for the various project facilities. Solar energy is more environmentally friendly as there are no emissions and is a more reliable source of electricity. It may not require any backup power source and personnel to constantly be onsite to monitor. The use of solar energy will be expensive to install but will have lower operational costs. The proposed project will avoid procurement of solar panels produced using forced labor (see **Appendix 7-1**).

8 PROPOSED MITIGATION MEASURES AND/ OR OPTIONS

The proposed mitigation measures and/ or options and guidelines have been designed in order to avoid, minimize and reduce negative environmental and social impacts and these are provided in **Table 8-1**.

Table 8-1: Proposed Mitigation Measures

No.	Potential impact	Mitigation Options and Guidelines
<i>Preparatory Phase</i>		
1.	Occupational health & safety	<ul style="list-style-type: none"> Workers/surveyors should wear appropriate PPE such as reflective jackets and safety boots. Use warning/caution signs to alert on coming vehicles of the presence of workers.
2.	Unwillingness/disputes over land	<ul style="list-style-type: none"> Ensure adequate consultations at the local/traditional levels to confirm ownership and obtain free, prior and informed consent from land owners. Ensure proper acquisition and documentation of land for the project. Put in place an effective grievance redress mechanism.
<i>Constructional Phase</i>		
3.	Loss of vegetation and impacts on flora and fauna	<ul style="list-style-type: none"> Limit vegetation clearance to the width of the trenches. Allow regrowth of vegetation in per-urban areas after construction works. Burning should not be used for vegetation clearance along major highways prior to trenching.
4.	Impacts to soil and sediment transport	<ul style="list-style-type: none"> Organize deployment of project infrastructure into sections and complete one section (trenching, laying of cables and covering) before moving to another. Reuse piled up soil for backfilling of trenches. Covered trenches should be properly compacted.
5.	Generation and disposal of waste	<ul style="list-style-type: none"> The contractor should develop and implement a waste management plan during the construction phase. Excavated soil should be reused for backfilling. Concrete debris should be collected and disposed at approved dumpsite. Plastic waste such as used polythene bags and drinking water sachets should be temporarily collected in bins on site and disposed of at approved dumpsites.
6.	Occupational Health & Safety (OHS) issues	<ul style="list-style-type: none"> The contractor should adopt a health & safety policy which should be implemented during the construction works. All active construction areas should be marked with high visibility tapes to reduce the risk of accident involving pedestrians and vehicles Prepare an emergency response plan for works. Experienced personnel should be engaged for the construction works. Training/induction should be provided for all workers. Proper supervision and monitoring should be ensured at site. Provide first aid kits on site and train supervisors on administering first aid. Appropriate PPE should be provided for workers and its use enforced.

No.	Potential impact	Mitigation Options and Guidelines
7.	Public safety and traffic issues	<ul style="list-style-type: none"> ● Sensitize the public, especially traders within the RoW of the upcoming works prior to construction activities. ● Organize works into sections and complete each section before the next section to ensure trenches are covered within the shortest possible time. ● Carry out deployment of metro fiber network at off peak periods such as at night or weekends where possible. ● Cordon off all trenches and excavations with caution tapes and use warning signs at vantage points to indicate ongoing construction works. ● Prevent entry of unauthorized persons to the construction site. ● Engage staff of Motor Traffic and Transport Directorate (MTTD) to direct traffic to reduce traffic congestions. ● Where necessary in extreme cases, provide motorable alternative routes during road diversions with the assistance of the MTTD of the Ghana Police Service. ● Organize awareness creation and sensitization for workers and the public on prevention of HIV/AIDS and other sexually transmitted diseases. ● Engage experienced drivers and machine operators and provide training especially for less experienced drivers/operators. ● Ensure that all covid-19 precautionary measures are duly observed by both workers and the public accessing the facility.
8.	Sanitation and hygiene	<ul style="list-style-type: none"> ● Provide bins for temporary collection of litter (including polythene bags, drinking water sachets, etc.) for disposal at approved dumpsites. ● Provide toilet facilities for use by workers at every site.
9.	Affected persons and properties	<ul style="list-style-type: none"> ● Engage affected persons prior to construction works to discuss and agree on affected property and reinstatement works. Free, prior and informed consent should be obtained before construction begins. ● All affected properties should be reinstated immediately to their original or improved state and in the process obtain photographs of all affected and reinstated properties (before and after status) for evidence. ● In cases where affected crops are affected, appropriate compensation should be paid.
10.	Impacts from visual intrusion	<ul style="list-style-type: none"> ● Reinstated all trenched areas to their original or improved state. ● Complete one section of work (trenching, laying of cables and reinstatement) before moving to the next section. ● Proper housekeeping should be ensured at the construction sites. ● All waste that cannot be reused should be collected and properly disposed of at an approved dumpsite.
11.	Dust and noise nuisance	<ul style="list-style-type: none"> ● Use dust abatement techniques such as wetting ground surfaces and untarred roads, covering soil delivery trucks and limiting operations during windy periods. ● Ensure delivery trucks and other vehicles reduce speed on untarred roads to reduce airborne dust. ● Ensure engines of vehicles/trucks and earth moving equipment are switched off when not in use. ● Use road worthy vehicles and ensure regular maintenance of vehicles, equipment and machinery to reduce noise. ● Keep work within working hours of the day.

No.	Potential impact	Mitigation Options and Guidelines
12.	Disruption of utility service	<ul style="list-style-type: none"> ● Ensure all cables are laid strictly within the mandatory road reservation with assistance from the Ghana Highways Authority, Department of Urban Roads and Department of Feeder Roads as appropriate. ● Liaise with utility service providers and telecommunication companies with service lines within the RoW to prevent the destruction of their lines.
13.	Fire risks	<ul style="list-style-type: none"> ● Educate workers and the public on the effects of fire on the project. ● Prevent entry of unauthorized persons to construction sites through the use of caution tapes. ● Provide fire extinguishers at construction sites. ● Provide fire emergency contact numbers at construction sites. ● The contractor should prepare and implement a fire preparedness/emergency plan.
14.	Conflicts/public agitation	<ul style="list-style-type: none"> ● Continuously sensitize the public on the construction works throughout the construction period. ● Consult and seek the free, prior and informed consent of affected persons before construction works. ● Reinstate any affected property immediately to its original or improved state. ● Provide motorable alternative routes were necessary to ease impact on road users. ● Engage staff of MTTD to direct traffic to avoid traffic congestion.
15.	Disruption of livelihoods	<ul style="list-style-type: none"> ● Consult affected persons on suitable times to carry out construction works which should be factored into the scheduling of construction works. ● Sensitize affected traders on the schedule of construction works. ● Reinstate affected entrances to shops immediately after deploying metro fiber network at that section. ● Provide assistance to traders who may have to temporarily move their wares and stores. ● Consider undertaking certain construction activities on weekends (Sundays) when commercial activities are less intense
16.	Chance find/ cultural heritage and archaeological interest as well as on sociocultural norms	<ul style="list-style-type: none"> ● Identify cultural heritage resources and existing ecologically sensitive areas and avoid them as much as practicable. ● The Project should implement a chance find procedure in line with ESS8 requirements (see Appendix 8-1), national laws and reporting system to be used by contractors in the event that a cultural heritage feature or ecologically sensitive item/issue is encountered. ● Any antiquity found during the construction phase will be made known to the Ghana Museums and Monuments Board (GMMB) as required. ● Where the observance of traditional and cultural norms with regard to restricted noise making during festivals will conflict with the timelines of the sub- projects, the PCU will engage the traditional authorities for exemptions if possible.
Operational Phase		
17.	Occupational health & safety	<ul style="list-style-type: none"> ● The operator should develop and implement standards operating procedures (SOPs) which should include monitoring and maintenance of the facilities. ● The operator should adopt a health & safety policy including an emergency response plan, which should be implemented. ● Experienced personnel should be engaged in the construction works.

No.	Potential impact	Mitigation Options and Guidelines
		<ul style="list-style-type: none"> ● Health & safety induction should be carried out for all new employees and periodic training conducted for all staff. ● Cordon off maintenance sites with caution tapes and use warning signs to alert the public of ongoing maintenance works. ● Proper supervision and monitoring should be ensured during maintenance activities. ● Provide first aid kits on-site and train supervisors on administering first aid. ● Provide health insurance for all staff. ● Appropriate PPE should be provided for workers and its use enforced.
18.	Public health & safety	<ul style="list-style-type: none"> ● Cordon off maintenance sites with caution tapes and prevent entry of unauthorized persons to the maintenance site. ● Use warning signs at vantage points to warn the public of ongoing maintenance works. ● Engage staff of MTTD to direct traffic to reduce traffic congestion. ● Where necessary in extreme cases, provide motorable alternative routes during road diversions with the assistance of traffic wardens. ● Awareness creation sessions and meetings with community leaderships including women, elderly and PwDs shall be carried out along the cable laying route. ● Covid-19 protocols should be adhered to/observed during public engagements and project implementations.
19.	Electric and magnetic fields	<ul style="list-style-type: none"> ● Follow good engineering practice in siting and installation of directional links (e.g., microwave links) to avoid building structures. ● Take into account public perception about electromagnetic frequency issues by consulting with local communities during the siting process of radiation emitting equipment. ● Evaluate potential exposure to the public against the reference levels developed by the International Commission on Non-Ionizing Radiation Protection (ICNIRP). Average and peak exposure levels should be below the ICNIRP recommendation for general public exposure.
5.	Generation and disposal of waste including e-waste	<ul style="list-style-type: none"> ● The Project should implement an e-waste management procedure in line with requirements of ESS3 (see Appendix 8-2) and Ghana EPA requirements. ● Food and plastic waste should be separated as much as possible for disposal by accredited third party contractors at designated metropolitan, municipal or district assembly disposal site

9 ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

The Environmental and Social Management Plan (ESMP) is the planning and management instrument that provides details on: (a) measures to be taken during the implementation and operation of a project to eliminate or offset adverse environmental and social impacts, or to reduce them to acceptable levels; and (b) the actions needed to implement these measures. It consists of the set of mitigation, monitoring, and institutional measures to be taken during implementation and operation of a project to eliminate adverse environmental and social risks and impacts, offset them, or reduce them to acceptable levels. The ESMP also includes the measures and actions needed to implement these measures. In this case the Ministry of Communications and Digitalization (implementing agency) is required to: (a) identify the set of responses to potentially adverse impacts; (b) determine requirements for ensuring that those responses are made effectively and in a timely manner; and (c) describe the means for meeting those requirements.

9.1 EIA Procedure to be followed by GDAP

The World Bank ESS 1 provides guidance on the environmental assessment procedures for WB funded projects. The Ghana EIA procedures (EPA, 1995) has also established 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 Ghanaian procedures are therefore summarized in the following sections and will mostly be followed by the proposed GDAP.

Registration

Environmental Assessment Registration Forms (EA1 or EA2) are available at the official website of EPA to register every project/ development that may have an impact on the environment (**see Appendix 9-1** for Form EA1 and EA2 to be used for GDAP). The responsibility is on the proponent undertaking the project/ subproject to register the project with EPA.

Screening

The EPA, within 25 working days of receiving the Registration Form will take a decision by placing the project at the appropriate level of environmental assessment. The results will be communicated to the developer/ proponent with reasons, which could be any of the following:

- Objection to the project, i.e., EIA procedure is curtailed and no permit will be issued.
- No objection to the project, i.e., EIA procedure will be followed through and permit issued.
- EPA may use the completed EA1 form to permit the project, e.g., installation of masts;
- EPA may require Preliminary Environmental Assessment (PEA) report to permit the project where the impacts are not major.
- EPA may require an EIA report to permit the project where the adverse impacts are significant. In such a case, a scoping report with Terms of Reference (ToR) for the EIA study will be required by the Agency before approval is given for the detailed EIA study.

9.2 Summary of Major Environmental and Social Reporting Requirements

A summary of the major environmental and social reporting requirement is provided in **Table 9-1**.

Table 9-1: Summary of Major Environmental and Social Reporting Requirements

No.	Report/Document	National and or World Bank	Objective
1	ESMF	EPA/ MoCD/ World Bank	To guide environmental and social screening, scoping and management processes
2	ESIA/EIA & RAP/ ARAP	EPA/ MoCD/ World Bank	To obtain environmental approval for project implementation (see Appendix 9-2)
3	ESMP	EPA/ MoCD/ World Bank	To provide detailed plan to address specific construction and operational issues and impacts (see Appendix 9-3)

9.3 Summary of Major National Permitting and Approval Requirements

A summary of the major national permitting and approval requirements is provided in **Table 9-2**.

Table 9-2: Summary of Major National Permitting and Approval Requirements

No.	Regulatory body	Permits/licenses and certificates	Applicable	Project Phase	Remarks /Status
1	EPA	Environmental Permit	Yes	Before Construction	-
		Environmental Certificate	Yes	During Operation	-
2	Ghana National Fire Service	Fire Permit	Yes	Construction Stage	-
		Fire Certificate	Yes	During operation	-
3	Factories Inspectorate	Certificate of Registration	Yes	Construction/ Operation	Cell Sites
4	NCA	Telecommunications License/authorization	Yes	Construction/ Operation	Communication Network/ Fiber Network
5	Radiation Protection Institute	Radiation Safety Certificate	Yes	During Operation	Communication Network
6	MMDAs	-Development Approval -Business Operating Permit	Yes	-Construction -Operation	Fiber network Communication Network

9.4 Roles and Responsibilities

9.4.1 Ministry of Communication and Digitalization

The Ministry of Communication and Digitalization (MoCD) will be responsible for development and presentation of clear guidelines for the design and provision of technical specifications and standards for the contractor or the responsible institutions shall approve any design or technical specifications provided by the contractor. This will ensure the streamlining of approaches and

activities for sound implementation of the project. These should include adequate reference to sector norms and prescribed national codes of practice as well as international best practices.

9.4.2 EPA - Environmental Quality Standards

The EPA is responsible for administering the Ghana Standards (GS) on environmental quality set by a committee of the Ghana Standards Authority (GSA). The standards are:

1. GS 1236:2019- Environment and Health Protection – Requirements for Ambient Air Quality and Point Source/ Stack Emissions;
2. GS 1222:2018- Health Protection – Requirements for Ambient Noise Control; and
3. GS 1212:2019- Environmental Protection Requirements for Effluent Discharge (General Industry).

In addition, the applicable World Bank Group (WBG) Environmental, Health, and Safety (EHS) Guidelines (General EHS Guidelines, April 30, 2007), which are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP) would be used. The industry sector EHS guidelines are designed to be used together with the General EHS Guidelines document.

General EHS Guidelines

The General EHS Guidelines (April 30, 2007) provides guidance to users on common EHS issues potentially applicable to all industry sectors. The general guidelines provide GIIP advice relating to the following elements to protect human health and the environment:

Environmental

- Air Emissions and Ambient Air Quality;
- Wastewater and Ambient Water Quality;
- Water Conservation;
- Hazardous Materials Management;
- Waste Management;
- Noise; and
- Contaminated Land.

Occupational Health and Safety

- General Facility Design and Operation;
- Communication and Training;
- Hazards- Physical, Chemical, Biological and Radiological;
- PPE Usage; and
- Monitoring.

Community Health and Safety

- Water Quality and Availability;
- Structural Safety of Project Infrastructure;
- Life and Fire Safety;
- Traffic Safety; and
- Emergency Preparedness and Response.

The WBG EHS General Guidelines are relevant to the proposed project as they provide internationally accepted GIIP for relevant EHS issues. The recommendations contained in the guidelines will be reviewed during the environmental assessment study of subprojects and will be incorporated into the prescribed management and mitigation measures as appropriate.

9.4.3 Project Coordination Unit

A Project Coordination Unit (PCU) within the MoCD will provide project oversight and lead the day-to-day management of the project.

The PCU will have the ultimate responsibility for ensuring that the measures set out in this ESMF are delivered. In this respect, PCU will review and approve contractor plans for delivery of the actions contained in this ESMF and during project implementation review contractor environmental performance through monitoring, audits and inspection. The PCU will have to liaise with the appropriate government ministries/agencies as well as relevant NGOs where necessary to ensure that stakeholder interest and concerns are addressed.

9.4.4 Environmental and Social Safeguards Specialist (ESSS)

The PCU will engage an Environmental and Social Safeguards Specialist (ESSS) as part of the team during the preconstruction and construction phases to oversee the implementation of all environmental and social requirements and to ensure that the overall objectives of the proposed project are met. The ESSS shall assist in screening and the implementation of the environmental mitigation measures.

9.4.5 Contractor(s)

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 proposed 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 an approved environmental document or report for the project or as may be recommended by key stakeholders including EPA, PCU and MoCD.

The Contractor will be expected to demonstrate commitment to the environment at all levels in the Contractors' management structure. The Contractor will be required to identify individuals

responsible for overall environment, social (including community relations); and health and safety management.

Contractor(s) implementation of the requirements of this ESMF and subsequent EIAs will form part of contractual agreement and Contractor project reporting requirements to MoCD and/ or PCU. The ESSS will ensure that the contractor(s) adhere to all environmental management provisions and ensure compliance with the World Bank's General Environmental Management Conditions for Construction Contracts as shown in **Appendix 9-3**.

9.4.6 The Road Agencies

Ghana Highways Authority (GHA), Department of Urban Roads (DUR) and Department of Feeder Roads (DFR) will play key roles on the project, particularly for the extension of the fiber network and other proposed project equipment installation within road reservations. These road agencies will have to be involved from the initial stages throughout the construction and operational phases. They should be formally notified about the project and their inputs obtained to improve the project implementation process.

9.4.7 Telecommunications and Utility Companies

Properties of telecommunications companies (MTN, Vodafone, AirtelTigo etc.) and utility companies (ECG, GWCL and GRIDCo) within the RoW of highways, urban and feeder roads may be affected during the deployment of the proposed project facilities. These institutions should be formally notified about the project and the likely impacts on their properties and their inputs obtained to improve the project implementation process.

9.5 Guidelines/Checklists and Specific Action Plans

9.5.1 Guidelines and Checklists

Environmental and social management issues at various stages of the Project are governed or guided by several standards, including:

1. the ESMF requirements;
2. those contained in national legislation;
3. those established by industry codes of practice; and
4. international standards and guidelines (such as those of the WBG/ IFC).

9.5.2 Specific Action Plans

Specific action plans (as relevant to the contractor(s) works) will need to be developed by the contractor(s) to implement the mitigation and management measures outlined in this ESMF. Specific action plans could include the following:

1. Health and Safety Plan/Policy (HSP) including emergency response plan;

2. Environmental Monitoring Plan;
3. Traffic Management Plan;
4. Waste Material Management Plan;
5. Labor Policy;
6. Public/Community Engagement Plan;
7. Reinstatement Plan; and
8. Decommissioning Plan.

9.5.3 Uncertainty and Change Management

Uncertainty in the development of the proposed GDAP derives from several factors including:

1. unconfirmed specific installation sites for proposed project equipment;
2. unconfirmed locations within the RoW for extension of fiber network;
3. unconfirmed total distance of fiber network; and
4. unforeseen events (flooding, fire etc).

The final project designs may require further mitigation and management actions. The PCU will liaise with the EPA to assess any change or engage an expert to assist in this direction.

Changes that might occur after the completion of the EIA study/findings should be subjected to re-assessment, including further stakeholder consultation, and supplementary EIA or ESMP or Environmental Management Plan (EMP) undertaken in line with the EIA procedures.

10 ESMF IMPLEMENTATION MONITORING PLAN

10.1 Objective of Monitoring

The objective of monitoring is to:

1. Ensure proper and timely implementation of environmental and social interventions proposed in this ESMF and other relevant documents to be prepared based upon the ESMF such as the EIA/ ESIA and EMP/ ESMP.
2. Alert project authorities by providing timely information about the success or otherwise of the environmental management process outlined in this ESMF in such a manner that appropriate decisions can be made to improve upon the process or avert any adverse impact.
3. Make a final evaluation in order to determine whether the mitigation measures incorporated in the technical designs and the EMP/ ESMP have been successful in such a way that the pre-project environmental and social condition has been restored, improved upon or is worse than before and to determine what further mitigation measures may be required.

This section sets out requirements for the monitoring of the implementation of this ESMF and the environmental and social impacts to be associated with the project. Monitoring of environmental and social indicators should be mainstreamed into the overall monitoring and evaluation system for the project.

10.2 Types of Monitoring Required

10.2.1 Compliance Monitoring

The following activities should be conducted to ensure compliance with the recommendations of the ESMF and subsequent ESIA/ EIA Study:

1. As part of the planning stage, ensure that EPA Permits are obtained for specific subprojects;
2. Final designs should be completed and submitted to MoCD or PCU following acceptance of the final Environmental Impact Statement (EIS) by EPA;
3. Confirm that all the design changes and design mitigation measures recommended by the EIA study have been incorporated into the final detailed design documents;
4. During contract negotiations, confirm that the designs and working methods proposed by the contractors have taken into account the environmental and social considerations recommended in the EIS;
5. Following completion of the detailed designs, confirm that all mitigation measures recommended by the ESMF and confirmed by the ESIA/ EIA study have been incorporated into the appropriate contract documents prior to signing;
6. During construction, confirm on a regular basis that all the agreed working conditions and procedures, regarding various environmental considerations, are followed through satisfactorily;

7. During construction and upon completion of construction, ensure that all requirements regarding clean up and reinstatement have been satisfactorily met; and
8. During the operation of the project, ensure that all the mitigation measures recommended in the EIS forms part of the functions and mandate of the institution responsible for the management and operation of the project facilities.

10.2.2 Monitoring of Environmental and Social Impacts

The actual impacts caused by project implementation should be closely monitored during the construction and operation of the project to examine the effectiveness of the mitigation measures. The goals of monitoring are to measure the success rate of the project, determine whether interventions have resulted in dealing with negative impacts, and whether further interventions are needed or monitoring is to be extended in some areas.

The following activities need to be conducted for impact monitoring:

Biophysical Impact Monitoring

1. During construction, monitor the levels of air, noise and land pollution at regular intervals (to be proposed in the ESIA/ EIA) and compare with standards and baseline data.
2. Monitor the construction spoil disposal practices during construction.
3. During and after construction, monitor the fiber network construction sites to ensure all trenches are properly covered and do not pose any danger to the public or do not breed mosquitoes.

Socio-economic and Health Impact Monitoring

1. Monitor the occurrence of incidents/accidents during the construction and operational phases.
2. Regularly check the health of the workers to ensure that there is no spread of communicable diseases.
3. Monitor public complains and reinstatement of affected property during the construction phase.
4. During construction and with the help of the local police, monitor the occurrence of criminal and socially undesirable activities.
5. Monitor the gender issues related to the project to ensure that neither males nor females bear an unfair share of negative impacts.

10.3 Monitoring Roles and Responsibility

Environmental Protection Agency (EPA)

EPA will play the leading oversight role of monitoring the activities of GDAP. The EPA will carry out this role by ensuring that EMPs for the subprojects are being implemented as specified therein. The EPA will rely on a bottom-up feedback system from the ground by going through relevant project/ monitoring reports and making regular site visits to inspect and verify for themselves the nature and extent of the impacts and the success or lack of the mitigation measures. The EPA will prepare brief consolidated periodic monitoring reports for submission to MoCD, PCU and other key stakeholders.

Project Coordination Unit

The PCU will be primarily responsible for ensuring compliance to the monitoring framework. The PCU will engage experts to undertake the field sampling and monitoring work and will review the monitoring reports emanating from these experts and will then upon approval submit these monitoring reports to EPA and other relevant stakeholders. The PCU will also provide overall coordination in monitoring including coordinating of training in collection and analysis of monitoring data for data collectors. Critical role of the PCU will include management of all baseline and monitoring data. The PCU will implement all the necessary modifications in the monitoring framework.

Contractors

The contractor will be mainly responsible for the monitoring of the construction impacts identified in Chapter 6.

The monitoring roles and responsibilities are summarized in **Table 10-1**.

Table 10-1: Sample ESMP for Significant Adverse Impacts

No.	Parameter	Anticipated E &S Impact	Proposed Management Measure(s) and their Objectives	Technical and Operational Requirements of Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation and Institutional Responsibilities	Frequency/ Timing	Budget/ Year (US\$)	Consultation
Pre-Construction (Planning/Design) Phase									
1.	Land Acquisition and Compensation	Anxiety from potential loss of lands/ livelihood/ shelter/ assets or relocation	<ul style="list-style-type: none"> • Sensitization and awareness creation on each sub-projects to ensure that potentially affected individuals and communities are adequately informed, in advance, of the scope, magnitude and schedule of the proposed project, its implications for the construction period. • These measures will minimize the problems of confrontation and conflicts and will reduce this impact significantly. • Ensure that communities are informed of any changes in the project design that may affect their status as affected persons. • Ensure all grievances/concerns by local communities, traditional authorities, are resolved prior to construction works to avoid conflicts. • Compensation for loss of permanent structures and assist to relocate other properties. • PAPs provided with livelihood assistance or assisted to get new jobs 	Community entry training and skill, Social safeguard training and skills	<ul style="list-style-type: none"> • Minutes or report of awareness creation meetings • Number of Complaints. • Records of complaints/grievances resolved/unresolved • Evidence of acceptable compensation paid • Cultural/ archaeological resources/ existing infrastructure encounter incidence register • Alternative Livelihood Restoration Program 	Social Safeguards Specialist	Weekly	As part of regular operations	Stakeholders to consult: Landlords, Project Affected Persons, communities and relevant Government and Non-Government Institutions

No.	Parameter	Anticipated E & S Impact	Proposed Management Measure(s) and their Objectives	Technical Operational Requirements and Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation and Institutional Responsibilities	Frequency/ Timing	Budget/ Year (US\$)	Consultation
			<p>immediately without any loss of income.</p> <ul style="list-style-type: none"> Identify cultural heritage resources and existing ecologically sensitive areas. PAPs could be considered for unskilled labor where possible as alternative livelihood Provide psycho-social counselling to PAPs to prepare them for relocation/resettlement Implementation of RAP prior to commencement of works 						
Construction Phase									
1.	Temporal disruption of businesses due to trenching	Loss of customers and income	<ul style="list-style-type: none"> Planning of work to out of business peak hours to minimize inconvenience to businesses 	Social safeguard	<ul style="list-style-type: none"> Complaints from businesses invoking GRM. 	Contractor/Design Consultant/Project Engineer/EPA/PCU	Monthly/ regular checks by contractor	As part of duties of Contractor	Stakeholders such as businesses, Landlords, Project affected Persons, communities
2	Site clearing and excavation works	Loss of vegetation cover and biodiversity	<ul style="list-style-type: none"> Carry out vegetation clearance in phases and limit clearance to portions of the land to be developed at a particular time to avoid exposure of the soil and loss of flora and fauna. Avoid unnecessary exposure or access to sensitive habitat. Regular inspection or monitoring should be carried out in sensitive 	Engineering	<ul style="list-style-type: none"> Vegetation intact at inactive sites of project area Presence of sensitive habitat at project area. Number of trees around project area. Increased in area of land cultivated. 	Contractor/Design Consultant/Project Engineer/EPA/PCU	Monthly/ regular checks by contractor	As part of duties of Contractor	Stakeholders such as Landlords, Project affected Persons, communities and relevant Government and Non-Government Institutions

No.	Parameter	Anticipated E & S Impact	Proposed Management Measure(s) and their Objectives	Technical and Operational Requirements of Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation and Institutional Responsibilities	Frequency/Timing	Budget/Year (US\$)	Consultation
			areas during construction works.						
3.	Site clearing and excavation works for manholes/pits/platforms etc. Laying of fiber optic cables. Transportation of materials and equipment.	Soil degradation and sediment transport	<ul style="list-style-type: none"> Carry out appropriate landscaping to preserve soils and vegetation cover. Control excavation works to limit the area and sized to be affected. Stabilize loose soil by dampening to avoid sediment transport into drains and water bodies. Carry out soil analysis to determine the present chemical conditions of the soil within the project. This is to identify the baseline soil properties to make recommendations on the type and rates of application of various soil nutrients. This will allow for the right nutrient replenishment to improve the soil. 	Engineering	<ul style="list-style-type: none"> Area and size of gullies formed Amount of silt deposited in watercourses. Observable change in turbidity of water in drains/water bodies Observable oil sheen drains/water bodies. 	Contractor/Design Consultant/PCU/Project Engineer	Daily	To be captured in Bill of Quantities (BoQ)	Stakeholder should include: Contractor, Design Engineers, Project Engineers, Project Communities, EPA.
4.	General construction activities. Generation and Disposal of construction spoil and waste.	Water quality deterioration	<ul style="list-style-type: none"> Do not discharge any garbage/refuse, oily wastes, fuels/waste oils into drains or water bodies to prevent water pollution. Fuel storage tanks/sites should be properly secured to avoid spillage and release into water bodies. Provide bund wall to guard against potential spillage from fuel tanks. 	Water quality testing analysis training and skills	<ul style="list-style-type: none"> Concentration of water quality parameters e.g. turbidity, oil & grease, TDS etc. Area and size of gullies formed. Presence and number of waste oil containers on site Records on waste oil collection and disposal 	Project Engineers/NPCT	Monthly	To be captured in Bill of Quantities (BoQ)	Stakeholder should include: Contractor (s), Design Engineers, Project Engineers, Project Communities, water quality specialist, EPA.

No.	Parameter	Anticipated E &S Impact	Proposed Management Measure(s) and their Objectives	Technical and Operational Requirements of Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation and Institutional Responsibilities	Frequency/ Timing	Budget/ Year (US\$)	Consultation
			<ul style="list-style-type: none"> • Adopt erosion control measures. • Provide drums or containers for temporarily storage of spent or waste oil from vehicles and equipment to avoid releasing into water bodies. • Ensure proper storage and handling of fuels, oil, wastes, and other potentially hazardous materials; • Regularly monitor suspected or known sensitive areas and ensure they form part of the project/ subproject activities; • Project activities should avoid disturbance of habitat or sensitive areas 						
5.	Site clearing and excavation works (Demolition of existing facilities applicable) Transportation of materials and equipment	Emissions and Air quality Deterioration and Increased Noise Levels	<ul style="list-style-type: none"> • Purchase sound equipment/ machinery for project to minimize the amount of air pollutants released to the environment; • Operate well maintained engines, vehicles, trucks and equipment to ensure the air is not overly polluted; • Use good quality fuel and lubricants; • Suppress dust generation at project sites by spraying water; 	Air quality and noise levels testing and analysis and skills training (proper handling of equipment)	<ul style="list-style-type: none"> • Presence and use of PPEs. • Number of Complaints. • Records of complaints/grievances resolved/unresolved • Baseline air quality and noise data 	Contractor/Design Engineers/Project Engineers	Daily	To be captured in Bill of Quantities (BoQ)	Stakeholder should include: Contractors, Design Engineers, Project Engineers, Project Communities, air quality and noise specialists, EPA

No.	Parameter	Anticipated E &S Impact	Proposed Management Measure(s) and their Objectives	Technical and Operational Requirements Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation and Institutional Responsibilities	Frequency/ Timing	Budget/ Year (US\$)	Consultation
			<ul style="list-style-type: none"> Switch off engines of vehicles/ trucks and earth-moving equipment when not in use. Deliver construction equipment and materials to the construction sites outside busy days in communities such as market days. Dampen untarred routes of vehicles/trucks to the construction sites. Haulage trucks carrying sand should be covered with tarpaulin. Hydraulic concrete mixing machines should be used as much as possible and regularly service all construction equipment and machinery. 						
6.	All construction activities	Generation and disposal of waste	<ul style="list-style-type: none"> Provide adequate waste reception facilities at construction/work camp sites; Dispose of waste at Metropolitan/ Municipal and District Assembly approved waste dump sites Provide training as part of the ESMP/ EMP awareness creation on waste management. 	Engineering	<ul style="list-style-type: none"> Availability and use of bins Records on frequency and location of waste disposal site of domestic and construction waste Records on training 	Contractor/Design Consultant/PCU	Monthly or quarterly	As part of duties of Contractors To be captured in Bill of Quantities (BoQ)	Stakeholder should include: Contractor, Design Engineers, Project Engineers, Project Community, Waste Management Engineer, EPA, and District Assemblies.
7.	All construction activities	Occupational Health and	<ul style="list-style-type: none"> Cover buckets of trucks carrying construction 	Vehicle maintenance/ skills training,	<ul style="list-style-type: none"> -Workers' awareness of 	Contractor/Design Consultant	Daily	As part of duties of Contractors.	Stakeholder should include:

No.	Parameter	Anticipated E &S Impact	Proposed Management Measure(s) and their Objectives	Technical and Operational Requirements of Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation and Institutional Responsibilities	Frequency/ Timing	Budget/ Year (US\$)	Consultation
		Safety Issues	<p>materials such as sand, quarry dust, etc.</p> <ul style="list-style-type: none"> • Use road worthy vehicles/trucks and experienced drivers/operators; • Active construction areas to be marked with high-visibility tape; • Backfill and or secure open trenches and excavated areas; • Provide adequate sanitary facilities; • Provide PPEs for construction workers; • Educate construction workers on site rules/regulation and hygiene and disease (HIV/AIDS and COVID-19) prevention. • Only qualified and certified workers shall be employed to install, maintain or repair any equipment on site • First aid kits will be kept on site whenever there maintenance activities. • Use suitable Personal Protective Equipment (PPEs)- Train all construction workers in safe methods of working. 	OHS Training	<p>Contractor's health and safety policy</p> <ul style="list-style-type: none"> • -Availability and proper use of PPEs • -Availability and proper use of warning signs • -Availability of first aid kit • -Adherence to health and safety procedures • Records on frequency, type and source of illness/accident/injury • Records on non-compliances 			To be captured in Bill of Quantities (BoQ)	Contractors, Design Engineers, Project Engineers, Project Community, EPA, and MMDAs
8.	Conveyance of construction materials.	Traffic Impacts	<ul style="list-style-type: none"> • The MMDAs should be informed at least seven days before start of work. 	Traffic assessment skills/training	<ul style="list-style-type: none"> • Change in condition of roads to project site 	Contractor/ Construction Supervisor/ Environmental and	Daily	As part of duties of Contractor.	Stakeholder should include:

No.	Parameter	Anticipated E &S Impact	Proposed Management Measure(s) and their Objectives	Technical and Operational Requirements of Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation and Institutional Responsibilities	Frequency/Timing	Budget/Year (US\$)	Consultation
			<ul style="list-style-type: none"> • The public should be informed of the proposed works through local FM stations • Warning signs should be provided at junctions to Project sites to indicate the approach of trucks. • Transport of materials will as much as possible be carried out during off-peak traffic hours to minimise the impact on traffic in project communities. • Ensure that all the vehicles to be used for the project and especially in transporting equipment and materials will be serviced regularly and all the drivers to be engaged/assigned would be required to hold the requisite driver's license as prescribed by the Drivers and Vehicles Licensing Authority (DVLA) • All temporary traffic controls should be done in consultation with the respective road agencies and the Police Motor Transport and Traffic Division (MTTD); • Haulage of materials including quarry products 		<ul style="list-style-type: none"> • Availability and use of diversion/road signs or trained persons directing traffic. • Records of accident occurrence involving truck drivers • Frequency of truck breakdowns along road • Records of parking at unauthorized places • Complaints of over speeding by Project vehicles 	social Safeguards Specialist (MoFA) /SESU		To be captured in Bill of Quantities (BoQ).	Contractors, Design Engineers, Project Engineers, Project Communities, EPA, and MMDAs

No.	Parameter	Anticipated E &S Impact	Proposed Management Measure(s) and their Objectives	Technical and Operational Requirements Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation and Institutional Responsibilities	Frequency/ Timing	Budget/ Year (US\$)	Consultation
			<p>to the site should be limited to off-peak hours;</p> <ul style="list-style-type: none"> • Trucks transporting quarry products and other friable materials to the site should be covered; • Engage very experienced drivers for the project; • Traffic wardens should monitor dump truck movements and ensure public and traffic safety; Speed limits of between 20-30 km/hour will be allowed along the construction routes. Where possible, attach speed limit sign to vehicles • In an unfortunate incident of any truck failure, such trucks will be towed within 24 hours. 						
9.	All construction phase activities	Public health impacts	<ul style="list-style-type: none"> • Organize, in collaboration with the respective MMDAs Health Directorates, awareness creation seminars and educational programs for all workers and the surrounding communities on the behavioural changes required to prevent the spread of HIV/AIDS and other STDs as well as COVID-19 • Ensure that the contractor covers all trenches or 	OHS Skills/Training	<ul style="list-style-type: none"> • Records of HIV/AIDS and COVID-19 awareness creation seminars and educational programs for all workers and the surrounding communities • Availability and use of warning signs and cautionary tapes around excavations and other working areas 	Project engineer/Contractor / Construction Supervisor/ Environmental Safeguards Specialist (NPCT)	Onset of project Daily	As part of duties of Contractors. To be captured in Bill of Quantities (BoQ)	Stakeholder should include: Contractor, Design Engineers, Project Engineers, Project Community, EPA, and MMDAs

No.	Parameter	Anticipated E &S Impact	Proposed Management Measure(s) and their Objectives	Technical and Operational Requirements of Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation and Institutional Responsibilities	Frequency/ Timing	Budget/ Year (US\$)	Consultation
			<p>excavations, other than the laterals/sub-laterals made for construction to prevent accidents and collection of stagnant water which could breed mosquitoes.</p> <ul style="list-style-type: none"> • Ensure the contractor provides adequate waste bins at the project site for use to minimise indiscriminate disposal of plastic and polythene material, cans and food waste by the workers. These bins will be frequently transported and emptied at approved MMDAs dump sites. This will prevent the littering of the project site with cans and bottles which could collect water and breed mosquitoes and other vermin. • Ensure the contractor provides temporary toilet facilities at the project site for use by the construction workers. The workers will be educated against “free range” defecation. 		<ul style="list-style-type: none"> • Availability of bins and record of frequency of dislodgement of sewage • Records on frequency and type of incident/accidents involving public 				
10.	All construction phase activities	Change in socio-cultural characteristics	<ul style="list-style-type: none"> • Use local labor as much as possible and where readily available. • Identify cultural heritage resources and existing ecologically sensitive areas. 	Social safeguard skills/training	<p>Complaints from project communities.</p> <p>Reports on chance finds</p>	Project Engineer(s)/contractor(s)	Daily	As part of duties of Contractors, and Safeguards Specialist	Stakeholder should include: Contractors, Design Engineers, Project Engineers,

No.	Parameter	Anticipated E &S Impact	Proposed Management Measure(s) and their Objectives	Technical and Operational Requirements Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation and Institutional Responsibilities	Frequency/ Timing	Budget/ Year (US\$)	Consultation
			<ul style="list-style-type: none"> Ensure the contractor(s), together with opinion leaders such as the Assembly Member and traditional leaders, sensitise migrant workers on societal norms, taboos and other cultural practices in the subproject area. The Contractor(s) shall be required to submit to the approval of the Engineer a social and cultural orientation plan for all staff. 						Project Communities, EPA, and MMDAs.
Operation Phase									
1.	All project operations	Soil degradation and sediment transport.	<ul style="list-style-type: none"> Monitor soil conditions around facilities. This is to identify the present state of the soil and to make recommendations. <ul style="list-style-type: none"> Provide bund wall to guard against potential spillage from fuel tanks. Adopt erosion control measures to minimize erosion and sediment transport from the facilities. Dispose of waste at District Assembly approved waste dump site Create an exclusive zone around project facilities. 	Engineering	<ul style="list-style-type: none"> Area and size of gullies formed. Results of soil test (Texture; pH; organic carbon; total nitrogen; available phosphorus; available potassium; exchangeable cations like Ca, Mg, Na, K; CEC) Number of site waste bins Final disposal records. 	Soil Scientist/ Environmental, Health, Safety & Security Officer/NPCT	Onset of project and subsequently biennially Weekly checks	20,000.00	Stakeholder should include: Contractor, Design Engineers, Project Engineers, Project Communities, EPA, and MMDAs

No.	Parameter	Anticipated E &S Impact	Proposed Management Measure(s) and their Objectives	Technical and Operational Requirements of Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation and Institutional Responsibilities	Frequency/Timing	Budget/Year (US\$)	Consultation
2.		Water quality deterioration	<ul style="list-style-type: none"> Maintenance and cleaning of vehicles, trucks and equipment should take place offsite and at a designated washing bay; Provide toilet facilities for workers. Dispose of waste oil through recognized oil marketing company or approved agent. The provision of bunds around the proposed project facilities will hold water and reduce transport of soil sediments through erosion by runoff. Regularly maintain the wastewater/ runoff drains through de-silting and weed clearance to allow waste water released from the project facilities flow freely out of the facilities 	Water quality testing of near-by water bodies	<ul style="list-style-type: none"> Physicochemical parameters Bacteriological parameters Pesticide residue parameters 	Environmental Consultant/	Spot checks/ Monthly/ Biannual tests and analysis (Major and minor season)	20,000.00	Stakeholder should include: Contractor, design engineers, project engineers, project community, EPA, and District Assemblies.
3.	All project operations	Waste Generation, management and disposal	<ul style="list-style-type: none"> Waste must be properly disposed of in order to avoid creating public nuisance. No waste should be disposed of on public roads and must be kept within boundaries of the project site. Solid waste desilted from the drains, during maintenance, must be dumped at approved dumpsites. 	Waste management engineering	<ul style="list-style-type: none"> Availability and use of bins for collection of plastic and polythene material Availability and use of separate labelled bins Records on disposal of plastic and polythene material (frequency and location of disposal site) 	NPCT	Weekly	15,000.00	Stakeholder should include: Contractor, design engineers, project engineers, project community, EPA, and District Assemblies.

No.	Parameter	Anticipated E &S Impact	Proposed Management Measure(s) and their Objectives	Technical and Operational Requirements Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation and Institutional Responsibilities	Frequency/ Timing	Budget/ Year (US\$)	Consultation
			<ul style="list-style-type: none"> • Provide adequate bins on the project facilities for the collection of plastic and polythene material such as drinking water sachets used by workers for proper disposal at approved dump sites or for recycling. • Ensure bins containing used containers are stored safely and are securely under cover prior to their safe disposal and that they should not be used for other purposes. 		<ul style="list-style-type: none"> • Toilet facilities provided in the field for workers 				
4.	All project operations	Occupational Health and Safety (OHS) Issues	<ul style="list-style-type: none"> • Ensure all staff are trained on appropriate use and handling of equipment and machinery. • Provide staff with first aid training, including on accidents and how to administer first aid health care in the event of any accidents • Appropriate PPEs such as gloves, nose masks, coveralls, goggles, safety boots, etc. will be provided for staff. • Monitor particulate matter (PM_{2.5} and PM₁₀) emissions from generator sets to ensure that they do not exceed 35µg/m³ and 70µg/m³ respectively • Comply with the requirements of the Ghana 	OHS assessment skills/training	<ul style="list-style-type: none"> • Workers' awareness of health and safety policy • Availability and proper use of PPEs • Availability and proper use of warning signs • Availability of first aid kit • Adherence to health and safety procedures • Records on frequency, type and source of illness/accident/injury • Records on non-compliances and evidence from GRPB. 	PCU	Weekly	20,000.00	Stakeholder should include: Contractors, Design Engineers, Project Engineers, Project Communities, EPA, and MMDAs

No.	Parameter	Anticipated E &S Impact	Proposed Management Measure(s) and their Objectives	Technical and Operational Requirements of Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation and Institutional Responsibilities	Frequency/ Timing	Budget/ Year (US\$)	Consultation
			<p>Radiation Protection Board (GRPB) to ensure that at subproject base stations whole body exposure shall not exceed 1.2 /cm-sq at 1800-2000 MHz and 0.6 W/cm-sq for systems operating at 900 MHz</p> <ul style="list-style-type: none"> • Safety procedures, particularly with the operation of machines and their handling will be enforced and sanctions applied when not adhered to. 		<ul style="list-style-type: none"> • Records on training and awareness creation on health and safety 				
5.	All project operations	Public health impacts	<ul style="list-style-type: none"> • Monitor particulate matter ((PM_{2.5} and PM₁₀) emissions from generator sets to ensure that they do not exceed 35µg/m³ and 70µg/m³ respectively • Engage and comply with the requirements of the Ghana Radiation Protection Board (GRPB) to ensure that at base stations whole body exposure shall not exceed 1.2 /cm-sq at 1800-2000 MHz and 0.6 W/cm-sq for systems operating at 900 MHz • Waste must be properly disposed of in order to avoid creating public health nuisance. • Provide and enforce the use of separate labelled 	Health Assessment and Auditing	<ul style="list-style-type: none"> • Health records (type, frequency and causes of diseases/illnesses) • Illustrative warning signage and indicators provided to warn about proximity to project/ subproject site/ facilities • Security in place near project facilities 	PCU	Daily	25,000.00	Stakeholder should include: Contractors, Design Engineers, Project Engineers, Project Communities, EPA, and MMDAs

No.	Parameter	Anticipated E &S Impact	Proposed Management Measure(s) and their Objectives	Technical and Operational Requirements Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation and Institutional Responsibilities	Frequency/Timing	Budget/Year (US\$)	Consultation
			bins for the collection and disposal of used containers and waste. <ul style="list-style-type: none"> • Illustrative warning signage and indicators will be provided to warn about proximity to project/ subproject facilities. 						
6.	All project operations	Change in socio-cultural characteristics	<ul style="list-style-type: none"> • Ensure the contractor (s), together with opinion leaders such as the Assembly Members and traditional leaders, sensitise workers on societal norms, taboos and other cultural practices in the area. • The Contractors shall be required to submit to the PCU for approval of the social and cultural orientation plan for all his staff. • Use local labor as much as possible and where readily available 	Contractor labor policy	<ul style="list-style-type: none"> • Records of meetings • Grievance records 	Contractors/ PCU	monthly	15,000.00	Stakeholder should include: Contractors, Design Engineers, Project Engineers, Project Communities, EPA, and MMDAs
Decommission Phase									
1.	Demolition of facilities/structures	Occupational/ Public safety and traffic	The contractor will be required to ensure that: <ul style="list-style-type: none"> • PPEs are provided to workers involved with decommissioning of facilities. • toilet facilities are available throughout the decommissioning period. 	Engineering	<ul style="list-style-type: none"> • Availability and proper use of PPEs • Adherence to health and safety procedures • Records on frequency, type and source of illness/accident/injury 	Contractor/NPCT	<ul style="list-style-type: none"> • Daily 	No additional cost required aside BoQ	Stakeholder should include: Contractors, Design Engineers, Project Engineers, Project Communities, EPA, and MMDAs

No.	Parameter	Anticipated E &S Impact	Proposed Management Measure(s) and their Objectives	Technical and Operational Requirements Management Measure(s)	Monitoring and Reporting (including performance indicators)	Implementation and Institutional Responsibilities	Frequency/ Timing	Budget/ Year (US\$)	Consultation
			<ul style="list-style-type: none"> workers still have access to public toilet facilities in the communities or can be conveyed to such facilities where needed, if mobile toilet facilities have been relocated. final movement of vehicles and equipment comply with approved speed limits within the communities. all community complaints are resolved before handing over project facilities 						
2.	Demolition of facilities/ structures	Waste disposal	<ul style="list-style-type: none"> Ensure that any remaining waste streams created during construction activities and waste generated during decommissioning activities are collected from the project sites properly disposed before handing over the project. Inspect the site to ensure that the contractor has properly cleaned up all construction sites before final payment is made to the contractor. 	Engineering	<ul style="list-style-type: none"> Availability and use of bins Records on frequency and location of waste disposal site of domestic and construction waste 	Contractor/ PCU	Daily	No additional cost required aside BoQ	Stakeholder should include: Contractors, Design Engineers, Project Engineers, Project Communities, EPA, and MMDAs
Total Cost Estimate for Monitoring								115,000.00	

11 CAPACITY BUILDING AND TRAINING

11.1 Major Institutions

The main institutions to be involved with the implementation of the project and ESMF and to ensure sound management of the environmental and social aspects include:

1. Ministry of Communications and Digitalization (MoCD);
2. National Communications Authority (NCA);
3. National Information Technology Agency (NITA);
4. Environmental Protection Agency (EPA);
5. National Council on Persons with Disabilities,
6. Ghana Investment Fund for Electronic Communications (GIFEC),
7. Office of the Head of Civil Service (OHCS);
8. Ghana Venture Capital Trust Fund (VCTF);
9. National Entrepreneurship Innovation Program (NEIP);
10. Ghana Enterprise Agency (GEA);
11. Ministry of Food & Agriculture (MoFA);
12. mLabs and iHubs;
13. Ghana Post (GP);
14. Postal and Courier Services Regulatory Commission (PCSRC);
15. Project/ Subproject Contractors;
16. Supervising/ Engineering Consultant; and
17. Project Coordination Unit (PCU).

11.2 Capacity Building Requirements

Project institutions need to understand the purpose of the ESMF, their expected roles and the extent to which the ESMF will facilitate the respective statutory functions. This will engender the required collaboration for the ESMF implementation.

Competence of government i.e., the ability of active government parties to carry out their respective design, planning, approval, permitting, monitoring and implementation roles will, to a large extent, determine the success and sustainability or otherwise of the project.

The objectives and provisions of this ESMF therefore cannot be achieved in the absence of relevant competencies on environmental and social management within the MoCD, the project/ subproject contractors and other stakeholders. The following sections provide recommendations on capacity building to support the program's environmental and social management objectives.

Identification of Capacity Building Needs

The first step in pursuing capacity building on E&S issues as provided in the Environmental and Social Commitment Plan (ESCP) and in compliance with the ESF will be to identify the capacity building needs of the various stakeholders e.g., PCU staff, PwDs, contractors/ project workers etc.

To participate effectively in the digital ecosystem and deliver in their respective lines of work Capacity building should be viewed as more than training. It is human resource development and includes the process of equipping individuals with the understanding, skills and access to information, knowledge and training that enables them to perform effectively. It also involves 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).

The capacity building requirements will mostly be in the form of training workshops as follows and in line with the provisions made in the ESCP for GDAP:

1. A training workshop on the ESMF and the World Bank ESF/ ESS should be organized for the major stakeholders identified above. The training workshop would cover (i) Gender and inclusion issue, (ii) Livelihood restoration and Chance finding, etc and as provided in the ESCP.
2. A training workshop for the key project implementers including PwDs, MoCD, EPA and the proposed PCU among others should cover the following:
 - a. Inclusion of environmental and social mitigation measures & penalties in contract documents of contractor and contractor supervision;
 - b. Environmental and social screening and monitoring; and
 - c. Public/community participation techniques and procedures.

For each group, training will be provided at different level of expertise in different areas, and would include:

1. In-depth training to a level that allows trainees to go on to train others, including environmental and social procedures where relevant; and
2. Sensitization or awareness-raising in which the participants are familiarized with the significance or relevance of the issues, to the extent that they can identify potential or emergent challenges and request further assistance as necessary.

11.3 Public Engagement/Sensitization

In order to ensure proper implementation of the ESMF, project/ subproject and to avoid public agitations/ litigations which could hinder the project, the project should engage/ sensitize the public, particularly those who may be affected within the RoW and sites for project facilities and those who are interested in the project. The engagement/ sensitization should include the schedule of implementation, reinstatement process for any affected property, grievance redress mechanism, traffic management, etc. The public engagement/ sensitization should be carried out ahead of construction works and any grievances addressed.

12 GRIEVANCE REDRESS MECHANISM

12.1 Objective of the GRM

The main objective of a Grievance Redress Mechanism (GRM) is to assist the implementing institutions to resolve complaints and grievances in a timely, effective and efficient manner that satisfies all parties involved. It is to help track project-related complaints including a feedback system for regular and timely feedback on actions taken to respond to complaints and to address and resolve any issues or problems connected to the proposed project from affected persons or community members promptly and in a manner that will be acceptable to all parties. The GRM is an integral part of this ESMF and helps to create avenues for receiving and responding to stakeholder concerns and complaints about issues related to the project. Specifically, it provides a transparent and credible process for fair, effective and lasting outcomes. It also builds trust and cooperation as an integral component of broader community/ citizen engagement that facilitates corrective actions. Specifically, the GRM:

1. Provides affected people with avenues for making a complaint or resolving any dispute that may arise during the implementation of projects;
2. Ensures that appropriate, timely and mutually acceptable redress actions are identified and implemented to the satisfaction of complainants;
3. Verify that complainants are satisfied with redress action; and
4. Avoids the need to resort to judicial proceedings.

12.2 Proposed Grievance Redress Mechanism

Having multiple stakeholders and implementing agencies on board the project could lead to complaints, misunderstandings, conflicts and disputes. The project has a grievance redress mechanism that will provide all direct and indirect beneficiaries, service providers and other stakeholders the opportunity to raise their concerns and/or ask for information (see **Appendix 12-1** for Grievance Redress Forms). Stakeholders will be informed of the grievance redress mechanism in place, as well as the measures put in place to protect them against any reprisal for its use. This will be done during sensitization activities and other interactions with stakeholders.

Grievances arising with the implementation of the project could typically include access and quality of services, issues about targeting for services and availability of facilities and resources. Grievances may also relate to expansion of infrastructural activities with some physical footprints in the later stages of project implementation.

12.2.1 Grievance Redress Mechanism Levels

The GRM levels is presented in **Table 12-1** and further illustrated in **Figure 12-1**.

Table 12-1: Grievance Redress Mechanism Levels

Level One	<ol style="list-style-type: none"> 1. Receive grievance 2. Acknowledge grievance 3. Register/Log 4. Screen 5. Investigate 6. Resolution 7. Provide feedback
Level Two	Grievance Redress Committee
Level Three	Mediation
Level Four	Court

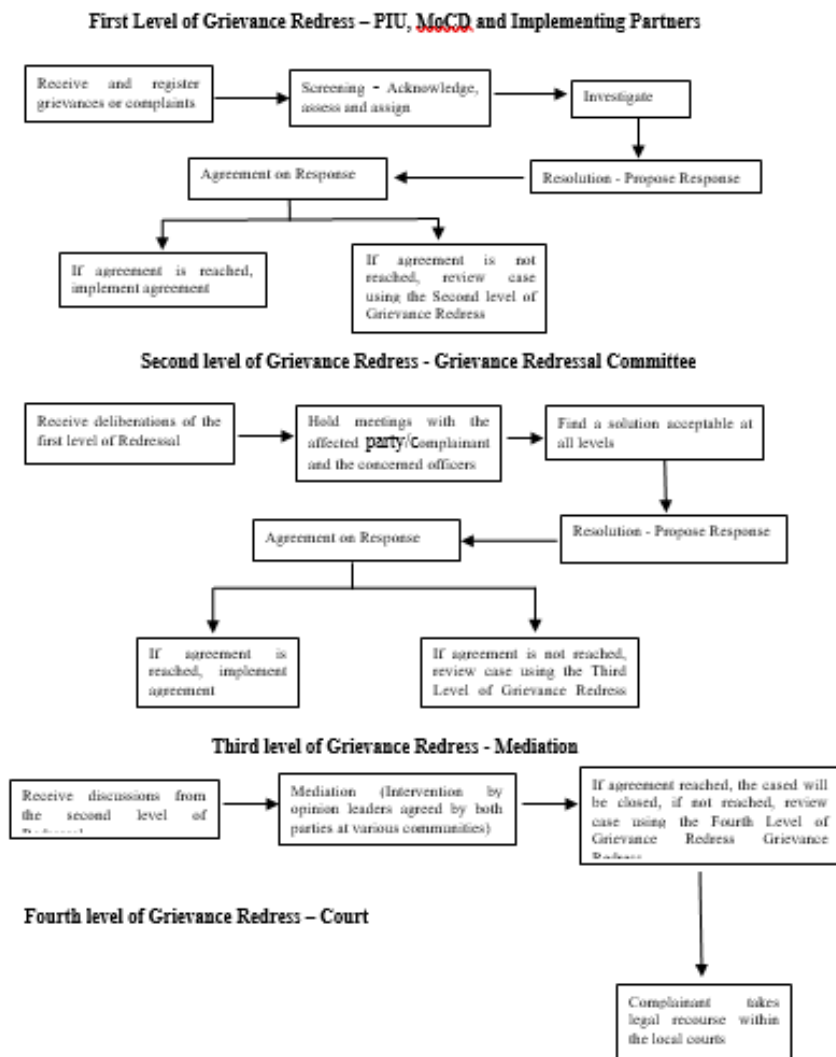


Figure 12-1: Proposed GRM Structure

First Level of Grievance Redress:

The project institutions within which project activities are carried out are the first level of grievance redress. Each institution (MDA, training institutions, regional offices) where project activities are undertaken will use existing grievance mechanisms to review and address grievances. The first level of grievances will be handled at the PCU level GRM that is composed of representatives from the implementing agency MoCD and the implementing partners represented in the PSC.

The full contact details of the grievance committees will be disclosed publicly on the website of the GRM member ministries and agencies. The same information should be displayed on the notice boards of the agencies and institutions along with the complainant box that should be placed in a visible location within the premises of the institutions, ministries and agencies. Grievances from the project dedicated complainant box will be collected and reviewed by the institution's grievance committee on a weekly basis.

Grievances can be received in person, verbally via phone, in writing or via e mail, fax, text message or any other media. Grievances submitted anonymously could be submitted through the complainant box. All grievances will be acknowledged by telephone or in writing by the grievance body of the institution within 48 hours of receipt and the complainant informed of the approximate timeline for addressing the complaint, if it can't be addressed immediately.

The grievance body will work to ensure the speedy resolution of the grievance. If the complaint cannot be resolved at this level it is taken to the next level.

The point of receipt of complaints is listed hereunder:

Register/Log Grievance: After receiving and recording the grievance, it will be accepted and registered for review.

Screen: The complaint will be forwarded to the grievance structure that is responsible for investigating the claim and liaising with the aggrieved in order to come to an acceptable resolution. Meetings with the grievant/complainant will be held, if necessary, to resolve the matter.

Investigate: The investigation by the grievance committee will include, but not limited to, meetings with the grievant/complainant, site visits, meetings/interviews with project staff and collection of relevant documentation and other forms of evidence.

Resolution: The resolution at the first tier should normally be completed within 15 working days of receipt of the grievance and notified to the concerned party. If the grievance is not resolved within this period, it can be referred to the next level of the Grievance Redressal system. However, once it is determined that progress is being made towards a resolution, the grievance will be retained at this first level. The complainant will be informed of this decision and an estimated time for the resolution of the matter will be

given either verbally or in writing. If the issue cannot be resolved within 25 working days, it will be transferred to the next level.

Once a resolution has been agreed and accepted, the complainant's acceptance will be obtained. If the proposed resolution is not accepted the grievance will be escalated to level 2.

Second level of Grievance Redress:

A Grievance Redressal Committee (GRC) will be formed at the PCU/MoCD comprised of key implementing entities, that will consist of members of their respective Project Steering Committees. The GRC will be called into place when a first-tier resolution is not found, but it could also meet on a quarterly basis to evaluate the performance of the project level GRM. From this perspective it is a standing body.

This committee will be chaired by the GRC representative of MoCD in the Project Steering Committee. The implementing partner ministries/agencies represented in PSC will assign representatives to the GRC.

The functions of the GRC are as follows:

1. Provide relief and support to the affected persons in a timely manner
2. Prioritize grievances and resolve them at the earliest reasonable time
3. Provide information to PCU on serious cases at the earliest plausible time
4. Coordinate the process of the Affected Persons getting proper and timely information on the solution worked out for his/her grievance
5. Study the normally occurring grievances and advise the PM/PCU as to their scale and scope.

The project coordinator at the PCU will coordinate the convening of the meetings of the GRC. He/She is also responsible for briefing the GRC on the deliberations of the first level of Redressal. The GRC will hold the necessary meetings with the affected party/complainant and the concerned officers and attempt to find a solution acceptable at all levels.

GRC will record the minutes of the meeting. The decisions of the GRC will be communicated to the complainant formally and if she/he accepts the resolutions, the complainant's acceptance will be obtained.

If the complainant does not accept the solution offered by the GRC, then the complaint is passed on to the next level/or the complainant can activate the next level. It is expected that the complaint will be resolved at this level within 30 working days of receipt of the original complaint. However, if both parties agree that meaningful progress is being made to resolve the matter may be retained at this level for a maximum of 60 working days.

Third Level of Grievance Redress:

Failure to resolve the complaint at the 2nd level will require a mediation by a group or an individual mediator agreed to by both parties. The officer in-charge of grievance redress at the PCU will trigger the resolution process at this level. It is expected that the complaint is resolved within Ten (10) working days upon the receipt of complaint. The decision rendered in the mediation shall constitute final resolution of the dispute at this level.

Fourth Level of Grievance Redress:

If the affected party/complainant does not agree with the resolution at the 3rd level, or there is a time delay of more than 60 working days in resolving the issue, the complainant can opt to consider taking it to the fourth level. This level involves the complainant taking legal recourse within the local courts.

12.3 SEA/H Related Grievance Redress Mechanism

When Sexual Exploitation, Abuse and Harassment (SEA/H) related complaint is received at the first or second tier of GRM, the complaint should be kept confidential by the person/persons receiving the complaint. The complaint should be reported to the relevant committee and immediate actions should be taken that is consistent with the wishes and choices, rights and dignity of the complainant. The complainant should be given information in simple and clear terms on the steps for filing complaints and the possible outcomes, the timelines and the types of supports available to be able to make informed decision.

For SEA/H cases, it is important to ensure that access to the complaints processes is as easy and as safe as possible for the complainant survivor. The recording of incidence should be limited to the nature of complaint put exactly in the words of the complainant, the age of the survivor and if to the best of their knowledge, the perpetrator was associated with the project. The complainant should decide on whether they would like to be referred to the grievance committee and the complainant should give consent to share basic monitoring data.

Safety & Well-Being: The safety of the survivor shall be ensured at all times including during reporting, investigation, and the provision of victim assistance. Those involved in the management of complaints will need to consider potential dangers and risks to all parties (including the survivor, the complainant if different the subject of the complaint, and the organizations involved), and streamline ways to prevent additional harm in all the complaint handling process.

The survivor is never to blame for reporting an act of SEA/H and should never be made feel investigated. On the contrary, it is important that she/he feels that her story is heard, believed and valued. The actions and responses of the complaint mechanism will be guided by respect for the choices, needs, rights, and the dignity of the survivor.

Confidentiality: The confidentiality of complainants, survivors, and other relevant parties must be respected at all times. All SEA/H-related information must be kept confidential, identities must be protected, and the personal information on survivors should be collected and shared only with the informed consent of the person concerned and on a strict need-to-know basis.

Survivor-Centered Approach: All prevention and responses action will need to balance the respect for due process with the requirements of a survivor-centered approach in which the survivor’s choices, needs, safety, and wellbeing remain at the center in all matters and procedures. As such, all actions taken should be guided by respect for choices, needs, rights and dignity of the survivor, whose agency and resilience must be fostered through the complaint process.

Accessibility and non-discrimination: The mechanism must be accessible to all potential complainants and sufficient information must be given on how to access them, making the complaints process accessible to the largest possible number of people. This includes identifying and instituting various entry points that are both gender and context sensitive. To facilitate incidents reporting and avoid stigmatization, reports from third parties (witnesses, people suspicious or aware of an incident, etc.) must also follow accountability protocols.

12.4 Building Grievance Redress Mechanism Awareness

The PCU Environmental and Social Safeguards Specialist will initially brief all staff of the project office, the Project Steering Committee (PSC), consultants and contractors on the Grievance Redressal Mechanism and SEA/H complaints mechanism of the Project and explain to them the procedures and formats to be used including the reporting procedures.

The project Environmental and Social Safeguards Specialist will brief all project stakeholders on the Grievance Redressal Mechanism of the Project and explain the procedures and formats to be used including the reporting procedures. Awareness campaigns would be conducted targeting project stakeholders to inform them of the availability of the mechanism. The GRM will also be published on the MoCD website and those of the implementing partners and the project website and other social media platforms if any. Project/ subproject site boards will be erected on the sites of sub-projects indicating the existence of the mechanism and phone number(s), email(s) and address(es) for further information. The GRM will be translated into local languages if needed.

12.5 Recommended Grievance Redress Time Frame

Table 12-2 presents the recommended time frames for addressing grievance or disputes related to resettlement and compensation. It is anticipated that resettlement/compensation disputes could be resolved at the community or regional levels.

Table 12-2: Proposed GRM Time Frame

Step	Process	Time frame
1	Receive and register grievance	within 24 hours
2	Acknowledge	within 24 hours
3	Assess grievance	Within 2 Days
4	Assign responsibility	Within 2 Days

Step	Process	Time frame
5	Development of response	within 21 Days
6	Implementation of response if agreement is reached	within 21 Days
7	Close grievance	within 30 Days
8	Initiate grievance review process if no agreement is reached at the first instance	within 30 Days
9	Implement review recommendation and close grievance	within 30 Days
10	Mediation	Within 10 Days
11	Grievance taken to court by complainant	As applicable

12.6 Grievance Documentation and Reporting

Resolved and escalated grievances/cases would be documented daily (as tickets) into the centralized GRM system by the assigned grievance managers at the PCU. The Environmental and Social Safeguards Specialist would exercise oversight over the system and track the resolution of all grievances/cases.

Monthly case/ grievance reports will be generated from the system by the Environmental and Social Safeguards Specialist at the PCU and report to the Project Coordinator to inform management decisions. Quarterly reports will also be generated and reported to the MoCD as part of the Project's Progress Reporting to the World Bank. Periodic reports will also be generated within a reasonable time frame for stakeholders upon request irrespective of the period (e.g., bi-annual, annual etc.)

The following indicators could be used as monitoring purposes:

- Number of active project complaints and appeals recorded and reported in each institution;
- 90% of grievance redressed claims settled within the specified period;
- 10% of unresolved complaints or disputes during the monitoring period; and
- Comments received by government authorities, women & youth, family, community leaders and other parties and passed to the Project.

13 PUBLIC CONSULTATIONS, PARTICIPATION AND INFORMATION DISCLOSURE

13.1 Introduction

The ESMF preparation included preliminary stakeholder identification, some initial consultations and analysis of the requirements with key stakeholders. The key project stakeholders identified for consultations included government and non-governmental organizations. Stakeholder consultation is a process and should continue through the design stage of the project and ESIA/ EIA and ESMP/ EMP stages.

Stakeholder consultation should be carried out throughout the project lifecycle. In line with this, the Project has prepared a standalone Stakeholder Engagement Plan (SEP) including a Grievance Redress Mechanism (GRM). Consultations were undertaken throughout the country to sensitize major stakeholders at the national and regional levels during the preparation of the GDAP and will continue in all phases of the project.

13.2 Objectives of the consultations

Stakeholder consultations are crucial in the preparation and implementation of the ESMF in order to specifically achieve the following objectives:

- provide information about the project and its potential impacts to those interested in, beneficiaries of, or affected by the project, and solicit their opinion in that regard;
- educate and solicit views from all stakeholders to enhance project implementation mechanisms and processes;
- manage expectations and reduce misconceptions regarding the project;
- ensure participation and acceptance of the project by all relevant stakeholders.

13.3 Stakeholders Identified

The stakeholders identified for consultations are as follows:

Project Proponent/Beneficiary

- Ministry of Communication and Digitalization; and
- World Bank.

Regulatory Institution

- National Communications Authority, Accra; and
- Environmental Protection Agency, Accra.

Other Government Institutions

- National Information Technology Agency (NITA);
- Ghana Investment Fund for Electronic Communications (GIFEC);
- National Cyber Security Authority (NCSA);
- Data Protection Commission (DPC);
- National Entrepreneurship Innovation Program (NEIP);
- Ghana Enterprise Agency (GEA);
- Venture Capital Trust Fund (VCTF);
- Relevant line Ministries (e.g., Ministry of Food and Agriculture (MoFA), Ministry of Lands and Natural Resources (MLNR);
- Ghana Communications Technology University (GCTU);
- Office of the Head of Civil Service (OHCS);
- Kofi Annan Centre of Excellence (KACE);
- Digital Accelerators (Tech Hubs and Innovation Hubs); and
- National Council on Persons with Disabilities.

Other stakeholders

- Telecommunication companies;
- Traditional leaders;
- Vulnerable and marginalized groups;
- Local communities;
- Civil Society Organizations (CSOs); and
- Non-Governmental Organizations (NGOs).

13.4 Outcome of Stakeholder Consultations/ Engagement Activities

A summary of the outcome of the stakeholder consultations/ engagement activities is provided in **Table 13-1**. Further details on the stakeholder consultations have been presented in the Appendix as **Appendix 13-1**.

Table 13-1: Summary of Outcome of Initial Stakeholder Consultations

Stakeholder	Concerns/Expectations/Suggestions
<i>Project Proponent/Beneficiary</i>	
World Bank	Provided information on the project, including general overview, proposed project coverage area and initial project designs.
Ministry of Communication and Digitalization (MoCD)	Provided documents to show that they had engaged World Bank to develop the technology
<i>Regulatory Institution</i>	
Environmental Protection Agency, Accra	a. An Environmental and Social Management Framework (ESMF) should be developed for the project. b. The EPA will review the ESMF based on which approval maybe granted for the project or otherwise. c. Where further and more specific information is required, a more detailed environmental assessment may have to be carried out for the project.

13.5 Key Stakeholder Requirements

Analysis of the main requirements for key stakeholders on the project based on experience from similar projects are presented in **Table 13-2**. The proponents may have to further engage these stakeholders on further requirements relevant to the specific locations and scope of the project components.

Table 13-2: Main Requirements of Key Stakeholders

No.	Stakeholder	Main requirements
1.	National Communications Authority (NCA)	d. Proponents must apply for license/approval from NCA for project components such as the metro fiber network and Communication Network.
2.	Telecommunication Companies	e. The project proponents must liaise with the telecommunication companies for coexistence of their infrastructure within the RoW.
3.	Environmental Protection Agency	f. Proponent will be required to undertake site specific assessment when the project locations are determined.

13.5.1 Community Participation

Community participation is vital in ensuring sustainability of any project. Communities affected by the project should be engaged for them to understand the various components of the project for them to identify themselves with it for successful implementation and to derive its maximum benefits. Steps should thus be taken by the Project Implementation Team (PIT) to sensitize and involve the beneficiary communities from the start of the project.

Community leaders – i.e., Chiefs, Opinion leaders and Assembly members – should be involved in decision making processes. Efforts should also be made to identify other groups in beneficiary communities (e.g., children, women, groups, the poor, parents, etc.) as they may constitute the major beneficiary group of the project. These groups should be educated on all aspects of the GDAP intervention including the benefits, challenges and financial implications among others. Various methods can be used to achieve this: focus group discussions, public announcements, animation, film shows, drama, and posters are some of the methods that could be used to educate the people.

13.5.2 Citizen Engagement/Education

Project beneficiary communities will be engaged and educated on all aspects of the intended intervention before implementation. The beneficiary communities should be briefed on the project, its objectives, implementation arrangements and delivery mechanisms, benefits, challenges and financial implications of the intervention. Citizen engagement would be a continuous activity between the community and the project implementers as outlined the citizen engagement plan developed for the GDAP. To ensure sustainability i.e., ensuring proper maintenance of the facilities the Citizen Engagement (CE) process should continue even after the project is completed.

The MoCD in their coordinating role will collaborate with the MMDAs to disseminate the required information on the project to the beneficiary communities to manage their expectation. Several

methods including announcements, animation, film shows, drama and posters are some of the methods that could be used to educate the people.

The MoCD will disseminate detail information on COVID-19 educational response interventions. Given the unprecedented changes presented by the COVID-19 pandemic, communication to beneficiaries will largely involve the use of emails, phone calls, and the use virtual channels such as WebEx, zoom as well as chat groups on WhatsApp and Facebook.

13.5.3 Framework for Sub Project Level Consultations

Representative consultations will regularly be held as the need arises for GDAP related activities at the sub project level. Participants will cut across various stakeholders, and focus groups in the selected communities, i.e., traditional leaders, women, youth, etc. Information obtained during consultations can be used to enhance the GDAP database and to aid decision making and addressing grievances.

Methods

A team will be constituted from MoCD and the Safeguards team to plan consultation meetings at the sub project level. Venue or method for the consultation meetings will be decide upon based on prevailing situation at the time of the meeting. Irrespective of the method of interaction, the meeting will be structured to be interactive, with questions from the communities and answers and explanations from the safeguard consultants, MoCD staff assigned for that purpose. The main issues to be discussed would be related to components of the project which may include the following:

- Sensitization on the project and related environmental and social risks and impacts;
- Financial implications of the project;
- Selection criteria for schools;
- Safeguards issues;
- Grievance redress mechanism;
- Monitoring and supervision of project activities;
- Roles of communities in the Implementation of the project.

13.5.4 Stakeholder Engagement and Consultation During COVID-19 Pandemic Era

The Project will prevent the spread of the disease among workers and in project communities by ensuring that all engagements and consultations are guided by the national protocols on COVID-19 pandemic and the guidance provided by the World Bank Technical Note on how to conduct public consultations in a manner that minimizes the spread of the diseases. Specifically, the project's strategy for stakeholder engagement and consultations during the COVID-19 restrictions include the following:

- Avoid public gatherings (taking into account prevailing national restrictions), including public hearings, workshops and community meetings;
- If smaller meetings are permitted, based on national updates on restrictions, conduct consultations in small-group sessions, such as focus group meetings but with appropriate social distancing and safety protocols such as the use of personal protective equipment, handwashing, hand sanitizing etc. If smaller meetings are not permitted, the Project will explore and conduct meetings through online channels, including WebEx, zoom, WhatsApp, skype, etc;
- Diversify means of communication and rely more on social media and online channels. Where possible and appropriate, create dedicated online platforms and chatgroups appropriate for the purpose, based on the type and category of stakeholders;
- Use traditional channels of communications (TV, newspaper, radio, dedicated phone-lines, and mail) when stakeholders do not have access to online channels or do not use them frequently. Traditional channels can also be highly effective in conveying relevant information to stakeholders, and allow them to provide their feedback and suggestions;
- Where direct engagement with project affected people or beneficiaries is necessary, such as would be the case of preparation and implementation of Resettlement Action Plans for this project, the project will identify channels for direct communication with each affected household via a context specific combination of email messages, mail, online platforms, dedicated phone lines with knowledgeable operators;
- Each channel of engagement will clearly specify how feedback and suggestions can be provided by stakeholders;
- In an unlikely event that all the above means of communication are not practicable in a particular circumstance, the event will be rescheduled to a later time, when meaningful stakeholder engagement will be possible.

13.6 ESMF Disclosure

World Bank ESF policies/ ESS require continuous engagements with stakeholders during the preparatory and implementation stages of all projects. After incorporating stakeholders' views in all environmental reports for projects, they are made available to project affected groups, local NGOs, and the public at large. Public disclosure of ESIA documents or environmental reports is also a requirement of the Ghana EIA procedures. However, there is no limitation as to the extent and scope of disclosure. Stakeholder consultations have been undertaken in the preparation of this project as well as the ESMF. MoCD and PCU/PIU in collaboration with EPA will make available copies of the ESMF in selected public places as required by law for information and comments. Public notice in the media should be served for that purpose.

The notification should be done through a newspaper or radio announcement or both. The notification should provide:

- a brief description of the Project;
- a list of venues where the ESMF report is on display and available for viewing;

- duration of the display period; and
- Contact information for comments.

The EPA will assist to select display venues upon consultation with MoCD. These would be project sites specific and very much informative to beneficiaries.

13.7 Publication of Scoping Notice and EIA consultations

A scoping notice is expected to be published in the national newspapers as part of the EIA procedures and after project(s)/ subprojects registration with the EPA. The scoping notice will inform the general public about the project and will require the public and key stakeholders to table their concerns, suggestions and comments to specific addresses and contacts to be provided in the notice. The public consultations to be carried out at the EIA stage is expected to engage communities/ traditional authorities identified and confirmed to be affected.

14 INSTITUTIONAL ARRANGEMENTS FOR ESMF IMPLEMENTATION

14.1 Institutional Arrangements

The Ministry of Communication and Digitalization (MoCD) is the main implementing institution of the Ghana Digital Acceleration Project and directly involved with the preparation and review of the ESMF. The MoCD will coordinate work among the relevant institutions and liaise with management on approval of agreed activities for speedy implementation. A technical team from the MoCD will guide the implementation of the project. The successful implementation of the ESMF will depend on the commitment, capacity of personnel and the appropriate and functional arrangements within the MoCD.

The project has established an organizational structure with qualified staff to support management of E&S risks including E&S team for E&S management that are a part of the organizational structure. The project will engage a safeguard officer who will work directly with the PCU.

Given that social investors and service providers will be engaged to deliver activities under the project, it is important that the safeguard team of MoCD screen project activities, advise appropriately and ensure that relevant safeguard instrument e.g., ESIA, ESMP, etc. are prepared and cleared by the Bank before commencement of activities. In case of a financial institution being the social investor, the Project will ensure that they have their Environmental and Social Management Systems (ESMS) in place and have the capacity to implement the project in compliance with the World Bank Environmental and Social Standards.

The contractor(s) or artisans to be engaged to undertake project activities will also have a role to play in the implementation of sustainable environmental and social measures at the sub-project level. Consultation with CSO's NGO's and community representatives will also be crucial.

14.1.1 Project Steering Team

A Project Steering Team (PST) comprising the Minister, Deputy Minister, Chief Director and/or other delegated official will provide oversight for the entire implementation team. The PST will be responsible for assessing and guiding the project implementation progress on the ground and undertake site visits as necessary. Specifically, the PST will undertake the following functions:

- Provide guidance on strategic, policy and implementation issue
- Coordinate activities of the ministry, agencies and other stakeholders involve in the implementation of the project
- Review and approve annual work plan and budgets
- Review quarterly and annual progress reports and make recommendations
- Guard the implementation trajectory to ensure that project objectives are met
- Resolves issues that could not be dealt with by lower-level authority

- Provide oversight and ensure the project comply to all environmental and social safeguard requirements of the project.

The PST will be chaired by the Minister of Communication and Digitalization or his designee and will include representatives of the following institutions:

- Ministries of Finance (MOF);
- National Communication Authority (NCA);
- National Information Technology Agency (NITA);
- Ghana Investment Fund for Electronic Communications (GIFEC);
- National Cybersecurity Authority (NCA);
- Data Protection Commission (DPC); and
- Environmental Protection Agency (EPA).

The representatives would be at the Chief Director level for the ministries and at the Director levels for the agencies.

14.1.2 Project Implementation Team (PIT)

The Project Implementation Team (PIT) will be made up of a team of leaders from MoCD who will undertake the following:

- Coordinate work among the relevant institutions;
- Liaise with management on approval of agreed activities for speedy implementation;
- Liaise with District Assemblies to ensure their full participation in the supervision of the project;
- Prepare and update the schedule of activities/procurement plans to be executed under the project;
- Review reports submitted by supervising entities;
- Prepare briefs to the Ministerial leadership (PST); and
- Have overall responsibility to ensure the project comply to environmental and social safeguard requirements of the project.

14.1.3 Environmental Protection Agency

The EPA is the national regulatory agency on the environment and has the mandate to review environmental and social management frameworks prepared in the country before disclosing the document at the EPA website and the info shop of the World Bank. The EPA will assist the MMDA's in monitoring activities that affect human and environment at the sub project level. They will ensure that activities of contractors and artisans comply with laid down procedures and guidelines that mitigate risks of noise, air/ water pollution, waste collection and disposal. The EPA will also deal with complaints that are environmentally related using national guideline and applying requisite sanctions to restore sanity in the operational area of the project.

14.2 Internal Compliance Monitoring

There will be an internal compliance monitoring mechanism put in place to ensure that environmental and social guidelines are followed. This will comprise the following channels:

The Safeguards team at the national level will also undertake monitoring of project activities and related environmental and social issues and report to the GDAP coordinating unit at the national level.

Safeguards consultants as part of their monitoring schedules will consult with project contractors and community focal persons to ensure that mitigation measures outlined in the ESMP at this level is adhered to. The level of compliance especially on social mitigation measures would however be determined by the level of involvement, sensitization and understanding or otherwise of the project in the beneficiary communities prior to the start of the project.

14.3 ESMF IMPLEMENTATION BUDGET

Budgetary estimates are provided in **Table 14-1** to support the implementation of the environmental and social management framework. The estimated budget is US\$ 1,495,000.

Table 14-1: Estimated Budget to Implement ESMF

No	Activity	Description	Unit cost, US\$	No.	Total Cost, US\$
1.	Project Public Awareness Creation	Stakeholder engagement	40,000	8	320,000
2	ESMF Disclosure	Distribution of documents to key stakeholders and publications in at least two national dailies (public) and one private newspaper	LS	-	80,000
3	Capacity building for key stakeholders	Training workshop on National and WB/IFC requirements, ESMF, ESIA/ EIA and ARAP/ RAP procedures, social measures and incorporating environmental and social measures etc. in contract documents.	20,000	16	320,000
4	Public engagement/ sensitization	Sensitization and engagement of project affected persons	LS	-	60,000
5	Engagement of Environmental and Social Safeguards Specialist for the project	Employment for at least five years	4,500	60	270,000
6	ESMF Project Management	Coordination and reporting	45,000	5	225,000
7	Monitoring and evaluation	Hiring of consultants and preparation of reports	LS	-	220,000
8	TOTAL (ESMF IMPLEMENTATION)		-	-	1,495,000

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16 APPENDICES

16.1 Appendix 1-1: Criteria for Environmental and Social Screening of Projects to be used by PCU

Environmental and Social Screening Form for Subprojects

Project Name and P-code	
Name of person undertaking the screen:	
Designation:	
Address (Email, Phone number)	
Have you visited the site as part of the screening process? (Yes, No, Not Applicable)	
If yes, Date of site visit	

A. Description of Activity

Nature of Activity	
State the Duration of activity:	
Describe the Scope of Activity:	
State the Region where the activity will be implemented:	
State the Metropolitan, Municipal and District Assemblies (MMDAs) where the activity will be implemented:	
Estimated Cost:	
Proposed Date of Commencement of work:	
Expected Completion of Work:	
Indicate if Technical Drawing is required:	

B. Site Characteristics [complete this section if applicable]

No.	Site Characteristics	
1	Adjoining Land Uses or Land Cover	
2	South	
3	North	
4	East	
5	West	
6	Proximity to a natural habitat e.g. wetland, river/stream, wetlands, forest reserves, protected areas etc.	
7	Proximity a residence or any community resource or facility	
8	Proximity to a road	

9	Are there outstanding land disputes within the area?	
10	What is the status of the land holding required by the project (customary, lease, community lands, etc.)?	

C. Risks Identification

If implemented, would the activity Potentially	Yes	No	If Yes, give a brief description	If Yes indicate frequency of occurrence			
				Very Rarely	Rarely	Occasionally	Very Frequently
<i>Air Quality and Noise</i>							
Cause air pollution? 1. generation of dust 2. generation of smoke 3. generate fumes? 4. generate emissions 5. Create objectionable odor affecting people?							
Expose workers or the public to substantial air pollution?							
Cause noise pollution							
Expose persons to excessive vibration and noise?							
<i>Biological Resources and Natural Resources</i>							
Occur in legally protected/nature reserve or Environmentally Sensitive Areas or a legally defined buffer zone; (forest reserves, national parks, Ramsar sites and wetlands, wildlife habitat areas, steep slopes, riparian areas, upland forests, vulnerable aquifers, biosphere reserves, World Heritage Sites, prime agricultural lands)?							
Be located within 100m from a protected/nature reserve or Environmentally Sensitive Areas?							
Have effect on neighboring protected/nature reserve or Environmentally Sensitive Areas (forest reserves, national parks, Ramsar sites and wetlands, wildlife habitat areas, steep slopes, riparian areas, upland forests, vulnerable aquifers and prime agricultural lands)?							
Have effect on flora (vegetation or plants)?							
Have effect on fauna (animals, wildlife)?							

Interfere with the movement of any wildlife species or organisms?							
Lead to the clearing of forestlands and woodlands?							
Cause disturbance in natural habitats?							
Lead to modification of natural habitats?							
Drain wetlands, or be sited on floodplains?							
Lead to road construction or rehabilitation, or otherwise facilitate access to fragile areas (natural woodlands, wetlands, erosion-prone areas)?							
Cause disruption of wildlife migratory routes?							
Harvest wetland plant materials or utilize sediments of bodies of water?							
Involve the harvesting of timber resources?							
Involve the harvesting of non-timber resources?							
Promote in-forest bee keeping?							
Lead to increased hunting or the collection of animals or plant materials?							
Increase the risks to endangered or threatened species?							
Accelerate erosion by water or wind?							
Reduce soil fertility and/or permeability?							
Involve removing renewable natural resources such as forest products?							
Involve the extraction of non-renewable natural resources?							
Affect dry season grazing areas and/or lead to restricted access to a common resource?							
<i>Water Quality and Hydrology</i>							
Occur within 100m distance from the nearest water body or drainage channel?							
Involve water extraction or abstraction from rivers, lakes, groundwater							
Have effect on potable water supplies to communities?							
Potentially contaminate surface water and groundwater supplies? 6. by generating liquid waste?							

7. by generating liquid with human or animal waste? 8. by generating liquid with pH outside 6-9 range? 9. by generating liquid with an oily substance? 10. by generating liquid with a chemical substance? 11. by generating liquid with odor/smell?							
Lead to changes in the drainage pattern of the area, resulting in erosion or siltation?							
Lead to increase in surface run-off, which could result in flooding on or off-site?							
Increase runoff, which could exceed the capacity of existing stormwater drainage?							
Increase potential for flooding?							
Potentially pollute or contaminate surface water?							
Potentially pollute or contaminate groundwater resources?							
Affect existing stream flow, reduce seasonal availability of water resources?							
Agricultural and Forestry Production							
Affect existing or traditional agricultural production systems by reducing seed availability or reallocating land for other purposes?							
Lead to forest plantation harvesting without replanting, the burning of pastureland, or a reduction in fallow periods?							
Affect existing food storage capacities by reducing food inventories or encouraging the incidence of pests?							
Affect domestic livestock by reducing grazing areas or creating conditions where livestock disease problems could be exacerbated?							
Involve the use of insecticides, herbicides, and/or other pesticides?							
Hazardous Waste and Materials - Will the activity							
Lead to the generation of hazardous waste such as: 12. Solvent-based paints, 13. Pesticides and other garden chemicals, Batteries (for							

example car, mobile phone or regular household batteries)							
14. Motor oils (Petrol, kerosene, lubricants for vehicles),							
15. Cleaning and polishing chemicals, Pharmaceuticals (all medicines),							
16. Electronic waste (unwanted computer equipment – monitors, keyboards, laptops, CD, disc drives, phones, batteries, solar panels, meters, Laser and printer inkjet cartridges, Fluorescent tubes and compact fluorescent globes (CFLs))							
17. Medical waste?							
Lead to the transportation of hazardous waste?							
Lead to the recycling of hazardous waste?							
Lead to the storage and disposal of hazardous waste?							
Lead to the generation of Hazardous industrial waste (HIW)? HIW includes used oils, solvents, paint, batteries, soiled packaging, aerosols, cosmetics, pharmaceuticals, phytosanitary products, industrial sludge.							
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement							
Require changes to existing land tenure system?							
Require acquisition of land (public or private, temporarily, or permanently) for its development?							
Potentially cause or aggravate land-use conflicts?							
Restrict land rights or land use rights?							
Restrict access to natural resources that cause a community or groups within a community to lose access to resource usage where they have traditional or customary tenure, or recognizable usage rights?							
Lead to the physical displacement? <i>Physical displacement occurs when individuals or communities are fully or partially no longer able to occupy an area</i>							

<i>and must relocate to a new location due to project activity.</i>							
Lead to economic displacement? <i>Economic displacement occurs when individuals or communities are fully or partially restricted in their access to land or resources that are important to their livelihoods and economic well-being</i>							
Cause a disruption on Power or other utility supply?							
Affect livelihood opportunities of people?							
Involve the use of direct workers? <i>Direct workers are people employed or engaged directly by the Borrower (including the project proponent and the project implementing agencies) to work specifically in relation to the project.</i>							
Involve the use of community workers? <i>Community workers are people employed or engaged in providing community labor.</i>							
Involve the use of contracted workers? <i>contracted workers are people employed or engaged through third parties to perform work related to core functions of the project, regardless of the location.</i>							
Involve the use of primary supply workers? <i>Primary supply workers are people employed or engaged by the Borrower's primary suppliers.</i>							
Involve the use of Children?							
Social Inclusion							
Cause the exclusion of migrants, poor, persons with disabilities, youth, women, men?							
Cultural Heritage							
Involve excavations, demolition, movement of earth, flooding or other changes in the physical environment?							
Be located in, or in the vicinity of, a recognized cultural heritage site?							

Affect culturally important sites in the community such as sacred areas, burial grounds or cemeteries?							
Affect religious sites shrines, temples, mosques, churches?							
Affect any archeological or historical site?							
Community Health and Safety							
Lead to labor influx? <i>Labor influx consists of the rapid migration to and settlement of workers in the project area, typically in circumstances where labor/skills and goods and services required for a project are not available locally. Projects also stimulate speculative influx (“followers”), including those seeking employment or enterprises hoping to sell goods and services to the temporary project workforce, as well as “associates” who often follow the first two groups to exploit opportunities for criminal or illicit behavior (e.g. prostitution and crime).</i>							
Create conditions that can lead to community health problems such as community exposure to health risks and vector-borne diseases, communicable diseases, injuries, nutritional disorders, HIV/AIDS and infectious Diseases?							
Lead to increase road traffic, vehicles or fleets of vehicles for the purposes of the activity?							
Involve the use of Security personnel?							
Other Areas							
Production or use in any product or activity deemed illegal under host country laws or regulations or international conventions and agreements, or subject to international bans, such as pharmaceuticals, pesticides/herbicides, ozone depleting substances, PCB's, wildlife or products regulated under CITES.							
Production or use in weapons and munitions.							

Production or use in alcoholic beverages (excluding beer and wine).							
Production or trade in tobacco							
Gambling, casinos and equivalent enterprises.							
Production or trade in radioactive materials.							
Production or use in unbonded asbestos fibers.							

D. Risks Classification

Based on the risks identified in section C the risks areas should be categorized as Low Risk, Moderate Risk or High Risk:

Risk areas	Low Risk (Risk that can impact on a small scale)	Moderate Risk (Risk that can cause an impact but not a serious one)	High Risk (Risks that can cause result in huge impact)
<i>Air Quality and Noise</i>			
<i>Biological Resources and Natural Resources</i>			
<i>Water Quality and Hydrology</i>			
<i>Agricultural and Forestry Production</i>			
<i>Hazardous Waste and Materials</i>			
<i>Land Acquisition, Restrictions on Land Use and Involuntary Resettlement</i>			
<i>Socio-economic, Livelihood and Labor</i>			
<i>Social Inclusion</i>			
<i>Community Health and Safety</i>			

Overall proposed activity risk classification:

E. Recommendations for Instruments to be prepared

Recommendation:	Tick as appropriate	Justification
No further instrument required		
<i>Requires the preparation of:</i>		
Environmental and Social Impact Assessment (ESIA)		
Environmental and Social Management Plan (ESMP)		
Resettlement Action plan (RAP or ARAP)		
Environmental and Social Audit		
Hazard or Risk Assessment		
Social and Conflict Analysis		
Cultural Heritage Management Plan		
Biodiversity Management Plan		

F. National Requirements

No.	If implemented, would the activity require permit or approval from the following national regulatory agencies?	Yes	No	Justification
1	Environmental Protection Agency			
2	Forestry Commission			
3	Water Resources Commission			
4	Ghana Standards Authority			
5	Food and Drugs Authority			
6	Minerals Commission			
7	Plant Protection & Regulatory Services			
8	Ghana Health Service			
9	District Assembly			

G. Clearance

Approval's	
Name:	
Signature:	
Date:	

16.2 Appendix 2-1: Lists of Undertakings Requiring Registration and Environmental Permit and Undertakings for which ESIA is mandatory

Undertakings Requiring Registration and Environmental Permit (EPA LI 1652 (1999))

Sector	Sub Sector	Description
Agriculture	Community Pastures	Involving the clearing of land greater than 40 ha Involving the clearing of land located in an environmentally sensitive area
	Fruit and other vegetable farms	Management areas: Involving the clearing of land greater than 40 ha Involving the clearing of land located in an environmentally sensitive area
Fishing And Trapping	Fishing	a. fish or shell fish farming in salt water, brackish water or fresh water, where the proposal includes the construction of shore-based facilities other than wharves; b. permanent traps or weir fisheries, salt water.
	Services incidental to fishing	Fish or shellfish breeding and propagating services, or fish or shellfish hatchery services, where the proposal includes the construction of shore-based facilities other than wharves.
Logging And Forestry	Logging	Management of forested land for the primary purpose of harvesting timber in a contract area.
	Forestry services	a. application of pesticides; b. introduction of exotic species of animals, plants or microbial agents.
Mining	Metal mines Nonmetal mines	-
Crude Oil and Natural Gas	Crude oil or petroleum production facilities Natural gas production facilities	
Quarries And Sand Pits	Stone quarries	Where the total area is greater than 10ha, OR Where any portion is to be located within an environmentally portioned area
	Sand and gravel pit	a. where the total area is greater than 10 hectares, or b. where any portion is to be located within an environmentally sensitive area.
Food	Meat and poultry products	a. abattoirs; b. meat, fat or oil processing facilities c. poultry processing facilities.
	Fish products	-
	Flours, prepared cereal foods and feeds Feed mills	-
Beverages	Distillery products Brewery products Wines	-
Rubber Products	a. tyres and tubes; b. rubber hoses and beltings; c. other rubber products	-
Plastic Products	a. tyres and tubes;	-

Sector	Sub Sector	Description
	b. rubber hoses and beltings; c. other rubber products	
Leather And Allied Products	Man-made fibers and filament yarns Spun yarns and woven cloths Broad knitted fabrics	-
Textile Products	Natural fibers processing and felt products Carpets, mats and rugs Canvas and related products Other textile products	-
Wood	Sawmill, planning mill and shingle mill products industries Veneers and plywood Other wood products Wood preservation facilities which use hazardous chemicals or similar chemical processes Particle board or wafer board production	-
Paper And Allied Products	Pulp and paper Asphalt roofing Other converted paper products	-
Primary Metals		-
Fabricated Metal Products		-
Transportation Equipment		-
Refined Petroleum Products	Agricultural chemicals Plastics and synthetic resins Paints and varnishes Soaps and cleaning compounds Other chemical products	-
Other Manufacturing	Scientific and professional equipment	Photographic films and plates manufacturing Floor tiles, linoleum and coated fabrics manufacturing Other manufacturing products
Construction	Industrial construction (other than buildings)	Construction of pipelines for the transmission of oil, natural gas and other related products from the source to the point of distribution, where: Any portion of the pipeline is to be located at a distance greater than 500m from an existing right of way; or Any portion of the pipeline is to be located in an environmentally sensitive area diesel electric power generating plants having capacity greater than 1 megawatt a gas turbine electric power generating plants having capacity greater than 1 megawatt nuclear electric power generating plants
Highways And Heavy Construction	Roads	-

Sector	Sub Sector	Description
	Waterworks and sewage system	Construction of trunk pipelines for transmission of water from the source to the point of distribution Construction of trunk sewer pipelines Construction of trunk sewer pipeline outfalls
	Hydroelectric power plants and related structures	Construction of dams and associated reservoirs Inter or intra basin water transfers Construction of hydroelectric power developments
Utilities		Establishment of waste disposal sites Establishment of facilities for the collection or disposal of hazardous waste materials
Wholesale Trade	Petroleum products	Wholesale establishment of petroleum products storage facilities
	Waste materials, wholesale	Establishment of facilities for the purpose of assembling, breaking up, sorting or wholesale trading of scrap, junk or waste material of any type
Services	Economic services administration	Resource conservation and management programs involving introduction of exotic species of animals or plants for any purpose; Resource conservation and management programs involving introduction of native species of animals or plants into areas where those species do not occur at the time of the proposed introduction Designation of land for cottage development or other recreational development
Accommodation Services	Establishment of recreation and vacation camps	-
Amusement And Recreational Services	Commercial spectator sport	Establishment of horse racetrack operations Establishment of racetrack operations for motorized vehicle sports and recreation clubs and services Establishment of facilities, including trails Establishment of outdoor firearm ranges Establishment of marina operations Establishment of facilities, including trails for mortised recreational vehicles Other amusement and recreational services

Undertakings for Which ESIA is Mandatory

Sector	Subsector	Description
Agriculture	-	Land development for agricultural purposes not less than 40 ha Agricultural programs necessitating the resettlement of 20 families or more
Airport	-	Construction of all airport or airstrips as well as the enlargement of existing airports or airstrips
Drainage And Irrigation	-	Construction of dams and man- made lakes; Drainage of wetlands; Irrigation schemes
Land Reclamation	-	Coastal land reclamation

Sector	Subsector	Description
		Dredging of bars, estuaries
Fisheries	-	Construction of fishing harbors Harbor expansion Land based aquaculture undertaking
Forestry	-	Conversion of hill forest land to other use Logging or conversion of forest land to other land use within the catchment area of reservoirs used for water supply, irrigation or hydropower generation or in areas adjacent to forest, wildlife reserves Conversion of wetlands for industrial, housing or agricultural use
Housing	-	Human settlement development undertaking Housing development
Industry	Chemical	Production capacity of each product or combined products is greater than 100 tons/ day
	Petrochemical	All sizes or raw material requirements of 100 tons/ day or greater
	Non- ferrous smelting	Aluminum- all sizes Copper- all sizes Others- producing 50 tons/ day and above product
	Non- metallic Cement lime	10 tons/ day and above burnt lime rotary kiln or 50 tons/ day and above vertical kiln
	Iron and steel Shipyards Pulp and paper	
Infrastructure	-	Construction of hospitals Industrial estate development Construction of roads and highways Construction of new townships Construction of railways
Port	-	Construction of ports Port expansion involving an increase of 25% or more in handling capacity per annum
Mining	-	Mining and processing of minerals in areas where the mining lease covers a total area in excess of 10ha
	Quarries	Proposed quarrying of aggregate, limestone, silica, quartzite, sandstone, marble and decorative building stone within 3km radius of any existing village, residential, commercial or industrial areas, or any area earmarked for residential, commercial or industrial development
	Sand dredging	
Petroleum	Oil and gas fields development Construction of off- shore and on- shore pipelines Construction of oil and gas separation, processing, handling and storage facilities Construction of oil refineries	Construction of product depot for the storage of petrol, gas, diesel which are located within 3km of any commercial, industrial or residential areas.
Power Generation and Transmission	-	Construction of steam generated power stations; Dams and hydroelectric power schemes; Construction of combined cycle facilities in national parks

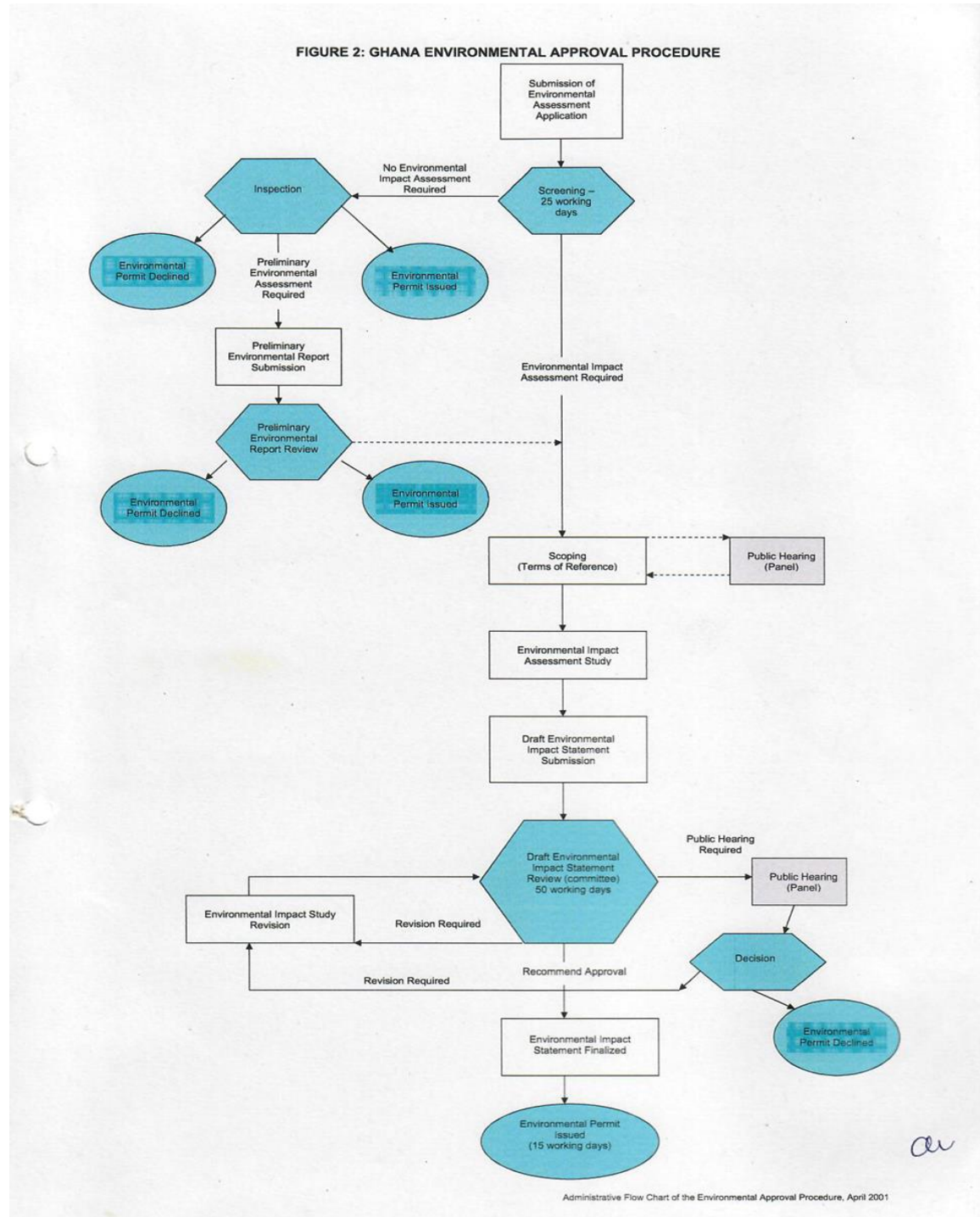
Sector	Subsector	Description
		Construction of nuclear fueled power stations Erection of power transmission lines
Resort And Recreational Development	-	Construction of coastal resort facilities of hotels with more than 40 rooms Hilltop resort or hotel development Development of tourist or recreational facilities in national parks Development of tourist or recreational facilities on island waters
Waste Treatment and Disposal	Toxic and hazardous waste	Construction of incineration plant Construction of recovery plant (off site) Construction of wastewater treatment plant (off site) Construction of secure land fill facility Construction of storage facility (off site)
	Municipal solid waste	Construction of incineration plant Construction of composting plant Construction of recovery recycling plant Construction of municipal solid waste landfill facility Construction of waste depots
	Municipal sewage	Construction of wastewater treatment plant Construction of marine outfall Night soil treatment
Water Supply	-	Construction of dams impounding reservoirs Groundwater development for industrial, agricultural or urban supplies
Environmental Conservation and Management	Activity to remove 'designated' status from an area designated for wildlife conservation and management	Activities relating to: Wildlife conservation and management Forest conservation and management Watershed conservation and management Commercial exploitation of flora and fauna

16.3 Appendix 2-2: Environmentally Sensitive Areas

ENVIRONMENTAL ASSESSMENT REGULATIONS, 1999 SCHEDULE 5 (Regulation 30 (2))

1. All areas declared by law as national parks, watershed reserves, wildlife reserves and sanctuaries including sacred groves.
2. Areas with potential tourist value.
3. Areas which constitute the habitat of any endangered or threatened species of indigenous wildlife (flora and fauna).
4. Areas of unique historic, archaeological or scientific interests.
5. Areas which are traditionally occupied by cultural communities.
6. Areas prone to natural disasters (geological hazards, floods, rainstorms, earthquakes, landslides, volcanic activity etc.)
7. Areas prone to bushfires.
8. Hilly areas with critical slopes.
9. Areas classified as prime agricultural lands.
10. Recharge areas of aquifers.
11. Water bodies characterized by one or any combination of the following conditions
 - a. water tapped for domestic purposes;
 - b. water within the controlled and/or protected areas;
 - c. water which support wildlife and fishery activities.
12. Mangrove area characterized by one or any combination of the following conditions
 - a. areas with primary pristine and dense growth;
 - b. areas adjoining mouth of major river system;
 - c. areas near or adjacent to traditional fishing grounds;
 - d. areas which act as natural buffers against shore erosion, strong winds or storm floods.

16.4 Appendix 2-3: Administrative Flowchart of Ghana EA Procedures



16.5 Appendix 3-1: Template for Preparing RAP

ELEMENTS OF PREPARING A RESETTLEMENT ACTION PLAN

Reference: ESS5—Annex 1

Description of the project. General description of the project and identification of the project area.

Potential impacts. Identification of:

- (a) the project components or activities that give rise to displacement, explaining why the selected land must be acquired for use within the timeframe of the project;
- (b) the zone of impact of such components or activities;
- (c) the scope and scale of land acquisition and impacts on structures and other fixed assets;
- (d) any project-imposed restrictions on use of, or access to, land or natural resources;
- (e) alternatives considered to avoid or minimize displacement and why those were rejected; and
- (f) the mechanisms established to minimize displacement, to the extent possible, during project implementation

Objectives: The main objectives of the resettlement program.

Census survey and baseline socioeconomic studies. The findings of a household-level census identifying and enumerating affected persons, with the involvement of affected persons, opinion leaders from the affected communities, surveying land, structures, crops, businesses and other fixed assets to be affected by the project. The census survey also serves other essential functions:

- a) identifying characteristics of displaced house-holds, including a description of production systems, labor, and household organization; and baseline information on livelihoods (including, as relevant, production levels and income derived from both formal and informal economic activities) and standards of living (including health status) of the displaced population;
- b) information on vulnerable groups or persons for whom special provisions may have to be made;
- c) identifying public or community infrastructure, property or services that may be affected;
- d) providing a basis for the design of, and budgeting for, the resettlement program;
- e) in conjunction with establishment of a cutoff date, providing a basis for excluding ineligible people from compensation and resettlement assistance; and
- f) establishing baseline conditions for monitoring and evaluation purposes
As the Bank may deem relevant, additional studies on the following subjects may be required to supplement or inform the census survey:
- g) land tenure and transfer systems, including an inventory of common property natural resources from which people derive their livelihoods and sustenance, non-title-based usufruct systems (including fishing, grazing, or use of forest areas) governed by local recognized land allocation mechanisms, and any issues raised by different tenure systems in the project area;
- h) the patterns of social interaction in the affected communities, including social networks and social support systems, and how they will be affected by the project; and
- i) social and cultural characteristics of displaced communities, including a description of formal and informal institutions (e.g., community organizations, ritual groups, nongovernmental organizations (NGOs)) that may be relevant to the consultation strategy and to designing and implementing the resettlement activities

Legal framework. The findings of an analysis of the legal framework, covering:

- a) the scope of the power of compulsory acquisition and imposition of land use restriction and the nature of compensation associated with it, in terms of both the valuation methodology and the timing of payment;
- b) the applicable legal and administrative procedures, including a description of the remedies available to displaced persons in the judicial process and the normal timeframe for such procedures, and any available grievance redress mechanisms that may be relevant to the project;
- c) laws and regulations relating to the agencies responsible for implementing resettlement activities; and
- d) gaps, if any, between local laws and practices covering compulsory acquisition, imposition of land use restrictions and provision of resettlement measures and ESS5, and the mechanisms to bridge such gaps.

Institutional framework. The findings of an analysis of the institutional framework covering:

- a. the identification of agencies responsible for resettlement activities and NGOs/CSOs that may have a role in project implementation, including providing support for displaced persons;
- b. an assessment of the institutional capacity of such agencies and NGOs/CSOs; and
- c. any steps that are proposed to enhance the institutional capacity of agencies and NGOs/CSOs responsible for resettlement implementation

Eligibility. Definition of displaced persons and criteria for determining their eligibility for compensation and other resettlement assistance, livelihood restoration program including relevant cutoff dates.

Valuation of and compensation for losses. The methodology to be used in valuing losses to determine their replacement cost; and a description of the proposed types and levels of compensation for land, natural resources and other assets under local law and such supplementary measures as are necessary to achieve replacement cost for them.

Physical Resettlement and Livelihood Restoration Planning. The planning ensures resettlement in new locations reflect the way households live and meet their needs, maintain links with existing assets and resources or replaces them and improve their livelihoods and also share the project benefits (e.g. employment). The planning also takes into consideration fair, equitable and adequate replacement housing and security of tenure. The key steps in physical resettlement planning include the following considerations: (i) initial assessment, (ii) identification of resettlement site, (iii) housing design, (iv) community facility and infrastructure design, (v) businesses, (vi) religious structure designs, (vii) consultations & negotiations, (viii) detailed design stage, (ix) host communities and (x) security of tenure.

Community participation. Involvement of displaced persons (including host communities, where relevant):

- a) a description of the strategy for consultation with, and participation of, displaced persons in the design and implementation of the resettlement activities;
- b) a summary of the views expressed and how these views were taken into account in preparing the resettlement plan;
- c) a review of the resettlement alternatives presented, and the choices made by displaced persons regarding options available to them; and
- d) institutionalized arrangements by which displaced people can communicate their concerns to project authorities throughout planning and implementation, and measures to ensure that such vulnerable groups as indigenous people, ethnic minorities, the landless, and women are adequately represented.

Compensation and Resettlement Sign-offs. Following the finalization of agreement regarding compensation payments, resettlement housing designs, livelihood programs, etc. the Project will require an efficient and transparent sign-off by affected persons/households at each stage of the resettlement process to validate their acceptance.

Implementation schedule. An implementation schedule providing anticipated dates for displacement, and estimated initiation and completion dates for all resettlement plan activities such as compensation payment, construction of houses & other structures, livelihood restoration program, etc. where applicable. The schedule should indicate how the resettlement activities are linked to the implementation of the overall project.

Costs and budget. Tables showing categorized cost estimates for all resettlement activities, including allowances for inflation, population growth, and other contingencies; timetables for expenditures; sources of funds; and arrangements for timely flow of funds, and funding for resettlement, if any, in areas outside the jurisdiction of the implementing agencies.

Grievance redress mechanism. The plan describes affordable and accessible procedures for third-party settlement of disputes arising from displacement or resettlement; such grievance mechanisms should take into account the availability of judicial recourse and community and traditional dispute settlement mechanisms.

Monitoring and evaluation. Arrangements for monitoring of displacement and resettlement activities by the implementing agency, supplemented by third-party monitors as considered appropriate by the Bank, to ensure complete and objective information; performance monitoring indicators to measure inputs, outputs, and outcomes for resettlement activities; involvement of the displaced persons in the monitoring process; evaluation of results for a reasonable period after all resettlement activities have been completed; using the results of resettlement monitoring to guide subsequent implementation .

Arrangements for adaptive management. The plan should include provisions for adapting resettlement implementation in response to unanticipated changes in project conditions, or unanticipated obstacles to achieving satisfactory resettlement outcome.

SCREENING FRAMEWORK FOR CENSUS OF AFFECTED ASSETS AND AFFECTED PERSONS

Annex: Affected Plot Sheet

Reference:

Reference:
 Location: - County: District: Town:
 GPS Coordinates: Surface: m²
 Description of soil:

Perennial Crops: 1 Owner:
 2 Owner:

Annual Crops: 1 Owner:
 2 Owner:

Trees: 1 Owner:
 2 Owner:

Structures: Movable structures: Owner:
 Immovable structures: Owner:
 Buildings: Owner:

Users: User 1: Surface used: Regime of tenure:
 User 2: Surface used: Regime of tenure:
 User 3: Surface used: Regime of tenure:

User 4:Surface used:Regime of tenure:

Valuation proposal (details of calculation on attached sheet):

Crops:
.....

Structures:
.....

Proposed distribution of compensation:

User 1:
User 2:
User 3:
User 4:

Prepared By:Date:

Annex: Affected Building Sheet

Reference:
Location: - County:District:Town:
GPS Coordinates:Photograph number:

Owner:-

Full Name:
Address :
.....

Description:-

Permanent:.....Non permanent:
Surface: m² Number of rooms:
Walls: Material: Condition:
Roof: Material: Condition:
Floor: Material: Condition:
Annexes outside:
Latrine: Material: Condition: Bathroom: Material:
..... Condition: Kitchen: Material: Condition:
..... Others:Material:Condition:
Additional features:
.....

Permanently Inhabited: ...By:Regime of occupation:
Periodically Inhabited: By: Regime of occupation:

Vulnerable group:

- a) Women-headed Household.....
- b) Family with physically and mentally.....
- c) Family with aged members.....
- d) Family with income below poverty line.....
- e) Family losing more than the economic threshold of their land through acquisition/negotiation.....

Valuation proposal (details of calculation on attached sheet):
.....
.....

Proposed distribution of compensation:

User 1:
User 2:
User 3:
User 4:

Prepared By: Date:

Annex: Affected Household Sheet

Household Reference:
Location: - County: District: Town:

Reference of Affected Asset:-

Type: - Structure: Plot: Crop: (Tick one)
Reference of Affected Asset Sheet:

Household Information:-

Head of Household: - Name: Age: Sex:
Identity Document: - Type: Number:

Composition of Household:-

Number	Name	Relationship with Household Head	Sex	Age
1				
2				
3				

Socio-Economic Information:-

Head of Household:
Occupations: - Primary: Secondary:

Other members of Household:-

Number: Occupation: Highest education level attained:
Number: Occupation: Highest education level attained:
Total Estimated Household Cash Income:

Education level of Household Members:-

Number: Level:
Number: Level:
Number: Level:
Number: Level:

Project Impact:-

Assessment of the Impact of the Loss of the Affected Asset on Household's Livelihood:
.....
Amount of land owned;
Details of income loss due to loss of land;

Proposed Compensation or Resettlement Package:-

Household's Wishes:
.....
Proposed Package:

Proposed Livelihood Restoration Package:-

Household's Wishes:
.....
Proposed Package:

16.6 Appendix 4-1: Labor Management Procedures



REPUBLIC OF GHANA

MINISTRY OF COMMUNICATIONS AND DIGITALISATION

GHANA DIGITAL ACCELERATION PROJECT (GDAP) (P176126)

Labour Management Procedures (LMP)

15 March 2022

1. INTRODUCTION

This Labour Management Procedure provide an overview of the applicable national legislative and World Bank Environmental and Social Standard 2 (ESS2) provisions and how the risks and issues related to labour will be managed in the implementation of Ghana Digital Acceleration Project (GDAP). The Labour Management Plans for the individual components will in due course be prepared by the relevant contractors and will be reviewed and cleared by the Safeguards Specialist/PCU as appropriate.

1. OVERVIEW OF LABOUR USE ON THE PROJECT

1. The project is an Investment Project Financing (IPF) operation comprising of five components as follows:

Component 1: Ensuring Inclusive and Safe Digital Transformation

- Sub-Component 1.1 Enabling Environment for Broadband Development and Greening ICT Enablers
- Sub-Component 1.2 Digital Connectivity in Lagging Areas
- Sub-Component 1.3 Safeguards for Cybersecurity and Data Protection

• *Component 2: Modernizing Digital Government Services*

- Sub-Component 2.1: Change Management moving towards a Strengthened Digital Governance
- Sub-Component 2.2: Digital Government -Enhancing User Centric Services 1
- Sub-Component 2.3 Future of Work in Government

• *Component 3: Support for Digital Transformation of Strategic Sectors*

- Sub-component 3.1: Scaling up Ghana's Digital Entrepreneurship and Innovation Ecosystem
- Sub-component 3.2: Digital Transformation in Agriculture sector
- Sub-Component 3.3 Skills for Digital Jobs and Inclusion

• *Component 4: Project Management and Implementation Support*

• *Component 5: Contingent Emergency Response Component*

2. The project activities will involve three types of employment including:

- (i) direct workers - the Programme Implementation Unit (PIU), who will be directly engaged on a permanent basis;
- (ii) contracted workers through third parties, such as people employed or engaged through third parties (contractors, sub-contractors, brokers, agents and intermediaries) to perform work related to core functions of the project, regardless of location; and
- (iii) primary supply workers – who will be engaged by the construction company's primary suppliers. There will also be community workers involved in the project.

The sections below provide detailed description of the type and number to be engaged throughout the project life.

2. ASSESSMENT OF KEY POTENTIAL LABOUR RISKS

Based on project activities, the labour risks involved with the project are viewed as minimal. Most of the labour risks will be related to extended hours of work mainly of the construction and rehabilitation of facilities as well data input. The probability of the incidence of child labour or forced labour is also minimal. The project requires technical staff with skills that require experience and education, which will not be possible for children or those below the age of 18 to possess. The risks of migrant and seasonal workers, labour influx and gender-based violence/sexual exploitation and abuse/sexual harassment (GBV/SEA/SH) do apply. A register of all persons under the age of eighteen years employed by the project and the dates of their births will be kept in keeping with Section 60(1) of the Labour Act, 2003 of Ghana. No person under the age of eighteen years shall be employed.

The project will adopt a zero-harassment policy for all of its workers and sub-contractors. The zero-harassment policy will be part of the workers Code of Conduct developed by the project. This policy will be broadcast to all workers through various mediums and several formats. The PIU will ensure the implementation of the SEA/SH Risk Mitigation and Response Action Plan developed under the project. The project will provide an extra layer of supervision for young workers to ensure they are educated of their rights, the project's policies on harassment, intimidation and exploitation.

Sub-Projects may face influx of Labour to local communities especially where skilled labourers are not available in some project sites. This could lead to increase in potential spread of STIs/STDs, HIV/AIDs due to workers on site, increase in GBV/SEA/SH especially for Girls that have been exposed to contractors, sexual relations between contractors and minors and resulting pregnancies, encourage presence of sex workers in the project communities. To mitigate this risk, GBV risk management should be integrated in the project's ESMP and Contractor's ESMP. In addition, Contractors should be encouraged to hire Labour from the host communities where possible, maintain labour relations with local communities through a code of conduct (CoC). The Code of Conduct must be signed by all categories of workers and workers must be trained on the provisions of the CoC about refraining from unacceptable conduct toward local community members, specifically women and be informed of the sanctions for non-compliance. Training must be conducted for all new hires including sub-contractors and contractors should make resources available for their workers in line with the project's ESMP.

There are minimal possibilities for accidents and emergencies related to the construction. However, the project through the labour management procedures plan will ensure that all applicable occupational health and safety provisions in Section 118 of the Labour Act, 2003 and International Labour Organizations conventions are observed.

Some of the highlights specific to certain areas in in the Labour Act are listed:

Forced Labour

Section 117 interpret forced labour to means work or service that is exacted from a person under threat of a penalty and for which that person has not offered himself or herself voluntarily, but does not include

- (a) labour required as a result of a sentence or order of a court;
- (b) labour required of a member of a disciplined force or service as his or her duties;
- (c) labour required during a period when the country is at war or in the event of an emergency or calamity that threatens life and wellbeing of the community, to the extent that the requirement of the labour is reasonably justifiable in circumstances of a situation

Section 116 highlights the prohibition of forced labour to include:

- (1) A person shall not be required to perform forced labour.
- (2) It is an offence for an employer to exact or cause to be exacted, or permit to be exacted, for his or her benefit forced labour from any worker.
- (3) Any employer convicted of an offence under subsection (2) is liable to a fine not exceeding 250 penalty units.

Prohibition of employment of young persons in hazardous work (Section 58)

- (1) A young person shall not be engaged in any type of employment or work likely to expose the person to physical or moral hazard.
- (2) the Minister may, by legislative instrument, determine the type of employment that is likely to expose a young person to physical or moral hazard.
- (3) An employer shall not employ a young person in an underground mine work.
- (4) A person who contravenes subsection (1) or (3) commits an offence and is liable on summary conviction to a fine not exceeding 100 penalty units.

Health of young persons (Section 59)

- (1) An employer shall not employ a young person on any work unless a medical practitioner has certified that the young person is in good health and is medically fit for the work.
- (2) Where a person fails to comply with subsection (1) the person shall be ordered by the Minister to have the medical examination conducted.

3. BRIEF OVERVIEW OF LABOUR LEGISLATION: TERMS AND CONDITIONS

The primary law and regulations that govern employment relationships in Ghana are the Labour Act 2003 (Act 651) and the Labour Regulations. The Labour Act consolidates all laws relating to employment. The act refers to three categories of workers, namely:

- permanent workers;
- temporary workers; and
- casual workers.

Interpretation

Section 78. of the Act defines terms that are applicable in the law

- *“temporary worker” means a worker who is employed for a continuous period of not less than one month and is not a permanent worker or employed for a work that is seasonal in character;*
- *“casual worker” means a worker engaged on a work which is seasonal or intermittent and not for a continuous period of more than six months and whose remuneration is calculated on a daily basis.*

The Labour Act distinguishes between a ‘contract of employment’ and a ‘contract for employment’. A contract of employment creates an employer-employee relationship between the parties. This affords the employer and especially the employee protection under the Labour Act. On the other hand, a contract for employment does not create an employment relationship between the parties, but rather a principal-contractor relationship. Here, the contractor is neither considered to be an employee of the principal nor entitled to benefits of employment such as social security contributions. Section 74 of the Act spell out the conditions of a contract of employment:

1. *A contract of employment of a casual worker need not be in writing.*
2. *A casual worker shall*

- (a) *be given equal pay for work of equal value for each day worked in that organization;*
- (b) *have access to any necessary medical facility made available to the workers generally by the employer;*
- (c) *be entitled to be paid for overtime work by his or her employer in accordance with section 35; and*
- (d) *be paid full minimum remuneration for each day on which the worker attends work, whether or not the weather prevents the worker from carrying on his or her normal work and whether it is possible or not, to arrange alternative work for the worker on such a day.*

On the other hand, Section 75 of the Act highlights the conditions for a temporary worker:

- (1) *a temporary worker who is employed by the same employer for a continuous period of six months and more shall be treated under this Part as a permanent worker.*
- (2) *Without prejudice to the terms and conditions of employment mutually agreed to by the parties, the provisions of this Act in respect of minimum wage, hours of work, rest period, paid public holidays, night work and sick leave are applicable to a contract of employment with a temporary worker.*

Salary, Wages, Allowances and Deductions

The Labour Act provides that all salary, wages and allowances are payable in cash, in addition to any non-cash remuneration.

Generally, employers are precluded from deducting any amount from the remuneration of their employees – whether it is a pecuniary penalty imposed on the employee or an interest or discount on remuneration advanced to the employee.

However, the Labour Act sets out situations in which an employer can, with the consent of the worker, legally deduct funds from their remuneration in relation to:

- provident, pension or other funds or contributions agreed to by the employee;
- a financial facility advanced by the employer to the employee or guaranteed by the employer;
- amounts paid in error or in excess of the employee’s remuneration to the employee;
- membership fees or contributions to an organisation of which the employee is a member; and
- deductions for any loss suffered by the employer as a result of damage to its property under the control of the worker; however, no deduction can be made in this regard unless it is shown that the worker is fully responsible for the damage.

Family and Medical Leave

Female employees are entitled to a statutory maternity leave of 12 weeks in addition to any annual leave that they may have. This statutory leave can be enhanced by contractual agreement between the parties. Female employees on maternity leave must be paid their full salary and other benefits while on leave. In addition, a female employee is entitled to additional leave to be determined by a medical practitioner where it is found that she has developed an ailment as a result of her pregnancy. Leave is also typically granted for bereavement in relation to close family members.

The Labour Act strictly prohibits discrimination of employees based on race colour, national extraction, social origin, religion, political opinion, sex, marital status, family responsibilities or disability. An employee also

has the right, by law, to remove himself or herself from a work situation which he or she reasonably believes presents an imminent or serious danger to life or health.

4. BRIEF OVERVIEW OF LABOR LEGISLATION: OCCUPATIONAL HEALTH AND SAFETY

The Occupational Health and Safety (OHS) Policy statement (Draft, 2004) is to prevent accidents and injuries arising out of or linked with or occurring in the course of work, by minimizing as far as reasonably practicable, the cause of the hazards in the working environment and therefore the risk to which employees and the public may be exposed. The engagement of skilled and unskilled workforce at various stages of project implementation reiterates the relevance of the OSH Policy to the proposed project. The policy is derived from provisions of the International Labour Organization (ILO) Conventions 155 and 161. The policy document has specific sections on objectives, scope, strategies, activities promotion and awareness creation.

5. RESPONSIBLE STAFF

MoCD through the project manager, will be responsible for the engagement and management of all project workers. The project manager will be the direct staff responsible for the engagement of project workers, contractors and subcontractors. The project manager will be responsible for the overall management of all project workers and contractors and subcontractors, who will be supported by the Management and Technical Advisory Firm.

Occupational Health and Safety (OHS): Occupational Health and Safety (OHS) will be the responsibility of the Environmental and Social Safeguards Officer. Contractors will assign a member of staff with responsibility for matters related to health and safety. In large firms, this member of staff may be a specialist in the area of OHS, for smaller firms and sub-contractors a member of staff with training and experience in OHS can suffice. A Code of Conduct for workers is required and will be developed and implemented.

The safety representative will ensure that any complaint on health and safety are recorded reported to the project safeguard officer.

Gender Based Violence/Sexual Exploitation and Abuse/Sexual Harassment (GBV/SEA/SH) The Project Management Unit (PIU) is responsible for mitigating and managing all risks related to GBV/SEA/SH resulting from project implementation. It is the PIU's responsibility to develop appropriate mitigation measures through the ESMPs and to ensure that these measures are translated in the Contractor's ESMP for implementation on site. The PIU through the Stakeholder Engagement process should inform project affected communities about GBV risks, conduct GBV service mapping in the project area for effective referral and response and develop a SEA/SH Risk Mitigation and Response Action Plan. The PIU should define and reinforce GBV requirements in procurement processes and contracts and create an effective GM with multiple channels to initiate complaint. The GBV-sensitive GM should have specific procedures for GBV cases confidentiality reporting with safe and ethical documenting.

Training of Workers: The safeguards officer will liaise with the contractors' OSH representative for the necessary capacity building activities of the contractor's management staff and workers. Training of workers in environmental and social standards and OHS will be the responsibility of the project safeguards officer. Training on the Code of Conduct will be conducted by the Project Manager with assistance from the project safeguards officer.

Worker Grievances: The process for addressing workers' grievance will be the Grievance Mechanism of the project (described in section 9 of this document).

Framework to Prevent and Respond to Gender Based Violence as well as Child Abuse /Exploitation

The framework, which is adopted by the Ghana Digital Acceleration Project (GDAP) shall guide the contracting entity in the preparation of a GBV action plan as part of the contractor's EMP/ ESMP. The GBV Action Plan shall include considerations presented hereunder:

- GBV allegation procedures, indicating how employees and the community can report cases of GBV;
- Managers and Employee Code of Conduct to manage workers' behaviours;
- GBV services providers to which GBV survivors will be referred, and the services which will be available;
- Awareness raising strategy, which describes how workers and local communities will be sensitized to GBV risks and the worker's responsibilities under the Codes of Conduct (CoC); and
- Monitoring and Reporting of GBV issues.

The proposed project shall establish a GBV and VAC committee with at least five representatives: MoCD social safeguard specialist, the Occupational Health and Safety Manager from the contracting entity or officer tasked with the responsibility of addressing GBV and VAC, the local NGO's GBV specialist, the GBV specialist of the monitoring consultant, and a representative from a local service provider with experience in GBV. The membership of the committee may, however, be amended to include those that are more pertinent to manage GBV in the project area based on the mapping of the service providers and location of the works.

Responsibilities of this committee shall include approving changes to the GBV action plan and associated code of conducts, monitoring resolutions and sanctions with regard to complaints related to GBV and VAC associated with the project, verifying that the referral protocols and services are functional and delivered to survivors as well as ensuring that GBV and GRM statistics are up to date and included in the regular project monitoring reports.

Other important sections of this framework are GBV referral pathway, response protocol for GBV incidents, making complaints, GBV and VAC allegation procedures, GBV complaint resolution process, accountability measures, monitoring and reporting, supervision and oversight, and training and awareness-raising strategy.

The Framework to Prevent and Respond to Gender Based Violence as well as Child Abuse/ Exploitation is a very relevant document to guide and inform the Project contractors/ subcontractors and the concessionaire in the preparation of the contractor ESMP and code of conduct for construction workers and staff under this road project.

Treaties and Conventions

Treaty/Convention/Protocol	Objective	Relevance to the Project
Universal Declaration on Human Rights	The law provides for the promotion of respect for rights and freedoms and for progressive national and international measures to secure the effective recognition and observance among people of signatories themselves and among the territories under their jurisdiction. Key provisions include: Article 19: Everyone has the right to freedom of opinion and expression.	Employment or labour issues and protection of worker welfare.

	<p>Article 20: (1) Everyone has the right to freedom of peaceful assembly and association. (2) No one may be compelled to belong to an association.</p> <p>Article 24: Everyone has the right to rest and leisure, including reasonable limitation of working hours and holidays with pay.</p>	
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6. POLICIES AND PROCEDURES

In an effort to mitigate the environmental and social impact relating to the project, it is the intention that mitigation measures will be put in place by incorporating standardized clauses in the contract documents so that the contractors will be aware of environmental and social obligations under the project. The Ministry of Communication (MoCD) will ensure compliance by contractor/consultants with these clauses.

The project will prevent any gender discrimination on the workplace, including gender pay gap. The project OHS policy will be as follows:

Purpose

The primary purpose of this OHS Policy is the safety and health of all the project employees at work and the protection of the environment and conservation of resources associated with the project. The policy also establishes and defines the authority for the OHS and associate safety systems. The policy will be enforced on all activities of the project and contractors and sub-contractors of the project through contractual arrangements as is appropriate.

Scope

Occupational safety and health (OSH), also commonly referred to as occupational health and safety (OHS), occupational health, or workplace health and safety (WHS), is concerned with the safety, health, and welfare of people at work. Safety is defined as “the well-being of project employees whilst at work or carrying out work duties”. Project Employee for the Project is defined as “anyone employed by activities of the project including employees of contractors and sub-contractors on a full-time or a part-time basis.

OSH Management System is the standards, policies, guidelines, that address project worker's safety, monitoring and evaluation of safety, worker's health, work and general environment.

Policy

The obligations of the project under the OSH policy includes the following:

- Compliance with all national associated legislation (for example health associated legislation) and international OSH legislation that are applicable to Ghana and the World Bank
- Compliance with the Environmental and Social Safeguards of the World Bank
- Prevention of injury and ill health of all project workers
- Establishment of safety systems, processes and performance;
- Continuous improvement of Safety Systems
- Management and mitigation of adverse environmental and social impacts
- Prevention of use of faulty equipment or sub-standard equipment
- The project will commit to safety considerations in the conduct of all of its activities and that of contractors and sub-contractors.

- The project will provide systems, processes, procedures, the necessary safety equipment and gears, and training for all project employees so that all activities are conducted in a safe environment.
- Employees will be responsible, subject to their roles, for the maintenance of a safe environment including the assessment of risks and actions to mitigate minimize and manage risks to the safety of the work environment.
- The project will develop an OHS policy and implement systems, processes, supporting policies, and services that are national and international in compliance with national and international legal requirements including industry standards and best practices in relation to safety.
- Employees at all levels have the authority to stop any activity they consider to be a danger to themselves or other workers, the public or the environment. The project is committed to non-retaliation to stop-work actions by project workers.

The Environment and Social Specialists of the project are responsible for the implementation and monitoring of the safety management systems of the project. The ESS will develop sub-policies, guidelines, procedures, instructions and training and awareness materials to support this policy.

Dissemination and Awareness

The OSH policy, developed for the project, will be disseminated to all project workers and stakeholders. The information will be dissemination in various formats including an adapted and summarized version.

7. AGE OF EMPLOYMENT

The project will be guided by the Labour Act, 2003 which states that the minimum age of employment in Ghana is eighteen (18) years old. In addition to the Employment Act, Ghana is a signatory to the following international conventions related to the minimum age of employment:

- Convention on the Rights of the Child (CRC): “Signed on the 19th April 1990 and ratified on the 9th October 1990” (UNICEF, 2015)
- Minimum Age Convention, 1973 (No.138) (International Labor Organization , 2017)
- Forced Labour Convention, 1930 (No. 29) (International Labor Organization , 2017)
- Worst Forms of Child Labour Convention, 1999 (No. 182) (International Labor Organization , 2017)
- Medical Examination of Young Persons Convention, 1921 (No. 16) (International Labor Organization , 2017)
- UN CRC Optional Protocol on Armed Conflict (U.S. Department of Labor , 2017)

Employees over the minimum age of 18 and under the age of 21, may be employed or engaged in connection with the project only under the following specific conditions:

- (a) the work is not likely to be hazardous and is not harmful to the child’s health or physical, mental, spiritual, moral or social development, and will not interfere with the child’s education.
- (b) an appropriate risk assessment is conducted prior to the work commencing; and
- (c) the Borrower conducts regular monitoring of health, working conditions, hours of work and the other requirement of ESS2: Labour and working conditions.

The following process will be followed to verify the age of project workers:

All project employees will be asked to produce identification documents (ID) that are acceptable in local laws, employment and human resources practices as “proof of age”. These forms of ID will be birth certificates, national drivers’ licenses and national registration cards. In the absence of one of those forms of IDs the project

will apply and document an age verification process. The age verification process will consist of alternative methods including copies of academic certificates, testimony/affidavits from officials of the schools attended, a medical examination, statements from family members and parish/village officials/local authorities. In addition, all documents will be cross-referenced and subjected to a verification process to ensure the validity of the documents. In instances where the documents are thought to be falsified the project will conduct the same process to ensure their authenticity. In all of the processes the attendant care will be provided to ensure that the applicant or employee's data are protected and their right to privacy is guaranteed. All copies of the IDs and documents pertaining to the applicant's age and other supporting materials will be kept in files with the human resources personnel. Audits and controls of the process will be a requirement of the contractors and included in the contracts, in keeping with the Labour Act 2003 (Act 651).

In the event that underage workers are found working on the project the following actions will be undertaken:

- Termination of the contract and services agreement immediately as per the Labour Act of 2003 (Act 651)
- Schedule a meeting with the child and seek to determine the reasons for seeking employment
- Refer the child to other support services including social services and the Ministry of Education
- Leverage the services of Non-government and Community Based Organizations to assist the child
- Consider employing another adult member of the family if the child's family is determined to be vulnerable or in dire circumstances

The Labour Act 2003 (Act 651) will be used as a guide in the conduct of the assessment of risks associated with persons below the age of 18. The procedure for assessing the risks will be as follows:

- All persons will be asked to provide a medical certificate with the results of a medical examination.
- An assessment will be done of the tasks assigned, to ensure that persons below the age of 18 are not subjected to hazards and risks
- There will be clear policy guidelines regarding supervision of young persons to prevent exploitation and sexual harassment
- Young persons will be provided with educational and awareness information on the policies of the workplace including sexual harassment policies and labour related grievances and the Grievance Mechanism of the project.

8. TERMS AND CONDITIONS

The following terms and conditions will apply to project workers in accordance with the Labour Act 2003 (Act 651).

Contracts

- The project, and sub-contractor, subcontractor, and assignees of contracts shall pay rates of wages and observe hours and conditions of employment which are not less favourable than those established in the country (minimum wage).
- Contractors and sub-contractors shall be certified according to the Government Requirements for governmental contractors including that contractors are certify that the wages and conditions of employment of all those employed by the contractor in the trade or industry in which the contractor is seeking to contract with the Government are fair and reasonable.
- The contracts will be guided by the principle of collective bargaining is applicable and where there is no minimum wage or rates established in the country, the guiding principle will be of fair wages and reasonable rates commensurate with governmental minimum wage and similar established rates and conditions.

- In keeping with the Labour Act, the contractor shall keep proper wage records and time sheets for all those employed in relation to the execution of the contract, and the contractor shall produce the wage records and timesheets for the inspection of any person authorised by the project or the Labour Commission of Ghana.
- Contractors are required by law, to post conditions of work in conspicuous places informing workers of their rights and conditions of work.
- A subcontractor shall be bound to conform to the conditions of the main contract and the main contractor shall be responsible for the observance of all contract conditions.
- Contractors and subcontractors shall recognise the right of their workers to be members of the trade unions.

Minimum Wage

All project workers shall be paid a wage that is above or equal to the minimum wage as established by the Government of Ghana. Wages will be paid on a weekly, bi-weekly or monthly basis. Each employee is entitled to a statement accompanying pay that itemised the following: “(a) the employee’s gross wages due at the end of that pay period; (b) the amount of every deduction from his or her wages during that pay period and the purpose for which each deduction was made; and (c) the employee’s net wages payable at the end of that pay period.”

Hours of Work

The maximum number of ordinary hours of work for employees shall be eight hours a day or forty hours a week except in cases expressly provided for in the Labour Act.

Project employees are prohibited from working more than 10 hours per day inclusive of two hours for lunch and rest periods. No person under the age of eighteen years shall be employed or allowed to work. Other provisions related to hours of work will be guided by the Labour Act (Act 651) on this matter.

9. GRIEVANCE MECHANISM

The Grievance Mechanism for all Project Workers is as follows:

- Contractors and or Representatives will be the point of contact for all Grievances. In the case of project management staff, the point of contact will be the Permanent Secretary. The contractor will designate a staff member who will be responsible to receive grievances.
- Upon receipt of Grievances, the contractor staff / Permanent Secretary or Representative will notify the project manager and Environmental and Social Specialist (ESS). Grievances will be registered in a registry of complaint and all information related to the handling of the grievances will be recorded in the registry. In the case of issues with project management staff, the Project Manager may be required to exclude her or himself if the complaint directly involves him or her.
- The contractor will attempt to address grievance within established time frame of 3 weeks upon receipt. In cases of timely or urgent matters a period of a minimum of 24 hours and a maximum of 15 days will be allotted for addressing a resolving the grievance. Grievances can be made in person, telephone call or writing.
- The Grievance Mechanism of the project will be published by the Ministry of Communication (MoCD). In addition, it will also be disseminated via public notices and billboards on sub-project sites, brochures will be distributed in communities of project activity and messages will be placed in both print and broadcast media advising of the mechanism and access points. Grievances can be made anonymously. A dedicated email and telephone number will be provided for all Grievances. For

grievances made via telephone or in person, a written account will be compiled and the complainant will be asked to verify its authenticity and sign that it is an accurate account.

- The staff member assigned by the contractor will notify the Project Manager through a report of the successful resolution of any grievance. The complainant will also be informed via writing of the measures taken to address the grievance.
- If the grievance cannot be resolved by the contractor the contractor will inform the Project Manager and ESS.
- The ESS and Project Manager will meet with the project contractor and workers and attempt resolution. In the case of project management staff, the Permanent Secretary will meet directly with the staff.
- If issues cannot be resolved the issue will be referred to the Ministry of Labour for their action and pronouncement.
- The Ministry of Employment and Labour Relations' ruling would be the final tier of the grievance mechanism.
- If unresolved, either party may seek redress in the courts of the Country.
- Parties involved will be advised that they can directly contact the Project Office Ministry.
- Information about the GM will be disseminated to workers through signs at the project work site, brochures and handbills at the project website and SMS messages sent to the workers' phones.
- If the GM receives a case on sexual exploitation and abuse related to the project, complaint will only be recorded after securing full consent of the complainant in line with survival centered approach. The GM administrator will then refer the complainant to the appropriate SEA/SH service provider or relevant government authorities in line with the developed SEA/SH Risk Mitigation and Response Action Plan and with Ghana Gender Policy. The GRC administrator or secretary will keep the information and personal details of the complainant confidential to protect privacy of GBV and SEA complainants. As part of contractor's agreement, each contractor would be required to sign a code of conduct to mitigate potential risk of SEA /SH. In cases, where the perpetrator(s) is linked to project activities then the contractor will take appropriate actions as per the provision of the contractor's contract agreement and under the effective law in Ghana. The PIU will report activities and outcomes of GBV and SEA surveillance and management to the World Bank on a regular basis.

10. CONTRACTOR MANAGEMENT

It is mandated that the contractor execute the management of the contract in a manner that is acceptable to the client and is in accordance with the World Bank rules and regulations as it relates to ESS2, specifically relating to the selection process for contractors, management of labour issues, including health and safety, procedures for managing and monitoring of performance for contractors, as well as reporting on workers under the project.

Information on Public Records: The Contractor must have in place information on corporate registers and documents relating to the violation of applicable law, including reports from labour inspectorates and other enforcement bodies.

Certification and Approval of Business and Workers: Documentation of approved business licenses, registration, permits and other approvals and workers' certification/permits and training to perform the work.

Health and Safety: Have in place labour management systems as it relates to organizational health and safety. Records of incidents and corresponding root cause analysis with a corrective mitigation plan. First aid cases, high potential near misses, and remedial and preventive activities required. Identification and establishment of safety committee and records of meetings.

Workers Payroll Records: Documentation of the number of hours work and pay received inclusive of all payments made on their behalf, for example payment made to the National Insurance Scheme and other entitlements regardless of the workers being engaged on a short- or long-term assign mentor fulltime or part time worker.

11. COMMUNITY WORKERS

The construction aspect of the project will envisage the hiring of community workers on the work. Community workers hired by the project will be provided with contracts similar to other project staff and workers. The Grievance Mechanism of the project will also be applicable to community workers of the project.

12. PRIMARY SUPPLY WORKERS

There is no significant risk of child or forced labour or serious safety issues in relation to primary suppliers. Based on the nature of the project, there will be Primary Suppliers engaged. All contracts with Primary suppliers will follow the mechanisms laid down in the Labour Act (Act 651).

16.7 Appendix 7-1: Solar Procurement Bidder Declaration Concerning Child Labor



IPF SOLAR PROCUREMENT BIDDER DECLARATION - FORCED LABOR

Background

There is a significant risk of forced labor in the global supply chain for solar panels and solar components. Senior Management have instructed that Task Teams strengthen procurement processes by including forced labor bidder declarations, qualification requirements and strengthened contractual provision in procurements involving financing of solar panels/solar components¹, requiring mandatory prior review.

The Bank's Environmental and Social Framework (ESF) prohibits use of Forced Labor in any Bank financed projects to which ESS2 Labor and Working Conditions applies. The ESF states that *"any work or service not voluntarily performed that is exacted from an individual under threat of force or penalty, will not be used in connection with the project. This prohibition covers any kind of involuntary or compulsory labor, such as indentured labor, bonded labor, or similar labor-contracting arrangements. No trafficked persons will be employed in connection with the project."* This definition is relevant to Forced Labor contractual provisions and the declarations detailed in this document. See Annex I, II, III, and IV.

The ESF defines *"voluntarily² performed"* as *"Work is on a voluntary basis when it is done with the free and informed consent of a worker. Such consent must exist throughout the employment relationship and the worker must have the possibility to revoke freely given consent. In particular, there can be no 'voluntary offer' under threat or other circumstances of restriction or deceit. To assess the authenticity of a free and informed consent, it is necessary to ensure that no external constraint or indirect coercion has been carried out, either by an act of the authorities or by an employer's practice."*

The ESF defines *"trafficking³"* as *"Trafficking in persons is defined as the recruitment, transportation, transfer, harboring or receipt of persons by means of the threat or use of force or other forms of coercion, abduction, fraud, deception, abuse of power, or of a position of vulnerability, or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purposes of exploitation. Women and children are particularly vulnerable to trafficking practices."*

The ESF's Forced Labor prevention requirements cascade into the Bank's Standard Procurement Documents for projects and apply in different ways to the Main Contractor and Subcontractors, and the Project's Primary Suppliers (including Primary Supply Workers as appropriate).

The ESF defines *"Primary Suppliers⁴"* as *"Primary Suppliers are those suppliers who, on an ongoing basis provide directly to the project goods or materials essential for the core functions of the project. Core functions of a project constitute those production and/or service processes essential for a specific project activity without which the project cannot continue"*. In the Bank Standard Procurement Documents (SPDs), to fit with FIDIC contract forms, what the ESF describes as Primary Suppliers are described in SPDs as *"Suppliers other than Subcontractors."*

¹ IPF, that include Solar panels/components for the "core functions of a project", for all new procurement (advertised, invited or awarded through direct contracting) on or after January 1st, 2022 (see Scope).

² ESF Page 34 footnote 14.

³ ESF Page 34 footnote 15.

⁴ ESF Page 20 footnote 34.

The ESF explains requirements for “Primary Supply Workers⁵” as “As part of the environmental and social assessment, the Borrower will identify potential risks of child labor, forced labor and serious safety issues which may arise in relation to primary suppliers. Where there is a significant risk of child labor or forced labor related to primary supply workers, the Borrower will require the primary supplier to identify those risks consistent with paragraphs 17 to 20 above [of the [Environmental and Social Framework](#)]”.

Scope

Investment Project Financing: Borrowers must include in applicable procurement documents⁶ that include solar panels/components for the “core functions of a project” as defined in the World Bank Environmental and Social Framework: (i) applicable provisions in the invitation for bids, instruction to bidders and qualification requirement; (ii) Forced Labor Performance Declaration; (iii) Forced Labor Declaration; and (iv) strengthened contract clause on Forced Labor. **These provisions and declaration forms must be included in procurement documents for both international as well as national competitive procurement, and any direct selection/direct contracting within the above scope.** The provisions and declarations in the annexes use terms such as “bid” and “bidder” based on terms used in request for bids. The qualification requirements and the declaration terms should be adjusted depending on the applicable procurement process, such as “proposal” “proposer” and “applicant” as appropriate. See Annex I, II, III and IV.

Effective date

All new procurement (advertised, invited or awarded through direct contracting) on or after January 1st, 2022: (i) Annex I: applicable provisions to be included; in the invitation for bids, instruction to bidders and qualification requirements; (ii) Annex II- Forced Labor Performance Declaration; (iii) Annex III- Forced Labor Declaration; and (iv) Annex IV- strengthened contract clause on Forced Labor.

Queries

Environmental and Social related matters please refer to Task Team E&S Specialist. **Procurement** related matters please refer to the Task Team Procurement Specialist. **Policy matters and/or Standard Procurement Documents** please refer to OPCS (E&S team for ESF matters, and Procurement team for matters relating to the Procurement Framework/SPDs).

Implementation

A mandatory note requiring Borrowers to include the following to procurement documents for procurement of Solar Panels/Solar Panel Components is posted on the Bank’s external procurement web page, to apply to both international and national competitive procurement and any direct selection/direct contracting within the scope of application.

Prior Review

All procurements that apply the declaration will be subject to Bank prior review and no objection. The Bank’s prior review will also include procurement documents prior to issue; Subcontractors/ suppliers/ manufacturers of solar panels/components prior to Employer (Borrower) approval (Annex III), and same for post award if there are any changes to Subcontractors/ suppliers/ manufacturers of solar panels/components.

⁵ ESF Page 36 paragraphs 39 to 42.

⁶ Procurement document in the context of this document refers to prequalification/initial selection document or bidding (tender) document or request for proposals document and/or contract form, as appropriate.

ANNEX I – Applicable Provisions⁷

Invitation for Bids

All bids must be accompanied by a Forced Labor Performance Declaration (Annex II) and a **Forced Labor Declaration** (Annex III).

Instruction to Bidders (ITB)

Include in the list of documents comprising the bid: Forced Labor Declaration using the form included in Section IV, Bidding Forms [or refer to the appropriate section where Bank’s SPDs are not applied].

Qualification requirements⁸

Forced Labor past performance declaration - require the bidder (including for JV each member of the JV), Subcontractors, suppliers and/or manufacturers proposed by the bidder to declare any contracts that have been suspended or terminated, and/or other contractual remedies applied including calling of performance security by an employer, for reasons of breach of forced labor obligations in the past five years. Documentation required: Form Annex II: Forced Labor Performance Declaration.

⁷ Annex I uses the terms “bid” and “bidder”. The terms should be adjusted depending on the applicable procurement process terms such as “proposal” “proposer” and “applicant”.

⁸ Depending on the process, the qualification requirements shall be included in the appropriate procurement document.

ANNEX II - Forced Labor Performance Declaration⁹

*[The following table shall be filled in by the Bidder, each member of a Joint Venture, each Subcontractor/supplier/
manufacturer providing solar panels and/or solar panel components proposed by the Bidder]*

Bidder's Name: *[insert full name]*

Date: *[insert day, month, year]*

Joint Venture Member's or Subcontractor's/supplier's/manufacturer's Name: *[insert full name]*

RFB No. and title: *[insert RFB number and title]*

Page *[insert page number]* of *[insert total number]* pages

Forced Labor Performance Declaration in accordance with Section III, Evaluation and Qualification Criteria			
We:			
<input type="checkbox"/> (a) have not been suspended or terminated, and/or other contractual remedies applied including calling of performance security by an employer, for reasons of breach of forced labor obligations in the past five years. <i>[if (a) is declared, state N/A for (b) below]</i>			
<input type="checkbox"/> (b) have been suspended or terminated, and/or other contractual remedies applied including calling of performance security by an employer, for reasons of breach of forced labor obligations in the past five years. Details are provided below:			
Year	Contract identification	Name of Employer	Reasons for suspension or, termination, and/or other contractual remedies applied including calling performance security
-	-	-	-
<input type="checkbox"/> (c) <i>[If (b) above is applicable, attach evidence demonstrating that adequate capacity and commitment to comply with Forced Labor obligations.]</i>			

We declare that all the information and statements made in this Form are true, and we accept that any misrepresentation contained in this Form may lead to our disqualification by the Employer and/or sanctions by the Bank.

Name of the Bidder/ JV member/ Subcontractor/ supplier/ manufacturer _____

Name of the person duly authorized to sign on behalf of the Bidder/ JV member/ Subcontractor/ supplier/manufacturer

Title of the person signing on behalf of the Bidder/ JV member/ Subcontractor/ supplier/ manufacturer _____

Signature of the person named above _____

Date signed _____ day of _____, _____

Countersignature of authorized representative of the Bidder (for forms submitted by a JV member, Subcontractor/ supplier/ manufacturer):

Signature: _____

Date signed _____ day of _____, _____

⁹ Annex II uses terms such as "RFB" and "bidder". The terms should be adjusted depending on the applicable procurement process terms such as "RFP" "proposer" and "applicant".

ANNEX III - Forced Labor Declaration¹⁰

Date: _____

RFB No.: _____

Alternative No.: _____

Contract Title: _____

To:

We, the undersigned, declare that, if awarded the Contract, we, including our Subcontractors and suppliers/ manufacturers, are required to comply with the contractual Forced Labor obligations. In this regard, we:

- (a) accept that there will be no Forced Labor among the staff, employees, workers and any other persons employed or engaged by us;
- (b) accept that staff, employees, workers and any other persons employed or engaged, will be hired under employment conditions that meet the contractual obligations set out in the Contract;
- (c) will include in our contracts with Subcontractors/ suppliers/ manufacturers of *[solar panels]* *[solar panel components]* obligations to prevent Forced Labor among the staff, employees, workers and any other person employed or engaged by the Subcontractor/ supplier/ manufacturer;
- (d) will include in our contracts with Subcontractors/ suppliers/ manufacturers of *[solar panels]* *[solar panel components]*, that the Subcontractors/ suppliers/ manufacturers include an obligation to prevent Forced Labor in all contracts that they execute with their suppliers/ manufacturers of *[solar panel]**[solar panel components]*;
- (e) will monitor our Subcontractors/ suppliers/ manufacturers of *[solar panels]**[solar panel components]* on implementation of obligations to prevent Forced Labor among the staff, employees, workers and any other person employed or engaged by them;
- (f) will require our Subcontractors to monitor their suppliers/ manufacturers of *[solar panels]**[solar panel components]* on implementation of obligations to prevent Forced Labor among the staff, employees, workers and any other person employed or engaged by them;
- (g) will require our Subcontractors/ suppliers/ manufacturers to immediately notify us of any incidents of Forced Labor;
- (h) will immediately notify the Employer any incident of Forced labor on the site, or premises of Subcontractors/ suppliers/ manufacturers of *[solar panels]* *[solar panel components]*;
- (i) will include in periodic progress reports submitted in accordance with the contract sufficient details on our, including our Subcontractors/ suppliers/ manufacturers, compliance with Forced Labor obligations; and we
- (j) confirm that the Subcontractors/ suppliers/ manufacturers for *[solar panels]**[solar panel components]* for this contract are (or likely to be):

¹⁰ Annex III uses terms such as “bid” and “bidder”. The terms should be adjusted depending on the applicable procurement process terms such as “proposal” “proposer”

[Provide each firm’s name, address, primary contact, e-mail address, and the link to the firm’s website]

OR

confirm that you have not yet finalized the Subcontractors/ suppliers/ manufacturers of solar panels/components, but when known the firm/s name(s), address(es), primary contact(s), e-mail address(es) and web site link(s) will be provided to the Employer, prior to signing the contract, with documentation demonstrating compliance with forced labor obligations to the Employer for approval].

THEN

If (c) above is applicable, attach evidence of how these contract obligations are/will be made.

If (d) above is applicable, attach evidence of how these contract obligations are/will be made.

If (e) above is applicable, please attach evidence of how this monitoring/due diligence is/will be undertaken (such as your inspection protocols, use of inspection agents, frequency of inspections, examples of previous factory/labor inspection reports etc.).

If (f) above is applicable, please attach evidence of how this monitoring/due diligence is/will be undertaken by Subcontractors (such as their inspection protocols, use of inspection agents, frequency of inspections, examples of previous factory/labor inspection reports etc.).

We declare all the information and statements made in this Form are true, and we accept that any misrepresentation contained in this Form may lead to our disqualification by the Employer and/or sanctions by the Bank.

Name of the Bidder* _____

Name of the person duly authorized to sign the Bid on behalf of the Bidder** _____

Title of the person signing the Bid _____

Signature of the person named above _____

Date signed _____ day of _____, _____

*: In the case of the Bid submitted by joint venture specify the name of the Joint Venture as Bidder

** : Person signing the Bid shall have the power of attorney given by the Bidder attached to the Bid

[Note: In case of a Joint Venture, the Forced Labor Declaration must be in the name of all members to the Joint Venture that submits the Bid.]

ANNEX IV - Strengthened contract clause on Forced Labor

Include the following Forced Labor contract clause/replace any other forced labor contract clause in its entirety with the following:

The Contractor, including its Subcontractors/ suppliers/ manufacturers, shall not employ or engage forced labour. Forced labour consists of any work or service, not voluntarily performed, that is exacted from an individual under threat of force or penalty, and includes any kind of involuntary or compulsory labour, such as indentured labour, bonded labour or similar labour-contracting arrangements.

No persons shall be employed or engaged who have been subject to trafficking. Trafficking in persons is defined as the recruitment, transportation, transfer, harbouring or receipt of persons by means of the threat or use of force or other forms of coercion, abduction, fraud, deception, abuse of power, or of a position of vulnerability, or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purposes of exploitation.

In this regard, the Contractor shall:

- (a) include in contracts with Subcontractors/ suppliers/ manufacturers of *[solar panels] [solar panel components]*, obligations to prevent Forced Labor among the staff, employees, workers and any other person employed or engaged by the Subcontractor/ supplier/ manufacturer;
- (b) include in contracts with Subcontractors/ suppliers/ manufacturers of *[solar panels] [solar panel components]*, that the Subcontractors/ suppliers/manufacturers include an obligation to prevent Forced Labor in all contracts that they execute with their suppliers/ manufacturers of *[solar panel][solar panel components]*;
- (c) monitor Subcontractors/ suppliers/ manufacturers of *[solar panels][solar panel components]* on implementation of obligations to prevent Forced Labor among the staff, employees, workers and any other person employed or engaged by them;
- (d) require Subcontractors to monitor their suppliers/manufacturers of *[solar panels][solar panel components]* on implementation of obligations to prevent Forced Labor among the staff, employees, workers and any other person employed or engaged by them;
- (e) require its Subcontractors/ suppliers/ manufacturers to immediately notify the Contractor of any incidents of Forced Labor;
- (f) immediately notify the Employer any incident of Forced labor on the site, or premises of Subcontractors/ suppliers/ manufacturers of *[solar panels] [solar panel components]*; and
- (g) include in periodic progress reports submitted in accordance with the contract sufficient details on its, including its Subcontractors/ suppliers/ manufacturers, compliance with Forced Labor obligations.

16.8 Appendix 8-1: Chance Find Procedures

1. INTRODUCTION

Both national regulations and World Bank Environmental and Social Standards especially, ESS8: Cultural Heritage, recognize the importance of cultural heritage for current and future generations. Though site specific location are not yet know, the project design suggest that there will be no impacts on Physical cultural Resources. However, the excavation for laying fiber optics could have an impact on unknown cultural heritage such us grave sites and sacred sites. Therefore, the purpose of this chance find procedures is to provide MoCD, its contractors and subcontractors with the appropriate response guidelines to be applied if previously unknown cultural heritage is encountered. This Chance Find Procedure takes into consideration international best practice such WB ESS8, 1972 UNESCO Convention on the Protection of World Cultural and Natural Heritage (World Heritage Convention) and the Ghanaian policies and laws cultural resources protection. Thus, Chance Find Procedures (CFPs) are part of MoCD's E&S instruments that may have relevance during Project implementation. The Procedure applies to potential cultural heritage objects, features or sites identified as a result of construction activities in the project area and its surroundings.

2. CHANCE FIND DEFINITION

A chance find procedure is a project-specific procedure that outlines the actions to be taken if previously unknown cultural heritage is encountered. It is also defined as potential cultural heritage (or paleontological) whether movable or immovable objects, sites, structures, group of structures and natural features and landscapes that have archaeological, historical, religious and other cultural significance. Cultural heritage resources may include:

- Artefacts, whole or partial, such as ceramic sherds, stone items, glass fragments, bone, shell, metal, textiles, and plant and animal remains
- Features associated with human occupation such as trash dumps, middens, hearths, structural remains.
- Prehistoric or historic human remains found in formal graves, cemeteries, or as an isolated occurrence.

Non-Cultural Heritage Chance Finds may include modern objects, features, and burials and the decision about whether a Chance Find is a cultural heritage resource requiring additional treatment will be made by MMDAs in consultation with Ministry of Youth and Culture and the Rwanda Cultural Heritage Academy where necessary.

3. CHANCE FIND PROCEDURES

If any person discovers a physical cultural resource, such as (but not limited to) archaeological sites, historical sites, remains and objects, or a cemetery and/or individual graves during excavation or construction, the following procedures shall be applied:

1. If the Contractor discovers archeological sites, historical sites, remains and objects, including graveyards and/or individual graves during excavation or construction, the Contractor shall:
 - a. Stop the construction activities in the area of the chance find;
 - b. Delineate the discovered site or area;
 - c. Secure the site to prevent any damage or loss of removable objects. In cases of removable antiquities or sensitive remains, a night guard shall be arranged until the responsible local authorities or the National Museum takes over;

- d. Notify the Environmental and Social Safeguards Specialist (ESSS) who in turn will notify responsible local or national authorities in charge of the Cultural Property i.e., the Ghana Museums and Monuments Board (within 24 hours or less);
 - e. Relevant local or national authorities would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures. This would require a preliminary evaluation of the findings to be performed. The significance and importance of the findings should be assessed according to the various criteria relevant to cultural heritage; those include the aesthetic, historic, scientific or research, social and economic values;
 - f. Decisions on how to handle the finding shall be taken by the responsible authorities. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance) conservation, preservation, restoration and salvage;
 - g. If the cultural sites and/or relics are of high value and site preservation is recommended by the professionals and required by the cultural relics authority, the Project's Owner will need to make necessary design changes to accommodate the request and preserve the site;
 - h. Decisions concerning the management of the finding shall be communicated in writing to relevant authorities;
2. Construction works could resume only after permission is granted from the responsible local authorities concerning safeguard of the heritage.

4. CHANCE FINDS DOCUMENTATION

The ESSS will ensure that contractors and subcontractors staff maintain records of monitoring, Chance Finds and it will include:

- Daily monitoring records indicating areas and activities monitored; reported Chance Finds and the results of any evaluations.
- Weekly reports summarising reporting period activities including Chance Finds, assessments and evaluations, internal and external communications and instructions and supporting photographic documentation (or other reference materials as appropriate). An additional report aimed at fulfilling any specific Ministry requirements is also anticipated.
- Monthly reports summarising monitoring and evaluation results, status of any site treatment measures requiring instructions to contractor(s)/ subcontractor(s), and other internal and external communications. Additional monthly reporting may be required by the respective MMDA.

5. CULTURAL HERITAGE TRAINING

All proposed project personnel are required to receive and comply with the Code of Conduct and receive training and demonstrate competency in (1) the identification of Chance Finds cultural heritage sites, objects, or features and (2) Chance Finds management procedures; that is, those actions that are required in the case of a suspected Chance Find. This training will be incorporated into the overall induction process for firms, contractor(s), and subcontractor(s) personnel and will include a quick reference hand-out. All employees must be aware of the Ghanaian Policies and Laws on cultural heritage and WB ESS 8 that forbids disturbance or removal of cultural heritage objects offsite for personal gain. Disciplinary action should be taken against any personnel who violate this requirement.

6. REPORTING AND COMMUNICATION

Monitoring, review and reporting will be along with the conduct of ESIA/EIA, ESMP/ EMP and RAP/ ARAP for the proposed project. Contractor(s); Sub-contractor(s) shall report all records on observational monitoring, protection measures, complaints, and damages to the ESSS on monthly and a quarterly basis. The ESSS shall report their monitoring records and the Contractor's records to MoCD which will in turn inform relevant authorities e.g., GMMB on case to case basis and on a quarterly basis.

7. IMPLEMENTATION ARRANGEMENT

The implementation arrangements and responsibilities of the Chance find procedures shall be as follows:

No	Stakeholder	Responsibility	Responsible person
1	MoCD	<ul style="list-style-type: none"> - Overall coordination; - Lead consultation with relevant authorities and local communities; - Implement the procedure and provide required funds; - Monitoring the implementation of chance finds procedures; and - Prepared required reports. 	ESSS
2	Contractors and sub-contractors	<ul style="list-style-type: none"> - Stop the construction activities in the area of the chance find; - Install temporary site protection measures; and - Inform the client and document chance finds. 	Site engineer/ Site foreman
3	GMMB	<ul style="list-style-type: none"> - Verification of chance finds; - Approval of the treatment measures in consultation with stakeholders; - Provide the authorisation to resume works in the chance find area; 	In charge of Sport and culture
4	Local communities	<ul style="list-style-type: none"> - To attend consultation meetings; - To provide required information; - Participate in treatment measures 	Local Population

8. BUDGET

The budget will depend on chance finds and the proposed treatment measures. However, a provisional sum has been provided in the main ESMF implementation budget.

9. CONCLUSION

The present Chance Find Procedures serve as international best practice policy for the accidental discovery of heritage resources and provide the framework to handle them. Based on the definitions provided within this document and the proposed procedures of communication and handling chance finds, MoCD will be able to deal properly with the accidental discovery of heritage resources throughout the various phases of the project implementation especially during the construction phase.

16.9 Appendix 8-2: E-Waste Management Procedures

1. INTRODUCTION

World Bank Environmental and Social Standards especially, ESS3: Resource Efficiency and Pollution Prevention and Management, and national regulations ensure that entities follow quality measures and standards to properly manage and dispose of wastes generated or produced throughout the entirety of the project. The ultimate goal is to reduce waste generation, practice waste reuse, recycle and recovery during project commencement. A construction project of this nature will generate electrical waste.

Therefore, the purpose of this waste management procedure is to provide MoCD, its contractors and subcontractors with the appropriate response guidelines to apply in managing waste generated. This waste management Procedure takes into consideration international best practices such WB ESS3, 2015 United Nations Sustainable Development Goal 11 Target 11:6 and the Ghanaian policies and laws on Hazardous and Electronic Waste Control and Management Act (Act 917) followed by the Hazardous, Electronic and other Wastes (Classification), Control and Management Regulations (LI 2250). Thus, Waste Management Procedures (WMPs) are part of MoCD's E&S instruments that will be relevant during Project implementation.

2. WASTE MANAGEMENT DEFINITION

MoCD is committed to reducing the amount of waste generated by its activities and contractors will minimise waste at source as much as possible. All parties shall minimise and manage waste generation through the implementation of the waste hierarchy, presented in the figure below.



Waste will be reused or recycled where deemed practical to ensure efficient use of resources. Energy recovery will also be considered. Even though waste disposal is the last option, it is appropriate for wastes that are hazardous and can cause harm to people and the environment. This waste will be well labelled, stored, handled, treated and disposed of.

3. WASTE MANAGEMENT PROCEDURES

The two legal frameworks which include Hazardous and Electronic Waste Control and Management Act (Act 917) and Hazardous, Electronic and other Wastes (Classification), Control and Management Regulations (LI 2250) set the background for a new and innovative strategy towards a sustainable management of e-waste in Ghana. The Hazardous, Electronic and other Wastes (Classification), Control and Management Regulations (LI 2250) provides technical Guidelines on Environmentally Sound E-Waste Management for Collectors, Collection Centers, Transporters, Treatment Facilities and Final Disposal in Ghana. MoCD and their contractors in dealing with e-waste waste will enforce sound management by observing the following:

Waste Collection

MoCD and their contractors in the management of e-waste will ensure that:

- i. An e-waste collector and most especially third party is registered with the relevant MMDAs and wherein an association, with the EPA.
- ii. All staff to handle e-waste shall receive appropriate training provided by EPA, Factories Inspectorate Department, and other competent bodies.

Waste storage

MoCD and their contractors in the management of e-waste will ensure that:

- i. Store e-waste on an impervious surface within a structure or a transportation unit such that it is protected from precipitation.
- ii. E-waste is stored in such a way that it is not exposed to direct sunlight and rainfall.
- iii. A whole or fractions containing hazardous substances shall be stored in a manner that prevents dispersal of hazardous materials to the environment.
- iv. Maintain adequate storage space and good housekeeping.
- v. Handle e-waste in a way that subsequent preparation for re-use, depollution or recovery is not adversely affected.

Transportation

MoCD and their contractors shall ensure that e-waste is transported, stored and handled in a manner adequate to minimize damage as well as not mix e-waste with any other type of waste.

Treatment

The following electronic waste components will be stored or pre-treated which include plastic components, mercury containing components, batteries, printed circuit boards, toner cartridges, asbestos and components which contain asbestos, cathode ray tubes, gas discharge lamps, components containing refractory ceramic fibers and components containing radioactive substances.

Disposal

MoCD and their contractors in the management of e-waste will ensure that:

- i. The disposal site shall be managed in accordance with the guideline for Landfill Management and other relevant laws.
- ii. The disposer shall issue a certificate to the owner of the waste.
- iii. The disposal facility shall put in place appropriate pollution control measures/systems.
- iv. Incineration facilities shall be registered and permit obtained in accordance with LI 1652.

Waste Transfer and Documentations

MoCD and their contractors will ensure all waste transfers will be accompanied by waste transfer documentation, of which a copy will be retained by the waste producer. The Waste Transfer Note or document shall accompany every transfer of waste generated. See Table 1 for MoCD Waste Transfer Note.

Table 1: Waste Transfer Note

Waste Transferor							
Waste	Quantity	Packaging	EWC Code	Description of waste	Waste Producer		Date
					Name	Signature	
Comment:							
Waste Transferee							
Waste	Quantity	Packaging	EWC Code	Description of waste	Waste Transferred By		Date
					Name	Signature	
Comment:							

4. AUDITING

An officer will be assigned to do a day to day inspection to ensure that the Waste Management Procedures are duly followed. Also, a third party will be contracted to carry out periodic audits during project commencement.

5. REPORTING AND COMMUNICATION

Details of the quantity of waste generated and management approach applied by all parties will be recorded and submitted to Health Safety and Environment Department daily. This information will be reported along with the conduct of ESIA/EIA, ESMP/ EMP and RAP/ ARAP for the proposed project.

6. IMPLEMENTATION ARRANGEMENT

The implementation arrangements and responsibilities of the Waste Management procedures shall be as follows:

No	Stakeholder	Responsibility	Responsible person
1	MoCD	<ul style="list-style-type: none">- Overall coordination;- Lead consultation with relevant authorities;- Implement the procedure and provide required funds;- Monitoring the implementation of waste management procedures; and- Prepared required reports.	ESSS
2	Contractors and sub-contractors	<ul style="list-style-type: none">- Practical application of the WMP;- Hazardous and non-hazardous waste report; and- Waste transfer and management documentation.	Health, Safety and Environment officer
3	Government	<ul style="list-style-type: none">- Permit for disposal of hazardous waste	EPA/MMDAs

7. BUDGET

A provisional sum has been provided in the main ESMF implementation budget for waste management.

8. CONCLUSION

National and international frameworks on waste management most especially hazardous and electronic waste are duly acknowledged in the Waste Management Procedure. The Waste Management Procedures serve as a guide to ensure best practices in waste management during project implementation.

**16.10 Appendix 9-1: Ghana Environmental Assessment Registration Form
EA1 & Form EA2**

ENVIRONMENTAL PROTECTION AGENCY



ENVIRONMENTAL ASSESSMENT REGISTRATION FORM

(To be completed in Duplicate)

FEE GHC

FORM EA 1

Proponent: _____

Address for correspondence _____

Contact person _____

Position _____

Phone No _____

Email _____

Environmental Protection Agency (Head Office)

P.O. Box M 326

Accra, Ghana

Tel: 0302 664697/8, 0302 663499, 0302 662465

Email: info@epa.gov.gh

Website: www.epa.gov.gh

This form shall be submitted to the relevant EPA Regional, District and Zonal Offices. It is important that you read carefully the guide for completing the form before starting.

GUIDE FOR COMPLETING AN ENVIRONMENTAL ASSESSMENT REGISTRATION FORM

The Environmental Assessment Registration Form is designed to provide enough relevant information to enable the EPA to set an appropriate level of assessment for proposal referred to it. Failure to provide detailed information in a comprehensive manner may delay the assessment process. It is not expected that this form will be appropriate for all purposes and, depending on your proposal, a lengthier document may be necessary in addition to this form.

PROPOSAL

A simple, brief description of the proposal or proposed undertaking is required and must include: input processes, end results, outputs, quantities and timing. Please include flow diagram if available.

LOCATION

A site/block plan is essential.

It should indicate the geographical coordinates of site (Longitude and Latitude), evaluation and slope of the site, any nearby areas or features of environmental significance (e.g. proposed or declared reserves, water courses, wetlands) and adjacent land uses, including the nearest homes or areas zoned residential.

SERVICES

Details of water supply, storm water drainage, power corridors, access to and impact on roads and transport can all be significant and should be noted where relevant.

ENVIRONMENTAL IMPACT

Criteria for assessing a project and setting a level of assessment are:

1. The character of the environment
2. The potential impact of the proposal
3. Resilience of the environment to cope with change
4. environmental impacts
5. The input of other statutory decision-making bodies
6. Degree of public interest.

The following potential environmental impacts may be relevant:

1. Impacts on geomorphology, land stability and landscape
2. Impacts on drainage and water quality (surface and ground)
3. Impacts on biota
4. Impacts on access and transport systems
5. Impacts on existing services including power, water and telephone
6. Impacts on existing community facilities
7. Impacts on existing contingency plans for safety and emergency services.
8. Impacts on emission (Gas, Dust, Noise and heat)

9. Management of solid and liquid waste and storm water
10. Impacts on adjacent land uses including any conservation and recreational aspects
11. Impacts of constructional and operational activities
12. Visual impacts
13. Social impacts

Proponents would be required to pay appropriate processing and permit fees in accordance with the current existing LI for fees and charges (Amendment) Instruments.

1. PROPOSED UNDERTAKING/DEVELOPMENT

Title of proposal (general classification of undertaking)

Description of proposed undertaking including unit processes (flow diagram), raw materials, list of chemicals (source, types and quantities), storage facilities, waste by-products (soil, liquid and gaseous)

Scope of proposal (size of labor force, equipment and machinery, installed production capacity, product type, area covered by facility/proposal, market)

2. PROJECT SITE

(Location attach a site plan/map)

Plot/House No..... Street/Area Name.....

Town..... District..... Region.....

Major Landmarks (if any).....

Current Zoning.....

Distance to the nearest residential and or other facilities (in meters) provide coordinates (where possible)

.....
.....

Adjacent land uses (existing and proposed) – (Describe in details and attach pictures)

.....
.....

Site description (immediate activities and adjacent land uses should be described)

.....
.....
.....

3. INFRASTRUCTURE AND UTILITIES

Structures (building and other facilities proposed or existing on site)

.....
.....

Access to water (source, quantity)

.....
.....

Access to power (type, source and quantity)

.....
.....

7. ATTACHMENTS

Tick appropriate box indicating that the following required documents have been attached.

- Authentic site plan (signed by a licensed surveyor and certified by survey dept.)
- Block plan of the site
- Photographs of the site
- Zoning letter from Town and Country Planning Department (TCPD)
- No objection letter from the National Petroleum Authority (NPA) (For Petroleum Products retail outlets (FSS & LPG))

8. DECLARATIONS

I,hereby declare that the information provided on this form is true to the best of my knowledge and shall provide any additional information that shall come to my notice in the course of processing the application. I also declare that the information provided is true.

.....
.....

.....

Signature

.....

Date

Use additional sheets where the spaces provided are inadequate.

ENVIRONMENTAL PROTECTION AGENCY, GHANA



ENVIRONMENTAL ASSESSMENT REGISTRATION FORM

(To be completed in Duplicate)

FEE GH¢7.00

Serial No.

FORM EA2

ASSESSMENT NO:		FILE NO:	
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Environmental Protection Agency (Head Office)
P. O. Box M.326
Accra, Ghana

Tel: +233 0302 664697/8, 664223, 662465
Fax: +233 0302 662690

Environmental Impact Assessment
Registration Form

PROPOSED:

Address for correspondence

Contact Person _____ Position _____

Phone No. _____ Fax No. _____

1. Proposed Undertaking/Development:

Sector: _____

Shareholders: _____

2. Proposed Site: _____

Town/Village: _____

(Attach Location Map)

District: _____

Region: _____

.....

Signature

.....

Date

16.11 Appendix 9-2: Terms of Reference (ToR) for (i) Preparation of ESIA for Sub-Projects, (ii) Format to be used for the Preparation of Environmental Audit and Environmental Management Plan (EMP) Reports

Introduction

A brief introduction indicating the purpose of the ToR which is to select a consultant to conduct the ESIA for the project

Background

An introduction to the project will be given with description of overall objective of project. Details of the project description may be given including any designs which may be attached in an annex.

Objectives

A statement to be made confirming intention to comply with all relevant national and international environmental requirements in order to meet legal and corporate obligations and to ensure a sustainable project as well as disclosure

Consultant's scope of works

All tasks to be performed by the consultant are clearly given:

Description of the proposed project

The Consultant to present a description of the proposed project components in sufficient detail as is consistent with the EIA process including maps at appropriate scales to illustrate the general setting of project-related development sites.

Legislative and Regulatory Considerations

The Consultant to identify and briefly discuss the pertinent regulations and standards governing environmental quality, health and safety, protection of sensitive areas, protection of endangered species, CITES, etc., at international, national, regional and local levels.

Description of the Baseline Environment

The Consultant will assemble, evaluate and present baseline data on the environmental characteristics of the study area. The baseline shall cover mainly the natural/bio-physical environment as well as the socio-economic/cultural characteristics.

Determination of the Potential Impacts of the Proposed Project

The Consultant will assess the impacts from changes brought about by the project on the relevant baseline environmental conditions as described above under Task above.

Analysis of Alternatives to the Proposed Project

The Consultant shall include an analysis of reasonable alternatives to meet the ultimate project objective. This analysis may suggest options that are more sustainable from an environmental, (i.e., natural resource, socio-cultural and economic) point of view than the originally proposed project. The analysis will include the "no action" or "no project" alternative.

Public Consultations process or Stakeholder involvement

The consultant will follow formal and Informal meetings, focus group discussion and public forum in the preparation of the ESIA

Development of Environmental Management Plan (EMP)

An Environmental Management Plan (EMP) shall be prepared by the Consultant for the project. Components of the EMP should include monitoring, documentation, evaluation, prediction, warning, prevention, control and reduction of impacts identified in the ESIA. It will include proposed work programs, budget estimates, schedules, staffing and training requirements, and other necessary support services to implement the mitigating measures.

Identification of Institutional Needs to Implement Environmental Assessment Recommendations

The consultant will carry out a review of the authority and capability of institutions at local, regional, and national levels and recommend steps to strengthen them so that the management and monitoring plans in the environmental assessment are likely to be implemented.

Development of a Monitoring Plan

The Consultant will prepare a detailed plan to monitor the implementation of mitigating measures and the impacts of the project during construction and operation phases. The plan will include an estimate of capital and operating costs and a description of other inputs (such as training and institutional strengthening) needed to conduct it.

Output of assignment and deliverables

The environmental assessment report should be concise and limited to significant environmental issues. The contents of the environmental assessment report should be according to the outline below:

- Title Page (list of consultants who prepared EIA)
- Executive Summary
- Description of the Proposed Project
- Policy, Legal and Administrative Framework
- Description of the Environmental Baseline
- Assessment of Significant Environmental Impacts
- Mitigation Management Plan
- Analysis of Alternatives
- Consultation with Stakeholders
- Environmental Management Plan (EMP)
- Institutional Arrangement and Capacity Building Needs for the Implementation of the EMP.
- Monitoring Plan
- List of References
- Appendices:
 - Records of Inter-Agency and Public/NGO Communications and Engagements
 - Data and Unpublished Reference Documents
 - Photo Documentation

Consulting Team

The Consultant should provide a team with demonstrable skills for interdisciplinary analysis required of a high level ESIA.

Schedule

Timelines for submission of reports and completion of assignment to be given.

Format to be used for the Preparation of Environmental Audit and Environmental Management Plan (EMP) Reports

The outline for the Plan is presented as follows:

EXECUTIVE SUMMARY

INTRODUCTION

Background 1
Company Profile
Management Goals

POLICY ON ENVIRONMENT, AND HEALTH & SAFETY

Declaration of Intent
Environmental Policy
Policy Statement
Policy Objectives
Legal/Regulatory Requirements

Occupational Health & Safety Policy

Policy Statement
Policy Objectives
Legal/Regulatory requirements

POTENTIAL IMPACT IDENTIFICATION

Raw Material Types, Annual Usage, Source & Packaging Forms
General Operations/Process Description
Equipment and Machinery

Potential Releases into Environmental Media (Air, Water, Land)

Potential Release into Water (Effluent)
Potential Releases into Air Media (Emissions)
Potential Releases onto Land
Potential Hazards in the Working Environment

Summary of Pollution Indicators Requiring Control

CURRENT ENVIRONMENTAL MANAGEMENT PRACTICES AND IMPACT ASSESSMENT

Evaluation of previous environmental action plans
Raw Material Handling, Storage, and Loss Control
Gaseous Emissions Management
Effluent Management
Water Usage and Management
Energy Utilization and Management
Chemical Usage and Management
Solid Waste Management
General Aesthetic Consideration
Traffic Management/Public Safety
Noise and Vibration

ENVIRONMENTAL ACTION PLAN

OCCUPATIONAL HEALTH & SAFETY MANAGEMENT

Occupational Health and Safety Issues Identification
Current Occupational Health and Safety Practices
Occupational Health and Safety Policy
Evaluation of Occupational health and safety action plans

Occupational Health and Safety Action Plan

PROGRAM TO MEET REQUIREMENTS

Management Structure Organization

Staff Information and Training

Document Tracking and Control

Public Participation

IMPLEMENTATION OF PLAN

Strategy

Implementation Schedule and Budget

Monitoring and Reviews

Environmental Budget

ECONOMIC EVALUATION OF THE EMP IMPLEMENTATION

Cost and Benefits of the Environmental Action Plan

Cost and Benefits of the Occupational Health and Safety Action Plan

ANNEXES

16.12 Appendix 9-3: World Bank's General Environmental Management Conditions for Construction Contracts

1. In addition to these general conditions, the Contractor shall comply with any specific Environmental Management Plan (EMP) or Environmental and Social Management Plan (ESMP) for the works he is responsible for. The Contractor shall inform himself about such an EMP, and prepare his work strategy and plan to fully take into account relevant provisions of that EMP. If the Contractor fails to implement the approved EMP after written instruction by the Supervising Engineer (SE) to fulfil his obligation within the requested time, the Owner reserves the right to arrange through the SE for execution of the missing action by a third party on account of the Contractor
2. Notwithstanding the Contractor's obligation under the above clause, the Contractor shall implement all measures necessary to avoid undesirable adverse environmental and social impacts wherever possible, restore work sites to acceptable standards, and abide by any environmental performance requirements specified in an EMP. In general these measures shall include but not be limited to.
 - a. Minimize the effect of dust on the surrounding environment resulting from earth mixing sites, vibration equipment, temporary access roads, etc. to ensure safety, health and the protection of workers and communities living within the vicinity dust producing activities.
 - b. Ensure that noise levels emanating from machinery, vehicles and noisy construction activities (e.g. excavation, blasting) are kept at a minimum for the safety, health and protection of workers within the vicinity of high noise levels and nearby communities.
 - c. Ensure that existing water flow regimes in rivers, streams and other natural or irrigation channels is maintained and or re-established where they are disrupted due to works being carried out.
 - d. Prevent oils, lubricants and waste water used or produced during the execution of works from entering into rivers, streams, irrigation channels and other natural water bodies reservoirs, and also ensure that stagnant water in uncovered borrow pits is treated to the best way to avoid creating possible breeding grounds for mosquitoes.
 - e. Prevent and minimize the impacts of quarrying, earth borrowing, piling and building of temporary construction camps and access roads on the biophysical environment including protected areas and arable lands; local communities and their settlements. In as much as possible restore /rehabilitate all sites to acceptable standards.
 - f. Upon discovery of ancient heritage, relics or anything that might or believed to be of archaeological or historical importance during the execution of works, immediately report such findings to the SE so that the appropriate authorities may be expeditiously contacted for fulfilment of the measures aimed at protecting such historical or archaeological resources.
 - g. Discourage construction workers from engaging in the exploitation of natural resources such as hunting; fishing, and collection of forest products or any other activity that might have a negative impact on the social and economic welfare of the local communities
 - h. Implement soil erosion control measures in order to avoid surface run off and prevents siltation, etc.
 - i. Ensure that garbage, sanitation and drinking water facilities are provided in construction workers camp.
 - j. Ensure that, in as much as possible, local materials are used to avoid importation of foreign material and long distance transportation.
 - k. Ensure public safety, and meet traffic safety requirements for the operation of work to avoid accidents,
3. The Contractor shall indicate the period within which he/ she shall maintain status on site after completion of civil works to ensure that significant adverse impacts arising from such works have been appropriately addressed.
4. The Contractor shall adhere to the proposed activity implementation schedule and the monitoring plan/ strategy to ensure effective feedback of monitoring information to project management so that impact management can be implemented properly, and if necessary, adapt to changing and unforeseen conditions.
5. Besides the regular inspection of the sites by the SE for adherence to the contract conditions and specifications, the Owner may appoint an Inspector to oversee the compliance with these environmental conditions and any proposed mitigation measures. State environmental authorities may carry out similar inspection duties. In all cases, as directed by the SE, the Contractor shall comply with directives from such inspectors to implement measures required to ensure the adequacy rehabilitation measures carried out on the bio-physical environment and compensation for socio-economic disruption resulting from implementation of any works.

Worksite/Campsite Waste Management

6. All vessels (drums, containers, bags, etc.) containing oil/ fuel/ construction materials and other hazardous chemicals shall be banded in order to contain spillage. All waste containers, litter and any

other waste generated during the construction shall be collected and disposed off at designated disposal sites in line with applicable government waste management regulations.

7. All drainage and effluent from storage areas, workshops and camp sites shall be captured and treated before being discharged into the drainage system in line with applicable government water pollution control regulations.
8. Used Oil from maintenance shall be collected and disposed-off appropriately at designated sites or be re-used or sold for re-use locally.
9. Entry of runoff to the site shall be restricted by constructing diversion channels or holding structures such as banks, drains, dams, etc. to reduce the potential of soil erosion and water pollution.
10. Construction waste shall not be left in stockpiles along the road, but removed and reused or disposed of on a daily basis.
11. If disposal sites for clean spoil are necessary, they shall be located in areas, approved by the SE, of low land use value and where they will not result in material being easily washed into drainage channels. Whenever possible, spoil materials should be placed in low-lying areas and should be compacted and planted with species, indigenous to the locality.

Material Excavation and Deposit

12. The Contractor shall obtain appropriate license/ permits from relevant authorities to operate quarries or borrow areas.
13. The location of quarries and borrow areas shall be subject to approval by relevant local and national authorities, including traditional authorities if the land on which the quarry or borrow areas fall in traditional land.
14. New extraction sites:
 - a. Shall not be located in the vicinity of settlement areas, cultural sites, wetlands or any other valued ecosystem component, or on high or steep ground or in areas of high scenic value, and shall not be located less than 1km from such areas.
 - b. shall not be located adjacent to stream channels wherever possible to avoid siltation of river channels where they are located near water sources, borrow pits and perimeter drains shall surround quarry sites.
 - c. shall not be located in archaeological areas, Excavations in the vicinity of such areas shall proceed with great care and shall be done in the presence of government authorities having a mandate for their protection.
 - d. shall not be located in forest reserves, However, where there are no other alternatives, permission shall be obtained from the appropriate authorities and an environmental impact study shall be conducted.
 - e. shall be easily rehabilitated, Areas with minimal vegetation cover such as flat and bare ground, or areas covered with grass only or covered with shrubs less than 1.5m in height; are preferred.
 - f. shall have clearly demarcated and marked boundaries to minimize vegetation clearing.
15. Vegetation clearing shall be restricted to the area required for safe operation of construction work. Vegetation clearing shall not be done more than two months in advance of operations.
16. Stockpile areas shall be located in areas where trees can act as buffers to prevent dust pollution. Perimeter drains shall be built around stockpile areas. Sediment and other pollutant traps shall be located at drainage exits from workings.
17. The Contractor shall deposit any excess material in accordance with the principles of these general conditions, and any applicable EMP, in areas approved by local authorities and or the SE.
18. Areas for depositing hazardous materials such as contaminated liquid and solid materials shall be approved by the SE and appropriate local and/or national authorities before the commencement of work. Use of existing, approved sites shall be preferred over the establishment of new sites.

Rehabilitation and soil Erosion Prevention

19. To the extent practicable, the Contractor shall rehabilitate the site progressively so that the rate of rehabilitation is similar to the rate of construction.
20. Always remove and retain topsoil for subsequent rehabilitation. Soils shall not be stripped when they are wet as this can lead to soil compaction and loss of structure.
21. Topsoil shall not be stored as large heaps. Low mounds of no more than 1 to 2m high are recommended.
22. Re-vegetate stockpiles to protect the soil from erosion, discourage weeds and maintain an active population of beneficial soil microbes.
23. Locate stockpiles where they will not be disturbed by future construction activities.

24. To the extent practicable, reinstate natural drainage patterns where they have been altered or impaired.
25. Remove toxic materials and dispose of them in designated sites. Backfill excavated areas with soils or overburden that is free of foreign material that could pollute groundwater and soil.
26. Identify potentially toxic overburden and screen with suitable material to prevent mobilization of toxins.
27. Ensure reshaped land is formed so as to be inherently stable, adequately drained and suitable for the desired long-term land use, and allow natural regeneration of vegetation.
28. Minimize the long-term visual impact by creating landforms that are compatible with the adjacent landscape.
29. Minimize erosion by wind and water both during and after the process of reinstatement.
30. Compacted surfaces shall be deep ripped to relieve compaction unless subsurface conditions dictate otherwise.
31. Re-vegetate with plant species that will control erosion, provide vegetative diversity and, through succession, contribute to a resilient ecosystem. The choice of plant species for rehabilitation shall be done in consultation with local research institutions, forest department and the local people.

Water Resources Management

32. The Contractor shall at all costs avoid conflicting with water demands of local communities.
33. Abstraction of both surface and underground water shall only be done with the consultation of the local community and after obtaining a permit from the relevant Water Authority.
34. Abstraction of water from wetlands shall be avoided. Where necessary, authority has to be obtained from relevant authorities.
35. Temporary damming of streams and rivers shall be done in such a way to avoid disrupting water supplies to communities downstream and maintains the ecological balance of the river system.
36. No construction water containing spoils or site effluent, especially cement and oil, shall be allowed to flow into natural water drainage courses.
37. Wash water from washing out of equipment shall not be discharged into water courses or road drains.
38. Site spoils and temporary stockpiles shall be located away from the drainage system, and surface runoff shall be directed away from stockpiles to prevent erosion.

Traffic Management

39. Location of access roads/ detours shall be done in consultation with the local community especially in important or sensitive environments. Access roads shall not traverse wetland areas.
40. Upon the completion of civil works, all access roads shall be ripped and rehabilitated.
41. Access roads shall be sprinkled with water at least five times a day in settled areas, and three times in unsettled areas, to suppress dust emissions.

Blasting

42. Blasting activities shall not take place less than 2km from settlement areas, cultural sites, or wetlands without the permission of the Minerals Commission or the SE.
43. Blasting activities shall be done during working hours, and local communities shall be consulted on the proposed blasting times.
44. Noise levels reaching the communities from blasting activities shall not exceed 90 decibels.

Disposal of Unusable Elements

45. Unusable materials and construction elements such as electro-mechanical equipment, pipes, accessories and demolished structures will be disposed of in a manner approved by the SE. The Contractor has to agree with the SE which elements are to be surrendered to the Client's premises, which will be recycled or reused, and which will be disposed of at approved landfill sites.
46. As far as possible, abandoned pipelines shall remain in place. Where for any reason no alternative alignment for the new pipeline is possible, the old pipes shall be safely removed and stored at a safe place to be agreed upon with the SE and the local authorities concerned.
47. AC-pipes as well as broken parts thereof have to be treated as hazardous material and disposed of as specified above.
48. Unsuitable and demolished elements shall be dismantled to a size fitting on ordinary trucks for transport.

Health and Safety

49. In advance of the construction work, the Contractor shall mount an awareness and hygiene campaign. Workers and local residents shall be sensitized on health risks particularly of AIDS.
50. Adequate road signs to warn pedestrians and motorists of construction activities, diversions, etc. shall be provided at appropriate points.

Construction vehicles shall not exceed maximum speed limit of 40km per hour.

Repair of Private Property

51. Should the Contractor, deliberately or accidentally, damage private property, he shall repair the property to the owner's satisfaction and at his own cost. For each repair, the Contractor shall obtain from the owner a certificate that the damage has been made good satisfactorily in order to indemnify the Client from subsequent claims.
52. In cases where compensation for inconveniences, damage of assets etc. are claimed by the owner, the Client has to be informed by the Contractor through the SE. This compensation is in general settled under the responsibility of the Client before signing the Contract. In unforeseeable cases, the respective administrative entities of the Client will take care of compensation.

Contractor's Health, safety and Environment Management Plan (HSE-MP)

53. Within 6 weeks of signing the contract, the Contractor shall prepare an EHS-MP to ensure the adequate management of the health, safety environmental and social aspects of the works, including implementation of the requirements of these general conditions and any specific requirements of an EMP for the works. The Contractor's EHS-MP will serve two
 - For the Contractor, for internal purposes, to ensure that all measures are in place for adequate HSE management, and as an operational manual for his staff.
 - For the client support where necessary by a SE, to ensure that the contractor is fully prepared for the adequate management of the HSE aspects of the project, and as a basis for monitoring of the contractor's HSE performance.
54. The contractor's EHS-MP shall provide at least:
 - a description of procedures and methods for complying with these general environmental management conditions, and any specific conditions specified in an EMP;
 - a description of specific mitigation measures that will be implemented in order to minimize adverse impacts,
 - a description of all planned monitoring activities (e.g. sediment discharges from borrow areas) and the reporting thereof; and
 - the internal organisational management and reporting mechanisms put in place for such.
55. The Contractor's EHS-MP will be reviewed and approved by the Client before start of the works. This review should demonstrate if the Contractor's EHS-MP covers all of the identified impacts, and has defined appropriate measures to counteract any potential impacts.

HSE Reporting

56. The Contractor shall prepare bi-weekly progress reports to the SE on compliance with these general conditions, the project EMP if any and his own EHS-MP. An example format for a Contractor HSE report is given below. It is expected that the Contractor's reports will include information on:
 - HSE management actions/measures taken, including approvals sought from local or national authorities;
 - Problems encountered in relation to HSE aspects (incidents, including delays, cost consequences etc. as a result thereof),
 - Lack of compliance with contract requirements on the part of the Contractor.
 - Changes of assumptions, conditions, measures, designs and actual works in relation to HSE aspects; and
 - Observations, concerns raised and/or decisions taken with regard to HSE management during site meetings
57. It is advisable that reporting of significant HSE incidents be done "as soon as practicable". Such incident reporting shall therefore be done individually. Also, it is advisable that the Contractor keeps his own records on health, safety and welfare of persons, and damage to property. It is advisable to include such records, as well as copies of incident reports, as appendices to the bi-weekly reports. Example formats for an incident notification and detailed report are given below. Details of HSE performance will be reported to the Client through the SE's reports to the Client.

Training of Contractor's Personnel

58. The Contractor shall provide sufficient training to his own personnel to ensure that they are all aware of the relevant aspects of these general conditions, any project EMP, and his own EHS-MP and are able to fulfil their expected roles and functions. Specific training should be provided to those employees that have particular responsibilities associated with the implementation of the EHS-MP. General topics should be:

- HSE in general (working procedures),
- emergency procedures, and
- social and cultural aspects (awareness raising on social issues)

Cost of Compliance

59. It is expected that compliance with these conditions is already part of standard good workmanship and state of art as generally required under this Contract. The item “Compliance with Environmental Management Conditions” in the Bill of Quantities covers these costs. No other payments will be made to the Contractor for compliance with any request to avoid and/or mitigate an avoidable HSE impact.

Example Format HSE Report

Contract:

Period of reporting:

HSE management actions/measures:

Summarize HSE management actions/measures taken during period of reporting, including planning and management activities (e.g. risk and impact assessments), HSE training, specific design and work measures taken, etc.

HSE incidents:

Report on any problems encountered in relation to HSE aspects, including its consequences (delays, costs) and corrective measures taken. Include relevant incident reports.

HSE compliance:

Report on compliance with Contract HSE conditions, including any cases of non-compliance.

Changes:

Report on any changes of assumptions, conditions, measures, designs and actual works in relation to HSE aspects.

Concerns and observations:

Report on any observations, concerns raised and/or decisions taken with regard to HSE management during site meetings and visits

Signature (Name, Title Date):

Contractor Representative

Example Format: HSE incident Notification

Provide within 24 hrs to the Supervising Engineer

Originators Reference No:

Date of incident: Time:

Location of incident:

Name of Person(s) involved:

Employing Company. Type of incident:

Description of Incident:

Where, when, what, how, who, operation in progress at the time (only factual)

Immediate Action:

Immediate remedial action and actions taken to prevent reoccurrence or escalation

Signature (Name, Title, Date):

Contractor Representative

16.13 Appendix 12-1: GRM Forms

Annex - Grievance Information Form

Date/Time received:	Date: (dd-mm-yyyy) Grievance ID #: Time: <input type="checkbox"/> am <input type="checkbox"/> pm
Name of Grievant:	<input type="checkbox"/> You can use my name, but do not use it in public. <input type="checkbox"/> You can use my name when talking about this concern in public. <input type="checkbox"/> You cannot use my name at all.
Company (if applicable)	<input type="checkbox"/> You can use my company name, but do not use it in public. <input type="checkbox"/> You can use my company name when talking about this concern in public. <input type="checkbox"/> You cannot use my company name at all
Contact Information:	Phone: Email address: Address: Location: (Kindly indicate the preferred language and method of communication)
Status of Occurrence	<input type="checkbox"/> One-time incident/complaint <input type="checkbox"/> Happened more than once (indicate how many times): _____ <input type="checkbox"/> Ongoing (a currently existing problem)

Grievant/Complainant Signature (if applicable)

Date (dd-mm-yyyy)

Project personnel Signature (to confirm receipt only)

Date (dd-mm-yyyy)

<p>For PCU use only: Grievance No: _____ Grievance Category: <input type="checkbox"/> Problems during material transport <input type="checkbox"/> Smell <input type="checkbox"/> Blocked road access <input type="checkbox"/> Problem with project staff <input type="checkbox"/> Dust <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Noise</p> <p>Grievance Owner/ Department: _____ Grievant/Complainant Signature (if applicable)</p>

Annex - Grievance Acknowledgement Form (GAF)

The project acknowledges receipt of your complaint and will contact you within 10 working days.

Grievance ID #: Date of grievance/complaint: (dd/mm/yyyy)	
Name of Grievant/Complainant:	
Complainant's Address and Contact Information:	
Summary of Grievance/Complaint: (Who, what, when, where)	
Name of Project Staff Acknowledging Grievance:	
Signature:	
Date: (dd/mm/yyyy)	

Annex - Disclosure/Release Form

Grievance ID #:	
Name of Grievant/Complainant:	
Date of Complaint:	
Summary of Complaint:	
Summary of Resolution:	
Resolved at:	<input type="checkbox"/> First Level <input type="checkbox"/> Second Level <input type="checkbox"/> Third Level
Date of grievance resolution (dd/mm/yyyy):	

Grievant/Complainant Signature (if applicable)

Date (dd-mm-yyyy)

Project personnel Signature (to confirm receipt only)

Date (dd-mm-yyyy)

16.14 Appendix 13-1: Summary of Stakeholder Engagement Activities

Stakeholder Consulted	Method	Engagement Discussions	Key Outcomes	Dates
<p>Government – MoCD, MoF, MoE, NITA, NCA, NCSA, DPC, TVET, GCTU, GES, OHCS, Office of Vice President</p> <p>Private Sector – Vodafone, MTN, Ghana Innovation Hub, Ghana Tech Hub, Kumasi Hive, Accra Digital Center, DreamOval, Oze, Kwidex, iSpace</p>	<p>Virtual (Microsoft Teams)</p>	<p>Purpose - To prepare a Project Concept Note for the Ghana Digital Acceleration Project (GDAP).</p> <p>The main objectives of the mission were to:</p> <ul style="list-style-type: none"> ▪ Discuss the development objective and the potential components and activities of the proposed Project; ▪ Identify the main beneficiaries and the proposed results indicators for the Project; ▪ Agree on next steps in the preparation of the Project as well as the composition of the Ghana government’s team; and ▪ Discuss the financial instrument options. 	<ul style="list-style-type: none"> ▪ All stakeholders present were delighted with the proposed project and agreed on the project’s development objective, which is to accelerate Ghana’s Digital Transformation and improve the provision of digital services in selected areas. ▪ The MoCD was the best positioned as the main implementation agency for the proposed GDAP <p>The following concerns were expressed by stakeholders;</p> <ul style="list-style-type: none"> ▪ The need for an active infrastructure sharing framework to promote the effective use of the existing extensive network. ▪ Coordination across the sectors (such as road transportation and railways) in infrastructure building and consolidating the Government-owned fiber optic assets in order to bring down the cost of connectivity and promote efficient nationwide coverage. ▪ The need for agile regulations for the country to stay on par with technological innovations and to reduce administrative burdens on businesses ▪ Low uptake of e-services has been a challenge and hence the need for digital skills and digital literacy among the end users, level of awareness and trust of digital services, and social and economic barriers. ▪ Expansion of Tech Hubs in other regions across the country. 	<p>April 6-12, 2021</p>

			<ul style="list-style-type: none"> ▪ The need for capacity building for the OHCS’s training center to reach more civil servants and provide necessary training ▪ Provision of ICT learning programs in formal education and vocational training. 	
<p>Government – MoCD, MoF, MoE, NITA, NCA, NCSA, DPC, COVET, GCTU, GES, OHCS, GIFEC, MoFA, MoH, CENDLOS, GEA, MLNR, OHLGS, BDR, NEIP, Ministry of Chieftaincy and Religious Affairs, National Council on Persons with Disability, Rent Control Department, Ghana Health Service, Ghana Post,</p> <p>Private Sector – Ghana Innovation Hub, Ghana Tech Hub, Kumasi Hive, Accra Digital Center</p>	<p>Virtual (Microsoft Teams)</p>	<p>Purpose - To prepare a Project Appraisal Document for the Ghana Digital Acceleration Project (GDAP).</p> <p>The main objectives of the mission were to:</p> <ul style="list-style-type: none"> ▪ Reach a final agreement on the scope and components of the project to match the government's objectives for fast-tracking digitization; ▪ Present the requirements of the World Bank's environmental and social safeguard policies; ▪ Discuss and agree on the fiduciary requirements and preparatory work (Project Procurement Strategy for Development, etc.); ▪ Discuss next steps in the preparation of the project including required preliminary studies; and ▪ Discuss and agree on the financial instrument for the project (Program for Results, Investment Policy Financing with Performance Based Conditions, etc.) 	<p>The following concerns were raised by stakeholders;</p> <ul style="list-style-type: none"> ▪ Priority areas for the country’s digital transformation, including: i) building the last-mile connectivity; ii) establishing an enabling regulatory environment for the competitive and vibrant digital ecosystem; iii) operationalization of Cyber Security Act; iv) strengthening of regulatory capacity of NITA; v) digitalization of key sectors including health, education, and the police service; vi) building the national digital skills; vii) closing the gender digital divide to empower women; viii) providing digital access to persons with disabilities for job opportunities; ix) building digital skills within the public sector; x) reorganizing the public sector to facilitate innovation from the private sector; xii) supporting tech entrepreneurship ecosystem and xiii) addressing the impacts of increasing digitalization on climate change. ▪ The need to shift the mindset towards a more demand-centered approach to meet the different needs when delivering services ▪ Scaling up of training and capacity building efforts targeting civil servants to ensure the fulfillment of agencies' interlinked mandates as well as the need for up-to-date, well-equipped training facilities with reliable broadband connectivity to enable a better learning experience and to leverage online training courses and digital contents ▪ NEIP and GEA highlighted the need for: i) scaling up the existing programs supporting women-led MSMEs, young girls, unemployed youth, and persons with disabilities, and ii) scaling up the programs in rural areas outside the Greater Accra Region. 	<p>July 19-30, 2021</p>

			<ul style="list-style-type: none"> Reaching out to the farmers in remote areas to provide technical information and advisory services is a main challenge to MoFA and hence the adoption of digital solutions in disseminating technical knowledge would be instrumental to engage better with the farmers and commodity communities living in remote areas. 	
<p>Government – MoCD, MoF, MoE, NITA, NCA, NCSA, DPC, OHCS, GIFEC, MoFA, EPA, BDR, NEIP, VCTF, Civil Service Training Centre, National Council on Persons with Disability, Ghana Post</p> <p>Private Sector – Ghana Innovation Hub, Ghana Tech Hub, Kumasi Business Incubator, Accra Digital Center</p>	Virtual (Microsoft Teams)	<p>Purpose - To have technical discussions for the Ghana Digital Acceleration Project (GDAP).</p> <p>The main objectives of the mission were to:</p> <ul style="list-style-type: none"> Discuss and agree on the detailed project activities (i.e., technical design, implementation arrangements, sustainability, results framework, project risks and mitigation measures, priority areas on gender, climate change, and citizen engagement) and budget estimates for each component; Advance the project preparation on relevant safeguards and due diligence aspects according to the World Bank's Environmental and Social Framework; Review progress on the fiduciary requirements and preparatory work (including Project Procurement Strategy for Development); Review progress in the preparation of the project, including required preliminary studies; and Discuss and agree on the next steps and timeline to ensure timely project approval by the World Bank Board in FY22. 	<ul style="list-style-type: none"> All stakeholders present during these engagements were in support of the proposed project activities. Stakeholders agreed to providing all the necessary information and documentation needed. 	October 12-22, 2021
<p>Government – MoCD, MoF, NITA, NCA, NCSA, DPC, OHCS, GIFEC, MoFA, EPA, BDR, NEIP, VCTF, MoTI, MLNR, AITI-KACE, GSS, PRAAD, GIPC, GCTU, GEA, CSTC, Office of Vice President, Ghana, National Council on Persons with Disability, Ghana Post, Lands Commission, Public Sector</p>		<p>Purpose - To have technical discussions for the Ghana Digital Acceleration Project (GDAP).</p> <p>The main objectives of the mission were to:</p> <ul style="list-style-type: none"> Discuss and finalize the technical design and scope of activities to be financed, as well as associated costs; Discuss and refine the implementation and fiduciary arrangements of the project, including the use of Performance-Based Conditions (PBC) financing options; Discuss and refine the results framework; Review progress in the key preparatory studies; 	<p>The following concerns were raised by stakeholders;</p> <ul style="list-style-type: none"> Strengthening of NCA's regulatory framework and guidelines to create more effective market competition and respond to the rapidly changing technological innovations as well as developing a robust infrastructure-sharing regulatory framework A comprehensive nationwide mapping of the existing public fiber assets would be needed to ensure effective coordination across the sectors and government agencies to facilitate infrastructure sharing through other public infrastructures 	

<p>Reform Secretariat, National Board for Small Scale Industries,</p> <p>Private Sector – Ghana Innovation Hub, Ghana Tech Hub, Kumasi Hive, Accra Digital Center, Ghana Hubs Networks, Women's Haven Africa, Kumasi Business Incubator, ENGINE Business Network, BlueSpace</p>	<p>Virtual (Microsoft Teams)</p>	<ul style="list-style-type: none"> ▪ Review general project readiness, including supporting the finalization of the Procurement Strategy for Development (PPSD), the Project Implementation Manual (PIM), Environmental and Social Safeguards instruments, and other corporate requirements (i.e., Gender, Climate Co-Benefits, Citizen Engagement) 	<ul style="list-style-type: none"> ▪ A comprehensive assessment study in collaboration with operators, ISPs, and local authorities to identify the areas where the private sector is unlikely to invest (including open access model options). ▪ Support in deploying fixed and/or mobile broadband connectivity through GIFEC and CICs in the identified areas of intervention, ▪ Support in deploying last-mile connectivity through a competitive bidding process for areas where market failure is confirmed. ▪ The need for digitizing records and processes, building capacities with the necessary ICT tools, and establishing feedback grievance mechanisms. ▪ Development of a system by following a common interoperability framework to reap the full ‘digital dividend’ for government agencies. ▪ Lack of assistive ICT tools dedicated to special needs and thus, the need for capacity building and digital skills training program for PwDs to (i) ensure inclusive digital skills development and optimize the use of technology for independent living and (ii) create more opportunities for PwDs to be employed and contribute to the digital economy ▪ The need to raise awareness among civil servants regarding the public sector’s digital transformation agenda. ▪ Insufficient capacity and resources for the government entities and digital accelerators (tech hubs, innovation hubs, technology centers) to meet the increasing demand. ▪ PIU to recruit additional staff to increase its technical capacity in key implementing areas. 	<p>November 29 – December 6, 2021</p>
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