REPUBLIC OF GHANA

MINISTRY OF ROADS AND HIGHWAYS / DEPARTMENT OF FEEDER ROADS

GHANA MARKET ACCESS AND CONNECTIVITY PROJECT

P513708

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK (ESMF)

[April 22, 2026]

Table of Contents

List of Tables

List of Figures

Abbreviations and Acronyms

AER	Annual Environmental Report
AETA	Agriculture for Economic Transformation Agenda
AIT	Agency Implementation Team
ASL	Above Sea Level
BMP	Biodiversity Management Plan
BOD	Biological Oxygen Demand
BOQ / BOQs	Bill of Quantities / Bills of Quantities
C-ESMP	Contractor's Environmental and Social Management Plan
CERC	Contingent Emergency Response Component
CLO	Community Liaison Officer
COD	Chemical Oxygen Demand
DFR	Department of Feeder Roads
DP / DPs	Development Partner / Development Partners
DPO	Disabled Persons' Organisation
DUR	Department of Urban Roads
E&S	Environmental and Social
EA	Environmental Assessment
ECOP	Environmental and Social Codes of Practice (also Environmental Codes of Practice)
EHS	Environmental, Health and Safety
EHSG	Environmental, Health and Safety Guidelines
EMP	Environmental Management Plan
EPA	Environmental Protection Authority
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental and Social Management Plan
ESCP	Environmental and Social Commitment Plan
ESRC	Environmental and Social Risk Category (Rating)
ESS	Environmental and Social Standard
FPIC	Free, Prior and Informed Consent
GBV	Gender-Based Violence
GDP	Gross Domestic Product
GHA	Ghana Highway Authority
GIIP	Good International Industry Practice
GIS	Geographic Information System
GMACP	Ghana Market Access and Connectivity Project
GMMB	Ghana Museums and Monuments Board
GoG	Government of Ghana
GRM	Grievance Redress Mechanism
GS	Ghana Standard
HIV/AIDS	Human Immunodeficiency Virus / Acquired Immunodeficiency Syndrome
IDA	International Development Association
ILO	International Labour Organisation
IPF	Investment Policy Financing
iRAP	International Road Assessment Programme
IWRM	Integrated Water Resources Management
KBA / KBAs	Key Biodiversity Area / Key Biodiversity Areas
L.I. 1692	Water Use Regulations, 2001

L.I. 2504	Environmental Protection (Environmental Assessment) Regulations, 2025
LC	Lands Commission
LMP	Labor Management Procedures
LRP	Livelihood Restoration Plan
LVD	Lands Valuation Division
M&E	Monitoring and Evaluation
MEST	Ministry of Environment, Science and Technology
MMDA / MMDAs	Metropolitan, Municipal, and District Assembly / Assemblies
MoF	Ministry of Finance
MoFA	Ministry of Food and Agriculture
MPN	Most Probable Number
MRH	Ministry of Roads and Highways
NDC	Nationally Determined Contribution
NGO	Non-Governmental Organisation
NO_2	Nitrogen Oxide
OHS	Occupational Health and Safety
PAD	Project Appraisal Document
PC	Project Coordinator
PCN	Project Concept Note
PDO	Project Development Objective
AIT	Project Implementation Unit
$PM_{2.5}$	Particulate Matter (2.5 microns)
PM_{10}	Particulate Matter (10 microns)
PNDCL 187	Workmen's Compensation Law, 1987
POM	Project Operations Manual
PPE	Personal Protective Equipment
PwD / PwDs	Person with Disability / Persons with Disabilities
RAP	Resettlement Action Plan
RPF	Resettlement Policy Framework
RSSAT	Road Safety Screening and Appraisal Tool
SEA/SH	Sexual Exploitation and Abuse / Sexual Harassment
SEP	Stakeholder Engagement Plan
SO_2	Sulphur Dioxide
STI	Sexually Transmitted Infection
TDS	Total Dissolved Solids
TMP	Traffic Management Plan
TOR / ToR	Terms of Reference
TSS	Total Suspended Solids
TVET	Technical and Vocational Education and Training
UNESCO	United Nations Educational, Scientific and Cultural Organization
VAC	Violence Against Children
WASH	Water, Sanitation, and Hygiene
WBG	World Bank Group
WHO	World Health Organization
WIGRAMS	Web-based Integrated GIS Road Asset Management System
WRC	Water Resources Commission

Executive Summary

Project Overview

The Government of Ghana, through the Department of Feeder Roads (DFR) under the Ministry of Roads and Highways (MRH), has prepared this Environmental and Social Management Framework (ESMF) for the proposed **Ghana Market Access and Connectivity Project (GMACP) (Project ID: P513708)**. The project is supported by the World Bank under its Environmental and Social Framework (ESF, 2018), particularly Environmental and Social Standard 1 (ESS1) on the assessment and management of environmental and social risks and impacts. Other ESS that relevant are ESS 2: Labor and Working Conditions; ESS 3: Resource Efficiency and Pollution Prevention and Management; ESS 4: Community Health and Safety; ESS 5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement; ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources: ESS 8: Cultural Heritage and ESS 10: Stakeholder Engagement and Information Disclosure.

The project is financed through an International Development Association (IDA) credit of **US$500 million**, with an additional **US$25 million** from the Government of Ghana, bringing the total project cost to **US$525 million**.

The Project Development Objective is to:

- Enhance sustainable farm-to-market road connectivity in selected areas of Ghana; and
- Strengthen road asset management systems.

In practical terms, the project will rehabilitate feeder roads that connect rural farming communities to markets, schools, and health facilities, while also improving Ghana's long-term capacity to plan, fund, and maintain its road network.

The project is expected to directly benefit approximately 556,912 beneficiaries, including 277,646 women and 368,297 farmers, and supports national initiatives such as the Feed Ghana Programme (2025–2028) and the Agriculture for Economic Transformation Agenda (AETA).

Project Components

The GMACP consists of three components:

Component 1: Feeder Road Rehabilitation

This component will finance the rehabilitation of approximately **1,050 km of feeder roads** across four regional clusters. Selection will follow a transparent, data-driven prioritization process based on agricultural productivity, food security, population, and road condition.

Key activities include: Road grading and surfacing; Drainage improvements; Construction of bridges and culverts; Roadside walkways; Installation of fiber optic infrastructure; and Integration of climate-resilient design features.

Component 2: Road Maintenance and Sustainability

This component focuses on ensuring long-term sustainability through: Reforms to the Road Maintenance Trust Fund; Expansion of the WIGRAMS digital road asset management system; and Performance-based maintenance contracts.

Component 3: Project Management, Monitoring and Evaluation

This component supports: Project coordination and implementation; Environmental and social risk management; Monitoring and evaluation (M&E); Citizen engagement and grievance management; Prevention of gender-based violence (GBV) and SEA/SH; and Capacity building for key institutions, including the Environmental Protection Authority (EPA), Department of Factories Inspectorate, and Lands Valuation Division.

Rationale for the ESMF

The project is classified as **Substantial Risk** due to potential impacts related to land acquisition, displacement, sensitive ecosystems, and construction activities.

At appraisal, specific road alignments and designs are not yet fully defined. Therefore, this ESMF establishes the principles, procedures, and institutional arrangements required to identify, assess, and manage environmental and social risks throughout project implementation.

The ESMF provides guidance for preparing site-specific instruments, including:

- Environmental and Social Impact Assessments (ESIAs)
- Environmental and Social Management Plans (ESMPs)

Legal and Policy Framework

The ESMF is aligned with:

- Ghana's environmental and social regulatory framework, including the Environmental Protection (Environmental Assessment) Regulations, 2025 (L.I. 2504); and
- The World Bank Environmental and Social Framework (ESF).

Where gaps exist between national systems and the ESF, the ESF requirements prevail. The ESMF integrates both frameworks and applies to all project stakeholders, including government agencies, contractors, and consultants.

Key Environmental Risks

Potential environmental impacts include: Dust, noise, and air pollution from construction activities; Vegetation loss and habitat disturbance; Soil erosion and land degradation from borrow pits; Water pollution from runoff, spills, and waste; Soil and groundwater contamination; Poor waste management, including hazardous and electronic waste; Greenhouse gas emissions; and Biodiversity impacts, including risks to sensitive ecosystems.

Key Social Risks

Key social risks include: Land acquisition and loss of assets (land, crops, structures); Livelihood disruption, especially for roadside traders (predominantly women); SEA/SH risks associated with labor influx; Community health and safety risks; Occupational health and safety risks for workers; Child labor risks in supply chains; Exclusion of vulnerable groups; Impacts on cultural heritage; and Community conflicts related to land and employment.

An **Exclusion List** prohibits high-risk activities such as: Works in protected areas; Significant destruction of natural habitats; Large-scale displacement; and Use of forced or child labor.

Environmental and Social Risk Management Approach

Considering the applicable laws, rules and regulations as well as World Bank's Environmental and Social Standards (ESS), in addition to this ESMF, the following instruments were prepared for the identification, management and mitigation of the environmental and social risks of GMAC Project:

a. **Resettlement Framework** (RF) – This sets out the guiding principles, organisational arrangements, and procedures for managing land acquisition and involuntary resettlement under the project.
b. **Labor Management Procedures** (LMP) - This shall be the reference on labour related matters for the various implementers and stakeholders for this project. Compliance on the various guidelines, codes and laws discussed in this document are necessary to ensure that no labor violations are being made in the project and that any labor disputes that may arise in the project are addressed properly following the worker GRM as outlined in the LMP.
c. **Stakeholder Engagement Plan** (SEP) – This will be the reference for ensuring that all identified and interested stakeholders are properly informed and consulted about the project. The SEP will outline key messages and actions, agency or individual roles and responsibilities, frequency and more importantly, a clearly defined grievance redress mechanism for the public.
d. **Environmental and Social Commitment Plan** (ESCP) – This instrument outlines the material measures and actions that the GOG through the Department of Feeder Roads (DFR) under the Ministry of Roads and Highways (MRH), shall carry out or cause to be carried out including as applicable the timeframes of action and measures, institutional and staffing roles, monitoring and reporting arrangements. With the Bank's approval, this document forms part of the Loan Agreement and can be revised as necessary as part of adaptive management of the Project and to respond to emerging concerns and performance of the Project.
e. **Sexual Exploitation and Abuse/Sexual Harassment Response Plan** (SEA/SH Plan) – This instrument is a project-level instrument that sets out clear, mandatory measures to prevent, detect, respond to, and monitor risks of SEA/SH associated with development projects—especially those involving civil works, labor influx, or close interaction with communities.

The project will use a layered approach to managing environmental and social risks.

Screening, Assessment and Site-Specific Instruments

Before any road works begin, each candidate road segment will be screened using a standardized environmental and social screening form to assess its specific risks and determine what level of assessment and management plan is required. Depending on the results of this screening, one or more of the following instruments will be prepared before works commence:

- Environmental and Social Impact Assessment (ESIA) (where required) - prepared by qualified specialists and cleared by the World Bank and the EPA.
- Site-specific Environmental and Social Management Plans (ESMPs) - prescribing specific measures to manage environmental and social impacts for each road package, prepared by qualified specialists and cleared by the World Bank and the EPA before works start.
- Resettlement Plans (RPs) (guided by the Resettlement Policy Framework) - where road rehabilitation will require people to give up land, crops, trees, or structures, to ensure all affected persons are identified, consulted, and compensated fairly at full replacement cost before any displacement or clearance occurs.
- Specialized plans including Traffic Management Plans, Occupational Health and Safety Plans, Waste Management Plans, and Biodiversity Management Plans, for road packages with specific risks.

No road rehabilitation works will be allowed to start on any road segment until the relevant environmental and social instruments have been prepared, reviewed and cleared by the World Bank, disclosed publicly in the affected communities, and all required environmental permits from the EPA have been obtained.

Implementation and Monitoring Arrangements

At the national level, the Ministry of Roads and Highways (MRH) has overall responsibility for the project and will be responsible for the overall monitoring of the project, strategic decision-making, the Road Maintenance Fund reforms and activities under component 2 and preparation of the Project Implementation Manual. Project implementation structure will include: (a) a Steering Committee (SC), (b) a dedicated, full-time Project Coordinator (PC) and (c) two Agency Implementation Teams (AITs) under the Department of Feeder Roads (DFR), and Ministry of Roads and Highways (MRH). The SC will be responsible for reviewing and approving the annual work plans and budgets, providing policy and program guidance, overseeing implementation progress, and ensuring communication and cooperation among stakeholders. The AITs will be headed by full-time Managers and with a team comprising of dedicated staff from the respective institutions or consultants. The Department of Feeder Roads (DFR) will lead the implementation of Component 1, while MRH will lead the implementation of Component 2. Component 3 will support both component 1 and 2 implementation. MRH will designate Environmental and Social focal points to oversee quality and compliance across all components.

The DFR, through its AIT, will manage day-to-day environmental and social risk management for Component 1, including coordinating screening, managing the preparation of site-specific instruments, tracking EPA permits, managing the project Grievance Redress Mechanism (GRM), and preparing progress reports for the World Bank.

At the regional level, DFR's Regional Offices — which have established field presence across Ghana — will serve as the principal focal points for environmental and social management in each of the four project clusters. Each participating DFR Regional Office will have a designated Regional Environmental and Social Field Officer responsible for day-to-day monitoring of construction sites, liaison with local government and communities, regional grievance management, and monthly reporting to the DFR AIT.

At the district and community level, Metropolitan, Municipal, and District Assemblies (MMDAs) will support environmental and social risk management, community consultations, host copies of project documents for public access, and assist in land acquisition coordination and grievance management. Community Liaison Officers (CLOs) will be deployed at each active construction zone to serve as the direct point of contact between the project and affected communities, receive and record grievances, and provide communities with information on project activities in local languages.

Supervision Consultants will provide full-time, independent construction supervision — including dedicated Environmental, Social, and OHS Specialists at each active construction site — responsible for weekly compliance inspections, review of contractor management plans, and monthly compliance reporting to the AIT.

Civil works contractors will be required to prepare and implement their own Contractor's Environmental and Social Management Plans (C-ESMPs) before mobilizing to site, appoint qualified site-level Environmental, Social, and OHS Officer(s), and provide mandatory training to all workers

— including subcontractors — before any work begins. All E&S obligations will be written into civil works contracts, with E&S management costs explicitly priced in the Bills of Quantities.

Capacity Building

Training on environmental and social risk management will be provided at all levels — from national AIT staff and DFR Regional Office officers, to supervision consultants, civil works contractors, and community members. A cascading training model will be used, where knowledge flows from the national level down to the field level, with training tailored to the specific roles and responsibilities of each group. Training will cover the World Bank ESF requirements, ESMP and RAP implementation, occupational health and safety, SEA/SH prevention, the Chance Find Procedure, GRM procedures, and community rights.

Monitoring and Reporting

Environmental and social performance will be monitored throughout the project at multiple levels:

The Supervision Consultant's resident E&S staff will conduct weekly site inspections at all active construction sites using standardized checklists, and will prepare monthly E&S compliance reports for the DFR AIT. The DFR AIT E&S Specialists will conduct monthly field visits to each regional cluster to independently verify findings and address any systemic issues. The World Bank Task Team will conduct biannual Implementation Support Missions, including unannounced field visits to construction sites. The independent third-party monitoring consultant will conduct semi-annual independent audits across all project clusters, with reports shared publicly on the MRH/DFR website.

The project will also use innovative remote monitoring tools — including satellite imagery, drone surveys, and the WIGRAMS GIS platform — to track environmental conditions and construction progress across geographically dispersed road packages. Community-based monitoring through mobile phone feedback platforms and community liaison officers will also provide real-time feedback from project-affected communities.

The MRH PC will prepare quarterly E&S Progress Reports to be submitted to the World Bank within 45 days of each six-month reporting period, covering ESMP implementation, RAP implementation, OHS performance, GRM performance, and stakeholder engagement updates.

Stakeholder Engagement and Grievance Management

Communities, local government authorities, civil society organizations, and other stakeholders were consulted during the preparation of this ESMF and will continue to be engaged throughout project implementation, consistent with the project's Stakeholder Engagement Plan (SEP). The SEP sets out how the project will provide information to communities, conduct meaningful consultations, and manage feedback and grievances — including a Grievance Redress Mechanism (GRM) accessible to all community members through multiple channels, and dedicated, confidential channels for reporting SEA/SH and child labour incidents.

If any serious incident occurs — such as a fatality, a case of SEA/SH or child labour, a major environmental pollution event, or a violent community conflict — the PC must notify the World Bank within 48 hours.

Budget

The total estimated budget for ESMF implementation — covering training, community engagement, site-specific instrument preparation, environmental monitoring, GRM management, software tools,

and third-party monitoring — is approximately USD 2,981,000 over the five-year project period. This does not include the costs of on-site civil works mitigation measures (priced in contractor Bills of Quantities), resettlement compensation costs, or E&S staffing costs (covered under the Component 3 project management budget).

1. Introduction

The Government of Ghana (GoG) through the Ministry of Roads and Highways (MRH) and the Department of Feeder Roads will be implementing the Ghana Market Access and Connectivity Project (P513708) financed by the World Bank through Investment Policy Financing (IPF). The Project will be implemented in selected regional clusters across Ghana, covering districts within three identified clusters targeting high agricultural production areas. A fourth cluster is currently being finalized prior to appraisal. The interventions will contribute to the priorities of GoG related to improving feeder road infrastructure and farm-to-market connectivity, transforming agriculture into a modern, competitive, and job-creating sector under the Agriculture for Economic Transformation Agenda (AETA) and Feed Ghana Programme (2025–2028). It also aims to strengthen road asset management systems through the Road Maintenance Trust Fund (Act 1147), and reducing post-harvest losses and transportation costs for rural farmers, particularly women and youth. This Environmental and Social Management Framework (ESMF) is developed to support the environmental and social due diligence of Project activities. It follows the World Bank Environmental and Social Framework (ESF) as well as the national legislation and regulations of Ghana.

1.1. Rationale of the ESMF

Ghana's Environmental Assessment (EA) Regulations, 2025 (L.I. 2504) provide the general framework and procedures for EA related to development projects. Development Partners (DPs) and funding institutions, including the World Bank, also have their respective EA requirements. As part of funding arrangements for the Ghana Market Access and Connectivity Project (P513708), the GoG is expected to apply the relevant World Bank Environmental and Social Standards, the World Bank Group General Environmental, Health and Safety (WBG EHS) Guidelines and relevant national legislative requirements.

This ESMF sets the stage for the identification, assessment and management of the potential adverse environmental and social risks and impacts of the Project activities and will apply throughout the entire life of the Project. It should be read together with other frameworks and plans prepared for the project, including the Resettlement Framework (RF), the Stakeholder Engagement Plan (SEP), the Environmental and Social Commitment Plan (ESCP), the Labor Management Procedures (LMP), and the SEA/SH Response Plan.

1.2. Objectives of the ESMF

The objective of this ESMF is to identify, assess and mitigate the potential negative environmental and social risks and impacts of the Project consistent with the relevant Environmental and Social Standards (ESSs) of the World Bank ESF and national requirements. More specifically, this ESMF aims to: (a) identify and assess the potential environmental and social risks and impacts of the Project, and propose appropriate mitigation measures; (b) establish procedures for the environmental and social screening, review, approval, and implementation of activities; (c) specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring adverse environmental and social issues related to the activities; (d) identify the staffing requirements, as well as the training and capacity building needed to successfully implement the provisions of the ESMF; (e) address mechanisms for public consultation including with vulnerable and disadvantaged groups and disclosure of project documents; (f) define criteria for determining site-specific instruments (e.g., ESMP, E&S checklist, biodiversity management plans, Occupational Health and Safety – OHS- plans, and where relevant, Resettlement Plan, Labor Management Plan, Stakeholder Engagement Plans, etc.); (g) provide guidance on grievance redress

mechanisms (GRM), including workers' GRM and (h) present an indicative budget for the implementation of the ESMF.

1.3. Approach and Methodology

The preparation of this ESMF entailed: (i) desk review of relevant policies, laws, regulations, and technical guidance; (ii) review of similar projects and lessons learned; (iii) analysis of potential E&S risks and mitigation options across typical activities; (iv) preliminary baseline profiling of environmental and social conditions in target areas; and (v) stakeholder consultations with government entities, local authorities, civil society, community representatives, and private sector actors. Inputs from consultations were incorporated into this ESMF, the screening criteria, engagement approaches, and capacity-building plan. Assumptions and limitations include evolving site selection and design details, which will be addressed through iterative screening and assessment during preparation of site-specific instruments.

1.3.1. Literature Reviewed

The following documents were reviewed:

- The Project Concept Note (PCN)
- The draft Project Appraisal Document (PAD)
- National frameworks on environmental/social assessment
- World Bank Environmental and Social Framework (ESF)
- World Bank Group General Environmental, Health and Safety (WBG EHS) Guidelines
- Relevant international conventions ratified by Ghana, including, UN Framework Convention on Climate Change (UNFCCC), Paris Agreement, Convention on Biological Diversity (CBD), Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW), Convention on the Rights of Persons with Disabilities (CRPD), International Labour Organisation (ILO) Convention No. 155 on Occupational Safety and Health, International Convention on Environmental Impact Assessment (Espoo Convention), UNESCO World Heritage Convention, and Convention on the Rights to Information, Participation and Access to Justice in Environmental Matters (Aarhus Convention).

1.3.2. Field Visits/Stakeholders Consultations

Field visits were conducted from January 15, 2026 through April 10, 2026 to selected locations within the identified project clusters. The places and dates visited is presented in Table 1-1.

Table 1-1: Field Visits Completed and Dates

Region	Assemblies Visited	Date of Visit
Eastern Region	Asuogyaman District	January 15, 2026
Ashanti Region	Ejura-Sekyeredumase District	April 9, 2026
Oti Region	Kadjebi District and Krachi East Municipal	March 26, 2026
Bono East Region	Nkoransa South District and Techiman Municipal	April 8 – 9, 2026
Northern Region	Sagnarigu Municipal; Kumbungu and Tolon Districts	Apr 8, 2026
Savanna Region	Bole and Sawla-Tuna-Kalba Districts	April 10, 2026

Bono Region	Wenchi Municipal	April 8 - 9, 2026
Central Region	Ajumako-Enyan-Essiam and Komenda-Edina-Eguafo-Abirem Districts	April 10, 2026
Ahafo Region	Asunafo South District	April 8, 2026
Volta Region	Adaklu North and North Tongu Districts	March 25, 2026
	Ho Municipal	March 27, 2026
Upper West Region	Wa East District	April 10, 2026
Western Region	Shama District	April 10, 2026
Western North Region	Sefwi Wiawso Municipal	April 8 – 9, 2026

The visits were undertaken to observe existing baseline environmental and social conditions along representative feeder road corridors, assess the physical state of road infrastructure, document the presence of sensitive receptors and ecologically significant features, and gain a direct understanding of the livelihoods, land use patterns, and socioeconomic conditions of communities likely to be affected by the project. Observations from the field visits informed the baseline conditions presented in Chapter 3 and the risk and impact assessment set out in Chapter 4.

Stakeholder consultations were conducted from October 17, 2026 at the national level and in all the locations are listed in Table 1-1 above. Consultations engaged a broad range of stakeholders, including community members, women's groups, roadside traders, farmers, youth representatives, persons with disabilities, traditional authorities, local government officials, and representatives of relevant government agencies including the Environmental Protection Authority (EPA), the Department of Feeder Roads (DFR), the Lands Valuation Division (LVD), the Ministry of Food and Agriculture (MoFA), and Metropolitan, Municipal, and District Assemblies (MMDAs). The consultations were conducted in English and relevant local languages to ensure meaningful participation by all groups, including those with limited literacy.

The consultations were designed to: (i) provide stakeholders with clear and accessible information about the project's objectives, components, and geographic scope; (ii) solicit feedback on anticipated environmental and social risks, impacts, and concerns associated with feeder road rehabilitation activities; (iii) identify community priorities, vulnerable groups, and locally specific sensitivities — including land tenure arrangements, cultural heritage sites, and livelihood dependencies — that should be reflected in the project's environmental and social management approach; and (iv) present and discuss the project's proposed grievance redress, compensation, and community engagement mechanisms.

1.4. Scope and Application

The ESMF applies to all components and activities financed under the project that may generate E&S risks and impacts. It covers both physical works (e.g., minor civil works, rehabilitation, installation of small equipment) and soft activities (e.g., technical assistance, training, institutional support). The ESMF excludes activities that are inconsistent with the ESF or fall under the project's Exclusion List.

Application of the ESMF is mandatory for all subprojects. Screening and assessment will be carried out prior to approval and mobilization, and instruments will be proportionate to risk. The ESMF shall be integrated into procurement processes (e.g., bidding documents, ToRs), contractor management, supervision, and reporting.

1.5. Document Structure

This ESMF is organized into eight chapters and a set of annexes, as follows.

- Chapter 1 — Introduction provides the background to the project and explains the rationale for preparing an ESMF. It sets out the objectives of the ESMF, the approach and methodology used in its preparation — including literature reviewed and stakeholder consultations conducted — the scope and application of the ESMF across all project components and activities, and the structure of the document.
- Chapter 2 — Project Description presents the Project Development Objective and PDO-level indicators, describes the project components and proposed activities, explains the geographic scope and targeting criteria used to select the four regional clusters, and sets out the implementation schedule and phasing across the five-year project period (2026–2031), including the implementing agencies and their respective responsibilities.
- Chapter 3 — Environmental and Social Policies, Legislation, and Institutional Frameworks reviews the national policy frameworks and action plans applicable to the project, the national legislation relevant to environmental and social risk management, and the institutional framework for E&S governance in Ghana. It also presents national environmental quality standards — including ambient noise, air quality, and effluent discharge standards — and describes the World Bank's Environmental and Social Standards (ESS 1–10) and the WBG Environmental, Health and Safety (EHS) Guidelines applicable to the project, and their relevance to project activities.
- Chapter 4 — Environmental and Social Baseline Conditions describes the existing environmental and social conditions of the project area across three dimensions. The physical environment section covers the project location, topography, climate, hydrology, and geology and soils. The biological environment section covers ecosystems and vegetation zones and key biodiversity areas and conservation sensitivities. The socioeconomic and cultural environment section covers demography and settlement patterns, livelihoods and economic activities, gender dynamics, vulnerable groups, land ownership and tenure, water, sanitation, hygiene, health and education, and cultural heritage.
- Chapter 5 — Potential Environmental and Social Risks, Impacts and Standard Mitigation Measures identifies and assesses the potential environmental and social risks and impacts of typical project activities across all project phases, presents a consolidated risk and impact matrix covering nine environmental risks and eleven social risks with proposed mitigation measures, responsible parties, and risk ratings. It also addresses risks and mitigation measures specific to disadvantaged and vulnerable groups — including women, youth, persons with disabilities, elderly persons, roadside traders, and residents of remote northern communities — and sets out planning and design considerations for the avoidance and minimization of environmental and social risks, including screening, consideration of alternatives, climate-resilient design, road safety integration, minimization of the civil works footprint, integration of E&S requirements into bidding documents, and emergency preparedness and response planning.
- Chapter 6 — Procedures and Implementation Arrangements is the operational core of the ESMF. It presents the full project cycle E&S management procedure table covering all stages from subproject identification through to completion and post-project evaluation. It includes the project Exclusion List of 23 categories of ineligible activities; the step-by-step subproject E&S screening, planning, review, disclosure, and implementation procedures; the implementation arrangements and roles and responsibilities of all parties — from MRH and DFR at the national level, through DFR Regional Offices, MMDAs, supervision consultants,

civil works contractors, and community liaison officers — at the regional, district, and site levels. This chapter also covers training and capacity building arrangements and the ESMF budget.

- Chapter 7 — Stakeholder Engagement summarizes the project's approach to stakeholder engagement, describes the key stakeholder groups identified, and presents the concerns raised during ESMF consultations and the responses provided by the project. It also introduces the project's Grievance Redress Mechanism (GRM), including procedures for SEA/SH complaints, and references the separately prepared Stakeholder Engagement Plan (SEP).

2. Project Description

2.1 Project Development Objective (PDO)

The Project Development Objective (PDO) is to **improve and sustain all-season farm-to-market road connectivity in selected districts of Ghana**.

Progress will be measured by the following indicators:

- Number of beneficiaries with improved access to services (disaggregated by gender and vulnerable groups), with a target of 6.2 million direct users, of whom at least 3.11 million are women and 3.42 million are youth.
- Percentage of infrastructure meeting resilience and accessibility standards, as measured by the length of feeder roads rehabilitated and/or upgraded with climate and road safety considerations, targeting approximately 1,050 km across selected regional clusters.
- Institutional performance indicators, including the operationalization and adoption of the Web-based Integrated GIS Road Asset Management System (WIGRAMS) across trunk, urban, and feeder road networks; the percentage of the planned annual road maintenance program delivered under approved and funded maintenance plans; the percentage of grievances resolved or escalated within two weeks of uptake through the project Grievance Redress Mechanism; and the timely submission of biannual Monitoring and Evaluation reports within 45 days from the end of each reporting period.
- Grievances addressed within project approved timelines (Percentage).

2.2 Components and Proposed Activities

The project aims to improve all-season farm-to-market connectivity by rehabilitating feeder roads and strengthening road maintenance, thereby reducing transport costs and enhancing market access over time. It comprises three components:

- Component 1: Feeder Roads Rehabilitation and Improvement - financing the rehabilitation of approximately 1,050 km of feeder roads across selected regional clusters, incorporating climate-resilient road designs, drainage systems, road safety measures, non-motorized transport infrastructure, fiber optic installation, and bridge and drainage structure construction. Roads will be selected through a three-step, data-driven screening and prioritization framework aligned with farm-to-market connectivity objectives.

- Component 2: Maintenance of rehabilitated roads and strengthening of road asset management — supporting Road Maintenance Trust Fund reform and revenue management, scaling up the operationalization of the Web-based Integrated GIS Road Asset Management System (WIGRAMS) through equipment supply and annual road asset data collection, and financing performance-based maintenance contracts for rehabilitated feeder roads.

- Component 3: Project Management, Monitoring and Evaluation — covering operational costs of implementing agencies, fiduciary audits, monitoring and evaluation, environmental and social safeguards monitoring, citizen engagement, GBV/SEA/SH prevention and mitigation activities, and strengthening Ghana's national environmental and social institutional capacity, including support to the Environmental Protection Authority (EPA), Department of Factories Inspectorate, Labour Department and Lands Valuation Division (LVD).

Immediate output includes improved all-season access, expanded use of WIGRAMS, and strengthened institutional and financial capacity for road maintenance. Over time, improved

connectivity is expected to support higher incomes and economic opportunities for farmers and small and medium-sized enterprises (SMEs).

2.3 Geographic Scope and Targeting

The project will operate in 74 districts across 13 regions grouped into four regional clusters selected using transparent criteria including agricultural production intensity, food insecurity levels, quality of the existing road network, and rural population size, with additional differentiation by strategic crop type — particularly rice and maize — given their significance to food security and import substitution. Refer to Annex 1 for list of beneficiary regions and districts and Figure 2-1 for map of the regional clusters.

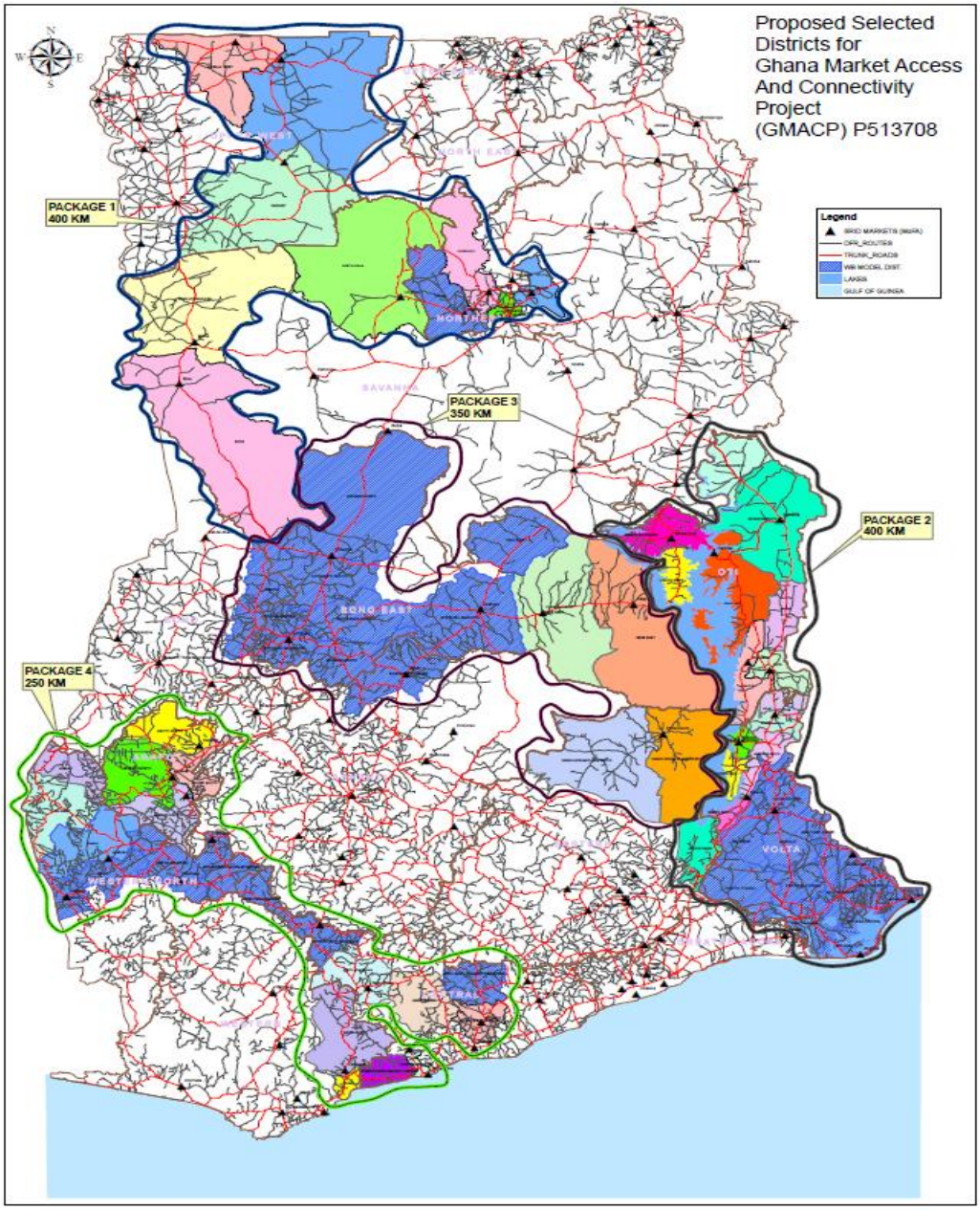


Figure 2-1: Proposed Regional Clusters with Selected Districts

Qualitative considerations such as the location of ongoing or planned government programs were also applied to avoid duplication and maximize synergies. Target areas include rural communities and agricultural production zones, particularly those in underserved districts where feeder roads represent the only viable connection between farm-gates and markets, with the northern regions identified as significantly underserved relative to the southern half of the country. Three regional clusters have been confirmed and agreed with the Ministry of Roads and Highways (MRH) and Ministry of Finance, with a fourth cluster currently being finalized prior to appraisal. The ESMF applies across all locations and sets procedures for site-specific instruments required for each subproject, including Environmental and Social Management Plans (ESMPs), Resettlement Plans (RPs), the Labor Management Procedures (LMP), the Stakeholder Engagement Plan (SEP), and Biodiversity Management Plans where road alignments intersect with ecologically sensitive areas.

2.4 Project Cost

The Table below summarizes the cost per project component.

Table 2-1: Project Cost and Financing by Component

Project components[1]	Indicative costs	IDA	GoG
1: Feeder roads rehabilitation	**474**	**474**	**0**
1(a): Rehabilitation of feeder roads	454	454	0
1(b): Supervision Consultant	18	18	0
1(c): Resettlement Costs	2	2	0
2: Road maintenance and sustainability	**40**	**17**	**23**
2(a): Road Maintenance	36	13	23
2(b): Support to the road fund	1	1	0
2(c): RAMS support through WIGRAMS	3	3	0
3: Project Management and Implementation Support	**9**	**9**	**0**
3(a): Project management and implementation support	7	7	0
3(b): Strengthening Ghana's national environmental and social institutional capacity and operational effectiveness for improved Environmental, Social, Health and Safety outcomes	2	2	0
4: CERC	**0**	**0**	
Total	**523**	**500**	**23**

2.5 Project Beneficiaries and Benefits

The project is expected to reach approximately 556,912 beneficiaries, including 277,646 women and 368,297 farmers. As road selection has not yet been finalized, this estimate is based on the population residing within a 2-kilometer radius of the feeder road network, pro-rated according to the share of the network to be rehabilitated. The actual number of beneficiaries—including road users such as farmers, women, children, non-motorized transport (NMT) users, persons with disabilities, and the elderly—will be determined once specific roads are selected during implementation. Additional beneficiaries include local assemblies and small and medium-sized enterprises (SMEs), particularly agribusinesses located in markets and along improved corridors,

[1] Contingencies are included in the activities cost.

which are expected to benefit from better access to agri-produce and transport services. Transport operators will also benefit from improved road conditions through reduced vehicle operating costs. Institutional capacity will be strengthened through on-the-job and off-site training.

2.6 Project Coordination and Implementation Arrangements

The project will be implemented by the Ministry of Roads and Highways (MRH), led by the Chief Director. The MRH will be responsible for overall project oversight, strategic decision-making, road fund reforms, activities under Component 2, and preparation of the Project Implementation Manual. The project governance structure will include: (a) a steering committee; (b) a dedicated, full-time Project Coordinator (PC) to coordinate the activities of the two implementation teams, lead the preparation of the annual work plans and budget for the project for approval by the steering committee and clearance by the World Bank, and reporting to the World Bank; and (c) two Agency Implementation Teams (AITs), located within the Department of Feeder Roads (DFR) and MRH.

The Steering Committee (SC) will review and approve annual work plans and budgets, provide policy and program guidance, oversee implementation progress, and ensure coordination among stakeholders. It will be chaired by the Minister of Roads and Highway , directly supported by the Chief Director of the Ministry of Roads and Highways (MRH) as a technical lead, and will include director-level representatives from the Ministry of Finance (MoF), Lands Commission (LC), Department of Feeder Roads (DFR), Environmental Protection Authority (EPA), and Ministry of Food and Agriculture (MoFA). MoF will support disbursement approvals and Interim Financial Reporting (IFR), in line with its mandate, while the Lands Commission will support land acquisition and compensation processes and the EPA will provide guidance and approvals related to environmental compliance, including quarries and borrow pits. The SC will meet quarterly, or as needed. The PC will additionally play the role of the SC's secretary.

The AITs will be headed by full-time managers and composed of dedicated (full-time) staff to the project or consultants where capacity gaps exist. The DFR AIT will include regional teams to support the day-to-day monitoring of civil works and maintenance. DFR will lead implementation of Component 1, while MRH will lead Component 2.

2.7 Associated Facilities

The World Bank ESS 1 requires that **Associated Facilities**—projects or activities that are not financed by the Bank but are essential for the main project's operation—be identified, assessed, and managed in a manner **consistent with the ESF**. Once specific road corridors are selected for rehabilitation, the DFR AIT must determine whether any such facilities exist, evaluate their potential environmental and social risks proportional to their relevance to the project, and outline measures to ensure that these risks are addressed to the extent possible. While the project is not responsible for enforcing ESF compliance on third-party facilities, the project must demonstrate due diligence, document available information, and incorporate reasonable risk-mitigation actions into project planning and stakeholder engagement.

2.8 Implementation Schedule and Phasing

The project will be implemented over **five years (2026–2031)** in three broad phases. **Year 1** focuses on establishing and staffing the PCU and AITs, building institutional capacity across key agencies, finalizing regional clustering, and identifying and screening priority road segments. This period also includes preparation of detailed designs, site-specific ESMPs and RPs, initiation of procurement, operationalization of the GRM, and mobilization of the first maintenance package (approximately

300 km). **Years 2–4** constitute the main rehabilitation phase, during which an estimated **1,050 km of feeder roads** will be progressively upgraded across four contract packages, followed by commencement of performance-based maintenance on completed sections. Activities during this period also include scaling up WIGRAMS for network-wide data collection, continuous environmental and social supervision, stakeholder engagement, adaptive management, and a Mid-Term Review. Annual confirmation of Government maintenance fund contributions will support continuity of works. **Year 5** focuses on full operationalization of performance-based maintenance across all rehabilitated road sections, consolidation of sector reforms, finalization of WIGRAMS integration into planning cycles, and completion of environmental and social close-out activities. The year concludes with preparation of the Government's Implementation Completion Report, assessment of PDO-level results, and documentation of lessons to inform future scale-up toward the national target of 5,000 km of feeder road rehabilitation.

3. Environmental and Social Policies, Legislation, and Institutional Frameworks

This section identifies and discusses the policies, legislation, and institutional frameworks relevant to the Project.

3.1 National Environmental and Social Policy Frameworks and Action Plans

Table 3-1: National Environmental and Social Policy Frameworks and Action Plans

Policy / Action Plan	Description of the Policy / Action Plan	Relevance to the Project
National Environmental Policy, 2013	Provides a framework for environmental sustainability, promoting clean resources, equitable access, strong governance, and public participation.	The Project may generate environmental impacts, which are mitigated through the ESMF, ESMPs, and SEP to ensure sustainable resource use and community involvement.
National Environmental Action Plan, 1988	Guides conservation of natural resources and prevention of environmental degradation through sustainable and responsible use.	The Project integrates biodiversity protection, resource management, and environmental awareness to minimize ecosystem impacts.
National Climate Change Policy, 2013	Promotes climate-resilient development through adaptation, mitigation, and strengthened institutional capacity.	The Project incorporates climate-resilient road designs, improved drainage, and supports low-emission and climate-responsive infrastructure.
Environmental Sanitation Policy, 2010	Establishes a framework for effective waste management, sanitation, and environmental health.	The Project includes waste management measures and improved drainage systems to support sanitation and reduce environmental risks.
National Water Policy, 2007	Promotes sustainable water resource management, improved water quality, and equitable access.	The Project mitigates water pollution risks through erosion control, runoff management, and improved drainage infrastructure.
Riparian Buffer Zone Policy, 2014	Provides guidelines for protecting water bodies and surrounding ecosystems through regulated buffer zones.	The Project avoids encroachment on buffer zones and ensures environmentally sound design of crossings and drainage structures.
National Land Policy, 1999	Ensures equitable land access, secure tenure, fair compensation, and sustainable land use.	The Project applies the RPF to manage land acquisition, compensation, and displacement in line with national policy and ESS5.
National Gender Policy, 2015	Promotes gender equality, inclusion, and protection of vulnerable groups.	The Project integrates gender targets, equal employment opportunities, and GBV risk mitigation measures.
National Employment Policy, 2012	Supports job creation through skills development, private sector growth, and rural economic development.	The Project generates direct and indirect employment and strengthens rural economic linkages.
National Transport Policy, 2020	Guides development of a safe, efficient, and sustainable transport system.	The Project supports 1050km of feeder road rehabilitation, asset management, and improved road safety and accessibility.

Policy / Action Plan	Description of the Policy / Action Plan	Relevance to the Project
Feed Ghana Programme, 2025–2028	Aims to boost agricultural production, reduce imports, and create jobs across value chains.	The Project enhances market access and supports agricultural trade by improving feeder road connectivity.

3.2 National Legislation

Table 3-2: National Legislation and Relevance to the Project

Legislation	Description of the Legislation	Relevance to the Project
Environmental Protection Act, 2025 (Act 1124)	Establishes the EPA and consolidates environmental laws, including hazardous waste, pesticides, and climate regulation.	The Project is subject to EPA permitting, oversight, and compliance with environmental and waste management requirements.
Environmental Protection (Environmental Assessment) Regulations, 2025 (L.I. 2504)	Sets out procedures for environmental assessment, permitting, and reporting of projects.	All project works require environmental screening, permits, ESMPs, and reporting before implementation.
Road Maintenance Trust Fund Act, 2025 (Act 1147)	Establishes a dedicated fund for sustainable road maintenance and financing.	The Project supports road fund reforms, maintenance planning, and accountability in financing.
Water Use Regulations, 2001 (L.I. 1692)	Requires permits for commercial water abstraction, subject to EPA approval.	Contractors must obtain permits for water use in construction and comply with regulatory procedures.
Land Act, 2020 (Act 1036)	Governs land acquisition, compensation, and stakeholder engagement.	The Project applies this Act through the RPF to ensure fair compensation and proper land acquisition.
Land Use and Spatial Planning Authority Act, 2016 (Act 925)	Regulates land use planning and promotes sustainable spatial development.	Project activities must align with district spatial plans and land use regulations.
Lands Commission Act, 2008 (Act 767)	Establishes the Lands Commission and mandates valuation of affected assets.	The Commission oversees land valuation and compensation processes for affected persons.
Local Governance Act, 2016 (Act 936)	Empowers local authorities to manage land use and enforce planning regulations.	MMDAs support land management, stakeholder engagement, and grievance handling in the Project.
Labour Act, 2003 (Act 651)	Defines labor rights, working conditions, and employer responsibilities.	The Project ensures fair labor practices, worker safety, and compliance through the LMP.
Labour Regulations, 2007 (L.I. 1833)	Provides rules on worker safety, especially for young persons and hazardous work.	The Project incorporates worker health and safety protections in its ESMF and LMP.
Workmen's Compensation Law, 1987 (PNDCL 187)	Requires compensation for workplace injuries.	Contractors must provide compensation coverage and ensure worker protection.
Factories, Offices, and Shops Act, 1970 (Act 328)	Regulates workplace safety and registration of worksites.	Construction sites must comply with safety standards and registration requirements.
Ghana National Fire Service Act, 1997 (Act 537)	Governs fire prevention, safety standards, and certification.	The Project requires fire safety measures, training, and compliance for construction and facilities.

3.3 Institutional Frameworks

Table 3-3: Institutional Framework for Environmental and Social Risks Management

Institution	Mandate / Role	Relevance to the Project and ESMF Implementation
Ministry of Environment, Science and Technology (MEST)	Provides national policy direction for environmental governance and oversees the EPA.	Sets the policy framework guiding environmental permitting and assessment for all Project works.
Environmental Protection Authority (EPA)	Enforces environmental laws, issues permits, sets standards, and monitors compliance.	Reviews and approves ESIAs, ESMPs, issues environmental permits, inspects construction sites, and receives AERs; receives capacity support under the Project.
Ministry of Roads and Highways (MRH)	Leads Project implementation, oversight, and road sector reforms.	Ensures full implementation of all E&S instruments and allocates resources for risk management with strengthened institutional capacity.
Department of Feeder Roads (DFR)	Implements Component 1, including planning, design, and supervision of feeder road works.	Manages day-to-day E&S implementation, prepares ESIAs/ESMPs/RAPs, supervises contractors, manages the GRM, and reports E&S performance.
Ministry of Local Government, Chieftaincy and Religious Affairs (MLGCRA)	Oversees decentralized governance and MMDA planning functions.	MMDAs support land use regulation, community engagement, and grievance handling for site-level E&S implementation.
Lands Commission and Lands Valuation Division (LVD)	Oversees land administration and is the sole authority for compensation valuation.	Conducts asset valuation and determines replacement cost compensation for project-affected persons.
Department of Factories Inspectorate (DFI)	Enforces workplace health and safety standards under the Factories Act.	Registers and inspects construction sites and monitors contractor OHS compliance.
Ministry of Food and Agriculture (MoFA)	Leads agricultural development and sector programs.	Provides data on agricultural hotspots and value chains to inform road prioritization and integrates sector-specific livelihood and gender considerations.
Water Resources Commission (WRC)	Regulates water resource use and issues Water Use Permits.	Requires contractors to obtain water abstraction permits and ensures compliance is reflected in ESMPs and supervised during construction.

3.4 National Environmental Quality Standards

3.4.1 Ghana Standard on Health Protection - Requirements for Ambient Noise Controls (GS 1222:2018)

The Ambient Noise Controls provide for maximum permissible levels of noise based on categorised zones as shown in Table 3-4 below. The standard also provides noise requirement for a construction site which includes:

- Erecting an acoustic barrier around construction site; and
- Ensuring that the maximum noise level near the construction site does not exceed 66dB(A) Leq (5min) in areas other than industrial areas.

The permissible noise levels for Ghana are compared with the WBG general EHS guidelines on noise management in Table 3-4 below. For this project, the most stringent of the two applies.

Table 3-4: Requirements for Ambient Noise Control

Zone	Permissible Noise Level in dB(A)		WBG EHS Guidelines	
	Day (6:00-22:00)	Night (22:00-6:00)	Day 07:00 – 22:00	Night 22:00 – 7:00
Residential Area	55	48	55	45
Educational and health facilities, offices and law courts	55	50	55	45
Mixed use	60	55	-	-
Area with some light industry	65	60	70	70
Commercial areas	75	65	70	70
Light industry areas	70	60	70	70
Heavy industry areas	70	70	70	70

3.4.2 Ghana Standard on Environment and Health Protection - Requirements for Ambient Air Quality and Point Source/Stack Emissions (GS 1236:2019)

The Ghana Standard on Environment and Health Protection - Requirements for Ambient Air Quality and Point Source / Stack Emissions provides the maximum limit for ambient air pollutants Table 3-5. These are compared with the WHO/WBG general EHS guidelines on ambient air quality. For this project, the most stringent of the two applies.

Table 3-5: Requirements for Ambient Air Quality – Maximum Limit for 24 Hours

Substance	Maximum Limit (µg/m^3)	WBG EHS Guidelines
Sulphur Dioxide (SO_2)	50 (24 hours)	50 (24hr; interim target 2)
Nitrogen Oxide (NO_2)	250 (1 hour)	200 (1 hour)
Total suspended particulate matter	150	-
Particulate Matter (PM_{10})	70 (1 year)	50 (1 yr; interim target 2)
Particulate Matter ($PM_{2.5}$)	35 (I year)	25 (1yr; interim target 2)
Black Carbon	5	-

3.4.3 Ghana Standards Environment Protection-Requirements for Effluent Discharge (GS 1212:2019)

The Ghana Standard for Environment Protection – Requirements for Effluent Discharge (GS 1212:2019) require every undertaking to install pollution control system for treatment of effluent discharges from the operations, based on best available technology. In the absence of pollution control equipment, an undertaking shall implement measures to control pollution. Any effluent discharged from a facility shall be within permissible levels.

Table 3-6: Requirements for Effluent Discharge

Parameter	Unit	Maximum Permissible Levels	WBG EHS Guidelines
Colour (TCU)	TCU	200	
pH	pH Units	6 – 9	6 - 9
Conductivity	µS/cm	1500	
Total Suspended Solids (TSS)	mg/l	50	50
Total Dissolved Solids (TDS)	mg/l	1000	500
Total Phosphorus	mg/l	-	2
Total Nitrogen	mg/l	-	10
COD	mg/l	250	125
BOD		-	30
Oil and grease	mg/l	5	10
Aluminium	mg/l	1.0	
Copper	mg/l	5	
Lead	mg/l	0.1	
Total Coliform Bacteria	MPN/100ml	-	400

3.5 International Requirements, Safeguard Policies, Conventions and Agreements

3.5.1 World Bank Environmental and Social Framework

Eight (8) of the ten (10) World Bank Environmental and Social Standards (ESSs) for sustainable development in the ESF are relevant to the GMAC Project. These include: ESS 1: Assessment and Management of Environmental and Social Risks and Impacts; ESS 2: Labour and Working Conditions; ESS 3: Resource Efficiency and Pollution Prevention and Management; ESS 4: Community Health and Safety; ESS 5: Land Acquisition, Restrictions on Land Use, and Involuntary Resettlement; ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources; ESS 8: Cultural Heritage; and ESS 10: Stakeholder Engagement and Information Disclosure. A summary of the relevant ESSs and the observed gaps when compared with Ghanaian laws is presented in **Error! Reference source not found.** below and includes a column on measures that will be used to bridge the identified gaps so that the project achieves the highest level possible of environmental and social sustainability. Where there are differences between the provisions or requirements of the World Bank and the Laws of Ghana, the World Bank's policy or standard will be applied under this project.

Table 3-7: Summary of Relevant World Bank ESSs and Gaps with Relevant Laws and Regulations in Ghana

ES Standard	Description of Bank Standard and Relevance	Description of Government of Ghana Regulation	Gaps Identified	Gap Bridging Actions
ESS 1: Assessment and Management of Environmental and Social Risks and Impacts	**Summary:** Requires assessment, mitigation, monitoring, consultation, and disclosure of E&S risks across all project stages. **Relevance:** MRH/DFR will prepare and implement the ESCP, ESMF (with CERC annex and ECOPs), site-specific ESMPs, RF, and RAPs, ensuring all instruments are disclosed and enforced before appraisal and civil works.	The EA regulations mandates that any project with adverse environmental impacts must be registered with the EPA before commencement and receive an environmental permit.	Ghanaian laws do not fully address impacts and mitigation hierarchy approach.	The project shall adopt the mitigation hierarchy approach to address the environmental and social risks and impacts of the project.
ESS 2: Labour and Working Conditions	**Summary:** Ensures fair treatment of workers, sound labor relations, and safe working conditions. **Relevance:** Project involves direct, contracted, and primary supply workers facing significant OHS risks; an LMP will outline labor management rules, OHS measures, non-discrimination, child/forced labor prohibitions, and a workers' GRM.	The Labour Act 2003 provides for worker rights, including safety, non-discrimination, and compensation for work-related injuries. However, it does not fully align with ESS2's provisions.	Does not explicitly mandate workers to remove themselves from unsafe working conditions or protect them from retaliation. Access to the Labour Commission at the district level may be challenging.	Develop and implement a worker grievance mechanism (GM), provide labour management procedures (LMP), and sensitise workers on their rights to safe working conditions and retaliation-free reporting.
ESS 3: Resource Efficiency and Pollution Prevention and Management	**Summary:** Requires efficient resource use and measures to prevent pollution and manage waste and emissions.	Act 1124 mandates the EPA to enforce EIA procedures and manage pesticides.	Ghanaian laws lack project-level, measurable resource efficiency standards (e.g., targets for energy/water use per unit	GMACP shall develop project-specific resource efficiency measures, establish pollution prevention practices aligned with Good International Industry

ES Standard	Description of Bank Standard and Relevance	Description of Government of Ghana Regulation	Gaps Identified	Gap Bridging Actions
	Relevance: Civil works will consume water, energy, and raw materials and generate multiple waste streams and GHGs; ESMPs will include pollution control and waste management measures and require annual GHG reporting.		of output or processes for cleaner production). Ghana's Renewable Energy Act, 2011 is *sectoral* rather than mandating efficiency in all projects. Ghana's Pollution laws are generally less detailed and less project-specific. It lacks clear project-level performance expectations, foreign-referenced GIIP standards, and comprehensive pollution avoidance hierarchy.	Practice (GIIP), and incorporate international standards where Ghanaian regulations are broad or silent. GMACP shall embed clear requirements in contractor ESMPs, technical specifications, and supervision protocols to ensure that energy and water efficiency, cleaner production, waste minimization, and hazardous materials management meet ESS3 expectations throughout the implementation cycle.
ESS 4: Community Health and Safety	**Summary:** Requires minimizing risks to communities, including traffic safety, exposure to hazards, and risks to vulnerable groups. **Relevance:** Works near rural communities pose traffic, SEA/SH, accident, dust, and noise risks; TMPs, road safety audits, awareness campaigns, and a SEA/SH Action Plan will be implemented.	The Public Health Act (2012) promotes the safeguarding of public health and environmental sanitation.	Does not address assessing and managing health and safety risks in project-affected communities. Does not consider emergency preparedness for project impacts	Implement a robust stakeholder engagement plan, and safety assessments as well as emergency response plans, ensuring timely responses to emergencies and risks associated with the project.
ESS 5: Land Acquisition, Restrictions on Land Use, and	**Summary:** Seeks to avoid resettlement where possible and ensure compensation and livelihood restoration when	The Constitution provides for land-based resettlement only for those with formal land rights.	The Ghanaian legal framework does not provide rights for resettlement assistance to	Ensure that resettlement and compensation are provided to all affected persons-including those without formal and customary rights to land in a proportionate

ES Standard	Description of Bank Standard and Relevance	Description of Government of Ghana Regulation	Gaps Identified	Gap Bridging Actions
Involuntary Resettlement	unavoidable. **Relevance:** Road works may cause physical/ economic displacement; the RF and site-specific RAPs will ensure compensation and support consistent with ESS5 and national law.		those without formal land ownership.	manner and ensure vulnerable groups are supported to re-establish themselves post resettlement
ESS 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	Protects natural habitats, biodiversity, and ecosystem services and requires mitigation of impacts. **Relevance:** Vegetation clearance, earthworks, and works near sensitive ecosystems require ESS6 screening and biodiversity mitigation measures in ESMPs.	The Forest and Wildlife Policy (2012) promotes the conservation and sustainable management of forest and wildlife resources.	No specific provisions to integrate conservation needs with development priorities.	Implement biodiversity conservation measures and ensure alignment with national policies and regulations on sustainable resource management.
ESS 8: Cultural Heritage	**Summary:** Protects tangible and intangible cultural heritage and requires proper management of chance finds. **Relevance:** Earthworks may uncover heritage resources; a Chance Finds Procedure will be integrated into the ESMF.	The Constitution recognises culture for national integration and development.	The regulations do not fully integrate cultural heritage into development planning or ensure protection during project activities.	Incorporate cultural heritage considerations into the Environmental and Social Management Framework (ESMF), ensuring meaningful consultation with stakeholders and equitable sharing of benefits.
ESS 10: Stakeholder Engagement and	**Summary:** Requires inclusive, transparent engagement and a	The Ghanaian regulations on stakeholder consultation and engagement focus on	Government regulations do not mandate continuous stakeholder engagement	Develop a robust Stakeholder Engagement Plan (SEP) to guide engagement throughout the

ES Standard	Description of Bank Standard and Relevance	Description of Government of Ghana Regulation	Gaps Identified	Gap Bridging Actions
Information Disclosure	functioning GRM throughout the project. **Relevance:** A SEP will guide engagement with affected communities and agencies and include a project GRM with SEA/SH-sensitive procedures.	the Environmental Impact Assessment (EIA) process, but do not comprehensively outline a continuous engagement strategy.	or a structured grievance mechanism throughout the project lifecycle.	project, including clear information disclosure and grievance redress mechanisms. Regularly update stakeholders on project progress and address their concerns promptly. Establish an accessible, participatory, and time-bound GRM for the project

3.5.2 World Bank Group Environmental, Health and Safety (WBG EHS) Guidelines

The WBG General Environmental Health and Safety (EHS) Guidelines is a technical reference document containing information on cross-cutting environmental, health and safety issues potentially applicable to all industry sectors. The guidelines applicable to this project are as follows:

- Environmental;
- Occupational Health and Safety;
- Waste Management;
- Community Health and Safety; and
- Construction and Decommissioning.

4. Environmental and Social Baseline Conditions

Agriculture in Ghana is predominantly smallholder-driven, rain-fed, and characterized by low productivity due to limited access to technology, inputs, and extension services. Market access remains constrained by poor rural road networks, high post-harvest losses, and fragmented value chains that limit farmers' ability to reach competitive markets. While emerging agribusiness investments and government programs are improving linkages, overall agricultural commercialization and market integration remain modest.

4.1 Environmental Baseline

4.1.1 Physical Environment

i) Project Location

The GMACP will be implemented across 74 selected districts within 13 regions of Ghana grouped under four regional clusters. (see map in section 2 and tentative list of beneficiary districts in Annex 1). The Republic of Ghana is located between latitudes 4°45'N to 11°N and longitudes 1°15'E to 3°15'W in West Africa. It shares a total border of 2,093 km with three countries: Burkina Faso to the north (548 km), Côte d'Ivoire to the west (688 km), and Togo to the east (877 km). To the south, Ghana has a coastline of approximately 539 km along the Gulf of Guinea, part of the Atlantic Ocean. The country covers a total land area of approximately 239,540 square kilometres and is administratively divided into 16 regions and 261 Metropolitan, Municipal, and District Assemblies (MMDAs).

The GMACP targets areas of high agricultural production potential, elevated food insecurity, poor feeder road network conditions, and large rural populations. The project areas span multiple agroecological zones, encompassing both the forest and transition zones in the southern half of the country and the savannah zones of the northern regions. While the southern half of the country has greater road density, service levels are often poor, resulting in high transport costs. Northern regions remain significantly underserved in terms of road infrastructure relative to the rest of the country, despite having comparative agricultural productivity advantages, particularly for staple crops such as maize and rice.

ii) Relief and Topography

Ghana is characterized by generally low and undulating relief, with few areas of moderate elevation. The greater part of the country lies below 300 metres above sea level (ASL), with the overall terrain rarely exceeding 600 metres ASL. The country's physiographic regions include the coastal plains along the southern margin, the Akan lowlands and forest-dissected plateau in the southwest and central areas, the Volta Basin occupying the central and northern zones, and the highland areas on the eastern and northern margins.

Two prominent highland areas flank the Volta Basin: the Kwahu Plateau in the south and the Gambaga Escarpment in the north. Along the eastern margins of the Volta Basin, a relatively narrow zone of mountains runs in a southwest to northeast direction, encompassing the Akwapim, Buem, and Togo Ranges, with Mount Afadjato (888 metres ASL) representing the highest point in Ghana. The northern savannah zone is largely flat to gently undulating, punctuated by isolated inselbergs and laterite plateaus.

From an engineering and environmental perspective, the topography of the project areas has significant implications for feeder road alignment, drainage design, slope stability, erosion risk, and the vulnerability of road surfaces to seasonal flooding and washouts. Road corridors traversing dissected terrain in the forest and transition zones will require careful drainage design and slope

management, while flat northern savannah areas will require attention to waterlogging and seasonal inundation during the rainy season.

iii) Climatic Conditions

Rainfall

Ghana's climate is tropical and varies significantly across the country's ecological zones. Average annual rainfall is approximately 1,260 mm but ranges from about 890 mm per year along the southeastern coast near Accra to over 2,030 mm per year in the southwestern rainforests. The rainfall pattern is bimodal in the southwestern forest zone, producing a major growing season from March to July and a minor growing season from September to November. Elsewhere across the country, including the transition and savannah zones, rainfall follows a unimodal distribution, with a single wet season typically running from May to October.

In the northern savannah zones — which fall within the priority project clusters — total annual rainfall is significantly lower, ranging from approximately 800 mm to 1,100 mm, and is concentrated in a shorter wet season from May to September. Rainfall reliability is a critical constraint on agricultural productivity and feeder road condition in these areas, as intense seasonal rainfall events cause rapid deterioration of unpaved road surfaces, wash away culverts and embankments, and render roads impassable for extended periods, isolating farming communities from markets.

Temperature and Humidity

Mean annual temperatures range from approximately 26°C along the coast to 29°C in the northern savannah zone. The harmattan — a dry, dust-laden northeast trade wind — affects northern Ghana between November and March, reducing humidity, lowering nighttime temperatures, and creating significant dust conditions relevant to air quality management during dry-season construction activities. Relative humidity averages between 50 and 80 percent across the country, declining significantly in the north during the dry season.

Climate Change Projections

Ghana is increasingly exposed to the adverse effects of climate change. Projections indicate higher mean temperatures, more frequent and intense rainfall events, longer and more severe dry seasons in the north, increased flooding in low-lying areas, and greater frequency of extreme weather events. These trends have direct implications for feeder road infrastructure durability, maintenance needs, and the vulnerability of rural communities to climate-related disruptions in market access. The project explicitly incorporates climate-resilient road design standards, upgraded drainage systems, and flood-resistant structures to address these risks, consistent with Ghana's Updated Nationally Determined Contribution (NDC 2021–2030) and the World Bank's Resilient Transport Guidance.

iv) Drainage and Hydrology

Ghana is drained by three main river systems: the Volta River System, the South-Western River System, and the Coastal River System. The Volta River System is by far the largest, occupying approximately 70 percent of Ghana's land area. The South-Western System covers approximately 22 percent, and the minor Coastal System accounts for the remaining 8 percent.

Global water resources in Ghana are estimated at 53.2 km^3 per year, comprising 30.3 km^3 per year of internally produced resources and 22.9 km^3 per year of runoff from riparian countries sharing the Volta Basin. Major water sources include rivers, streams, lakes, groundwater aquifers, and artificial impounded water bodies such as the Akosombo and Bui dams, as well as community-level dugouts

and reservoirs, which are particularly important in the northern savannah zones where surface water availability is seasonal and limited.

Recharge to the Volta River system predominantly occurs between June and September, when precipitation exceeds evapotranspiration. The mean annual recharge of the Volta River system is approximately 14.8 percent of mean annual precipitation. In the northern savannah areas, shallow unconfined aquifers are widely used for domestic water supply, and their protection from construction-related contamination is an important environmental management consideration for the project.

Seasonal flooding is a major concern across project areas. Many feeder roads in both the forest and savannah zones are rendered impassable during peak rainfall periods due to inadequate drainage infrastructure, submerged low-water crossings, and road surface deterioration. The project's investment in bridges, culverts, and upgraded drainage structures along rehabilitated feeder road corridors is designed to address these chronic connectivity disruptions. Construction activities near rivers, streams, and water bodies will require careful management to avoid sedimentation, bank erosion, and contamination of water resources, consistent with the Riparian Buffer Zone Policy (2014) and the Water Use Regulations (L.I. 1692).

v) Geology and Soils

Ghana's geology comprises three broad categories: the Precambrian crystalline basement rocks (Birimian and Tarkwaian systems) that underlie much of the forest and transition zones; the Voltaian sedimentary basin occupying the central and northern regions; and the Coastal Basin sediments along the southern coast. Mineral resources including gold, bauxite, manganese, diamonds, and limestone are associated with the Precambrian formations in the southwest, while the Voltaian basin contains limited mineral extraction potential but significant agricultural land resources.

Soils vary considerably across the project's agroecological zones. In the forest zone, Oxisols and Ultisols dominate — deeply weathered, low-fertility soils that are highly susceptible to erosion when vegetation cover is removed. In the transition and savannah zones, Alfisols and Entisols are prevalent, with moderate fertility but high susceptibility to crusting, compaction, and runoff under intense rainfall. Laterite and lateritic gravel deposits are widespread in the northern savannah zone and represent a critical local construction material source for unpaved road surfaces. However, uncontrolled borrow pit operations for laterite extraction carry significant risks of land degradation, erosion, and community conflict that must be carefully managed through site-specific ESMPs.

4.1.2 Biological Environment

i) Ecosystems and Vegetation Zones

Ghana's vegetation is broadly classified into six main zones from south to north, reflecting the latitudinal rainfall gradient: the Coastal Scrub and Grassland, the Moist Evergreen Forest, the Moist Semi-Deciduous Forest, the Transition Zone, the Guinea Savannah, and the Sudan Savannah.

Coastal Wetlands and Mangroves: Ghana's coastline supports a range of coastal wetland ecosystems, including mangrove forests, lagoons, and estuaries. The Songor, Keta, and Muni-Pomadze Ramsar sites are among the most ecologically significant. While feeder road activities under the GMACP are not anticipated to directly affect coastal wetlands, construction activities in the coastal and southern transition zones must ensure that drainage outflows and construction runoff do not adversely affect downstream wetland habitats.

Forest Ecosystems: The Moist Evergreen Forest zone in the southwestern corner of Ghana supports the country's highest biodiversity, including numerous endemic plant and animal species. The Moist Semi-Deciduous Forest, which extends across the Ashanti, Brong-Ahafo, and parts of the Volta and Eastern regions, is heavily utilized for agriculture, timber, and cocoa cultivation, and much of the original forest cover has been reduced to forest reserves and fragmented patches. Key timber species include Odum (Milicia excelsa), Mahogany (Khaya spp.), and Wawa (Triplochiton scleroxylon). Wildlife includes forest elephants, chimpanzees, various monkey species, and a rich diversity of birds, reptiles, and invertebrates. Several of the confirmed project clusters are located within or adjacent to the transition and semi-deciduous forest zones, where road rehabilitation activities — including vegetation clearance, earthworks, and borrow pit operations — must be carefully sited to avoid fragmentation of remaining forest patches and disturbance of wildlife corridors.

Savannah Ecosystems: The Guinea and Sudan Savannah zones cover much of northern Ghana and support a distinct assemblage of biodiversity, including characteristic trees such as Shea (Vitellaria paradoxa), Dawadawa (Parkia biglobosa), and various Acacia species. Wildlife includes roan antelope, kob, baboon, various raptor species, and diverse reptile communities. The northern savannah zones are also home to Ghana's most significant protected area network, including Mole National Park, Bui National Park, and Digya National Park. Feeder road activities in proximity to these protected areas will require heightened biodiversity screening and mitigation measures.

ii) Key Biodiversity Areas and Conservation Sensitivities

Ghana has several designated protected areas, Key Biodiversity Areas (KBAs), and ecologically sensitive landscapes relevant to the project's geographic scope. These include:

Protected Areas: Ghana's protected area system covers approximately 5.2 percent of the country's total land area and includes national parks, resource reserves, wildlife sanctuaries, and strict nature reserves. The most significant protected areas potentially relevant to the project's regional clusters include Mole National Park (3,576 km^2) in the northwest, Bui National Park (1,821 km^2) in the Brong-Ahafo region, Digya National Park (3,478 km^2), the Bia Biosphere Reserve, and numerous forest reserves across the forest and transition zones managed by the Forestry Commission.

Riparian and Wetland Habitats: Rivers, streams, and seasonal wetlands along feeder road corridors support significant biodiversity and provide critical ecosystem services including water supply, fisheries, and flood regulation. Riparian buffer zones must be respected during road works, consistent with the Riparian Buffer Zone Policy (2014).

ESS6 Screening Requirements: Given the geographic dispersion of project sites across multiple agroecological zones and the potential for road alignments to traverse or pass in proximity to sensitive habitats, a systematic ESS6 screening process will be integrated into the site identification workflow. Standardized ESS6 checklists and spatial biodiversity layers — including protected area boundaries, Key Biodiversity Areas, Ramsar sites, and forest reserve boundaries — will be applied during site selection and preliminary design to identify and avoid or minimize impacts on critical habitats, key biodiversity areas, and ecological corridors. Where avoidance is not possible or strict controls are needed to operationalize and enforce avoidance and minimization of measures, site-specific biodiversity management plans will be prepared as annexes to site-specific ESMPs.

4.2 Socioeconomic and Cultural Environment

4.2.1 Demography and Settlement Patterns

Ghana's population was estimated at approximately 33.74 million in 2025, growing at an average annual rate of approximately 2.2 percent. The 2021 Population and Housing Census recorded a national population of 30.8 million. Urbanization is most pronounced along the coastal and forest belts, particularly in the Greater Accra, Ashanti, and Western regions, which collectively account for a disproportionate share of the country's urban population and economic activity. By contrast, the northern regions — including the Northern, Savannah, North East, Upper East, and Upper West regions — maintain higher rural population shares, lower access to services, and significantly lower infrastructure density.

Population density is highest in Greater Accra (approximately 1,300 persons per km^2) and lowest in the northern savannah regions (as low as 20–30 persons per km^2). Settlement patterns in the project areas reflect both ecological conditions and historical infrastructure development, with larger market towns situated along existing trunk road corridors and smaller farming communities dispersed along feeder road networks. The dispersed settlement pattern in rural areas increases the importance of feeder roads as the primary means of access to markets, health facilities, schools, and social services for the majority of the rural population.

Youth (persons aged 15–34) constitute approximately 35 percent of Ghana's population, and youth unemployment and underemployment remain significant development challenges, particularly in rural areas where agricultural seasonality limits year-round income opportunities. The project's emphasis on labor-intensive road construction and maintenance activities, with a minimum of 30 percent of total labor costs allocated to local staff, is designed to generate direct employment benefits for local youth and communities within project areas.

4.2.2 Livelihoods and Economic Activities

Agriculture is the primary livelihood activity in the rural project areas, employing approximately 38 percent of Ghana's total labor force and contributing approximately 22.2 percent of GDP (2024). Priority agricultural value chains relevant to the project include:

- Maize: Ghana produces approximately 3.2–3.5 million metric tons of maize annually, slightly above direct human consumption needs of approximately 2.7 million metric tons. However, Ghana imports 10,000–60,000 metric tons of yellow maize annually for poultry feed, reflecting a structural gap in the feed industry. Maize is cultivated predominantly in the northern and transitional zones within the project clusters and is a primary cash crop for smallholder farmers.
- Rice: Ghana consumes approximately 1.8–2.0 million metric tons of rice annually, with approximately 50–57 percent imported, representing a foreign exchange drain of US$500–600 million per year. Domestic rice production is concentrated in the Northern, Savannah, Volta, and Brong-Ahafo regions, which overlap significantly with the project's target clusters.
- Cassava: Cassava is the most widely cultivated crop, grown by approximately 90 percent of rural households, primarily for subsistence on smallholdings of up to 2 hectares. It is less sensitive to market access constraints given its predominantly domestic consumption orientation, but improved connectivity can reduce post-harvest losses and enhance access to processing facilities.
- Beyond farming, rural livelihoods in the project areas include petty trade and market vending (particularly by women along road corridors and in market centers), artisanal mining in some

forest zone districts, and transport and logistics services. Post-harvest losses are estimated at up to 30 percent of agricultural production in areas with poor road connectivity, representing a critical welfare and food security gap that the project's feeder road investments are designed to address.

4.2.3 Gender Dynamics

Gender inequality is a defining feature of the socioeconomic landscape in rural Ghana and has direct implications for the project's environmental and social management. Women constitute approximately 90 percent of the agricultural labor force in rural areas, largely concentrated in informal post-harvest activities including storage, processing, and market trading. Despite their central role in food production and trade, women face disproportionate constraints in accessing all-weather roads, storage facilities, and transport services, resulting in higher spoilage rates, elevated transportation costs, and restricted access to higher-value markets.

Women represent only approximately 3 percent of the construction and maintenance workforce in Ghana's transport sector, reflecting structural barriers including skills gaps, restrictive hiring practices, safety concerns, and prevailing social norms. The project seeks to address these gender disparities through targeted interventions including minimum targets for women's employment in medium and high-skilled construction and maintenance jobs, equal pay provisions in bidding documents, anti-harassment and grievance procedures, and a TVET-linked certification and mentorship program. The project tracks gender outcomes through disaggregated PDO and intermediate result indicators covering direct beneficiaries, employment, and post-harvest loss reduction for women farmers.

Women are predominant users of rural markets, and their participation in community consultations and road selection processes is essential to ensure that project investments respond to women's mobility needs and market access priorities. The SEP and site-specific consultation processes will incorporate targeted engagement strategies for women, including the use of women's groups and community-based organizations as consultation channels.

4.2.4 Vulnerable Groups

Several categories of vulnerable individuals and groups are present in the project areas and require targeted identification, engagement, and protection measures:

Low-income and food-insecure households are disproportionately represented in the project's target clusters, particularly in northern savannah districts where food insecurity rates are highest, agricultural productivity is constrained, and access to social services is most limited. These households are both the primary intended beneficiaries of improved road connectivity and among those most at risk of adverse impacts from land acquisition, temporary market access disruptions, and construction-related disturbances.

Youth face elevated risks of unemployment and economic marginalization in rural areas. The project's labor-intensive construction and maintenance approach and TVET-linked training program offer direct pathways to employment for young people in project communities.

Persons with Disabilities (PwDs) face particular challenges in accessing transport infrastructure and services. All rehabilitated road designs will incorporate universal accessibility standards, including safe pedestrian walkways and appropriate signage, to ensure that project infrastructure serves PwDs equitably.

Roadside traders and informal vendors — predominantly women — who depend on road rights-of-way for their livelihoods face risks of economic displacement during road rehabilitation and right-of-way clearance. The RPF and site-specific RAPs will establish procedures for identifying, engaging, and compensating affected traders consistent with ESS5 requirements.

Remote northern communities face compounding vulnerabilities including lower access to health and education services, higher climate risk, greater food insecurity, and deeper infrastructure deficits. The project's cluster selection methodology explicitly weights food insecurity and road network quality to ensure that resources are targeted toward the most underserved areas.

4.2.5 Security and Conflict Areas

Security and conflict dynamics in Ghana are generally characterized by relative national stability, underpinned by a strong governance framework and low incidence of widespread violent conflict. However, localized security risks persist and are important in the context of the Ghana Market Access and Connectivity Project (GMACP). These include chieftaincy and land disputes, particularly in parts of the Northern, Savanna, Oti, and Upper West Regions, which can affect access to land, disrupt project activities, and create tensions among communities. In addition, farmer–herder conflicts—often linked to competition over land and water resources—pose intermittent risks in agricultural zones, while small-scale illegal mining (“galamsey”) activities can generate disputes over natural resource use, environmental degradation, and community grievances.

Emerging security concerns along Ghana’s northern border, influenced by spillover risks from the Sahel region, also warrant attention, although these have not significantly escalated into widespread insecurity within the country. At the community level, conflicts may arise from perceived inequities in project benefit-sharing, labor influx, or inadequate stakeholder engagement, particularly affecting vulnerable groups. Overall, while the operating environment remains conducive, the project must incorporate conflict-sensitive planning, inclusive consultation processes, and accessible grievance redress mechanisms to mitigate localized risks and sustain social cohesion in project areas.

4.2.6 Land Ownership, Tenure, and Use

Land tenure in Ghana is governed by a complex interplay of statutory and customary systems. Approximately 80 percent of land in Ghana is held under customary tenure, administered by traditional authorities including stools (in southern Ghana), skins (in northern Ghana), and family heads. The remaining 20 percent is held by the state or under formal statutory title. In many rural areas, stool or skin lands are allocated to farmers under customary usufruct arrangements, and tenancy agreements — including sharecropping arrangements known as abunu and abusa in cocoa-growing areas — are common.

The customary land tenure system presents important implications for the project's land acquisition and compensation processes. Rights to land under customary tenure may not be formally documented, and multiple overlapping claims — from traditional authorities, family heads, individual farmers, and tenants — may complicate the identification of legitimate right-holders for compensation purposes. The RF and site-specific RAPs will include provisions for identifying and documenting customary land rights through community-level processes, consistent with the Land Act, 2020 (Act 1036), the Lands Commission Act, 2008 (Act 767), and the World Bank's ESS5.

Land use along feeder road corridors includes subsistence and commercial farming, roadside market trading, residential structures, community facilities, and in some cases community shrines and cultural heritage sites. The right-of-way clearance required for road rehabilitation may affect structures, crops, trees, and economic activities within the road corridor. The project will ensure that

affected persons are identified early, engaged meaningfully, and compensated fairly and prior to commencement of civil works.

4.2.7 Water, Sanitation, Hygiene, Health, and Education

Access to safe water and adequate sanitation varies significantly across the project areas. Urban and peri-urban areas generally have higher rates of piped water access, while rural communities — particularly in the northern savannah zones — rely predominantly on boreholes, hand-dug wells, dugouts, and seasonal streams for domestic water supply. Access to improved sanitation facilities in rural areas remains well below national targets, with open defecation still prevalent in some northern districts. These baseline WASH conditions are relevant to the project's environmental and social management in two respects: they inform the minimum sanitation standards required at construction worksites under the LMP and ESS2, and they highlight the potential for construction activities to contaminate community water sources if not properly managed.

Public health in the project areas is affected by a range of communicable diseases including malaria (the leading cause of morbidity in rural Ghana), respiratory tract infections, diarrheal diseases, and meningitis (seasonally prevalent in northern savannah zones during the harmattan period). The presence of construction workers in rural communities, combined with the potential for minor labor influx, creates risks of disease transmission and increased pressure on local health facilities. Construction contractors will be required to implement health and hygiene programs for workers, including malaria prevention, HIV/AIDS awareness, and access to medical care, consistent with ESS4 and the World Bank Group EHS Guidelines.

Education infrastructure in rural project areas is generally basic, with primary schools accessible in most communities but secondary school access requiring travel over feeder road corridors — a journey that is frequently disrupted by poor road conditions during the rainy season. Construction activities near schools will require traffic management and community health and safety measures to protect children from road safety hazards.

4.2.8 Cultural Heritage

Ghana has a rich and diverse tangible and intangible cultural heritage, encompassing traditional festivals, sacred groves, shrines, burial grounds, historical settlements, and archaeological sites, as well as nationally and internationally recognized heritage sites. Ghana's world-famous slave trade forts and castles along the coast are UNESCO World Heritage Sites, but significant cultural heritage resources are also present in inland areas, including community shrines, sacred forests, and ancestral burial grounds that may not be formally documented or mapped.

Feeder road rehabilitation activities — particularly earthworks, excavation for drainage structures and bridge foundations, and borrow pit operations — carry a risk of disturbing previously unknown or unrecorded cultural heritage assets. The ESMF include a standardized Chance Find Procedure, consistent with ESS8, to guide contractors, supervisors, and community members in the identification, reporting, and management of any cultural heritage discoveries encountered during civil works. Works will be suspended in the vicinity of any chance find pending notification of the relevant national authorities — including the Ghana Museums and Monuments Board (GMMB) — and appropriate assessment and management measures will be implemented before works resume. Prior to commencement of civil works on any road segment, site-specific screening for known cultural heritage assets will be conducted as part of the ESMP preparation process, and communities will be consulted to identify any culturally significant features within or adjacent to the proposed road corridor.

5. Potential Environmental and Social Risk Impacts and Standard Mitigation Measures

This section identifies the potential environmental and social risks and impacts associated with the key activities of the Ghana Market Access and Connectivity Project (GMACP) and sets out standard mitigation measures to be applied at project and subproject levels. Because the exact road segments and subproject locations will be finalized during implementation through the three-step prioritization framework, this section provides a structured, proportionate approach to risk identification and management consistent with Good International Industry Practice (GIIP) and the World Bank Group Environmental, Health, and Safety Guidelines (EHSGs). Site-specific risks and impacts will be assessed in detail through subproject-level Environmental and Social Management Plans (ESMPs), and contractors will be required to develop Contractor's Environmental and Social Management Plans (C-ESMPs) prior to commencement of civil works.

Typical project activities covered in this section include: (i) feeder road rehabilitation, including earthworks, vegetation clearance, grading, and compaction; (ii) bridge and drainage structure construction; (iii) borrow pit operations for laterite and aggregate extraction; (iv) asphalt mixing and road surfacing; (v) fiber optic cable installation along road corridors; (vi) road maintenance operations under performance-based contracts; (vii) WIGRAMS data collection and equipment deployment; and (viii) Road Maintenance Trust Fund reform technical assistance.

5.1 Risk Assessment Methodology

The assessment of impacts is an iterative process underpinned by four key questions:

- **Prediction:** what change to the bio-physical, chemical or social environment will occur if the project is implemented?
- **Evaluation:** what are the consequences of this change? How significant will its impact be on human and biological receptors?
- **Mitigation*:*** if it is significant can anything be done about it?

Residual Impact: is it still significant after mitigationWhere significant residual impacts remain, further options for mitigation will be considered and where necessary, impacts are re-assessed until they are reduced. The table below shows the risk assessment rating system that will be used.

5.2 Risk Assessment Rating System

The GMACP ESMF applies a structured risk assessment matrix built on two core dimensions: **likelihood** and **severity of impact**. *Likelihood* reflects how probable it is that a given environmental or social risk will occur, rated across categories such as **Unlikely**, **Possible**, and **Likely**. *Severity* measures the potential consequences of the impact if it occurs, commonly categorized as **Minor**, **Moderate**, **Major**, or **Severe** based on the scale of environmental damage, the number of people affected, reversibility, and duration of the impact.

These two dimensions are combined to produce an overall **risk rating**, such as **Low**, **Moderate**, **Substantial**, or **High**. Risks rated **Major** or **Substantial** typically require enhanced mitigation measures, closer monitoring, and, in some cases, redesign of activities to reduce residual risks. Lower-rated risks (e.g., Moderate) still require mitigation but are considered manageable through standard procedures and good environmental and social practices. This rating system ensures that project planning, implementation, and monitoring are proportionate to the significance of each identified risk.

5.3 Environmental and Social Risks and Impacts

The Project's environmental and social risk profile is driven primarily by feeder road rehabilitation civil works across multiple agroecological zones. Environmental risks, rated Moderate to Substantial, include vegetation loss and habitat disturbance, air quality deterioration from dust and asphalt production, noise and vibration impacts, land degradation from borrow pit operations, water quality degradation near drainage and bridge works, soil and groundwater contamination from fuel spills, waste mismanagement including e-waste, greenhouse gas emissions, and biodiversity impacts such as habitat fragmentation and invasive species introduction. Social risks, also rated Moderate to Substantial, include physical and economic displacement of persons within road rights-of-way — disproportionately affecting women traders and smallholder farmers — labor influx, SEA/SH, child and forced labor, social exclusion of vulnerable groups, loss of cultural heritage through chance finds, community conflicts arising from land acquisition disputes, traffic safety hazards near active construction sites, and significant occupational health and safety risks to workers. These risks will be managed through site-specific ESMPs, Contractor ESMPs, a Resettlement Framework, Labor Management Procedures, a SEA/SH Response Plan, Traffic Management Plans, a Chance Find Procedure, and biodiversity management plans, consistent with the World Bank's Environmental and Social Framework, WBG EHS Guidelines, and applicable Ghanaian legislation.

Table 5-1: Environmental and Social Risks and Mitigation Measures

Activity	Potential Risk / Impact	Likelihood	Severity	Risk Rating	Standard Mitigation Measures
Environmental					
Vegetation clearance and earthworks for road rehabilitation	Loss of vegetation and habitat disturbance: Land preparation including clearing of roadside vegetation, grubbing, and excavation may result in loss of flora, fragmentation of natural habitats, and reduction in biodiversity value of affected ecosystems, including potential loss of ecologically important species. Impacts are most significant where road alignments traverse or pass adjacent to forest reserves, riparian buffer zones, or ecologically sensitive areas. The risk is localized, direct, potentially permanent, and of major significance in sensitive zones.	Likely	Major	Substantial	Conduct ESS6-based biodiversity screening using spatial biodiversity layers (protected areas, KBAs, forest reserves, riparian buffers) during site selection and preliminary design. Limit vegetation clearance strictly to the minimum width required for road works. Retain mature trees and riparian vegetation wherever feasible. In case trees need to be cut, ensure replacement (1:3) and also survival management plan. Avoid scheduling clearance activities during key wildlife breeding seasons. Implement progressive revegetation of cleared areas using native, non-invasive species immediately upon completion of works. Include invasive species prevention measures in C-ESMPs. Avoid works within designated riparian buffer zones consistent with the Riparian Buffer Zone Policy (2014). Prepare biodiversity management plans as annexes to ESMPs where road alignments traverse sensitive habitats.
Earthworks, construction equipment operations, and asphalt production	Air emissions and dust: The use of earth-moving machinery, haulage trucks, and asphalt mixing and heating equipment during earthworks and road surfacing will generate dust and exhaust fumes, causing deterioration of air quality and associated risks of respiratory ill-health for workers and nearby communities. Prolonged exposure to particulate matter, diesel exhaust, and asphalt fumes can cause upper respiratory diseases and may exacerbate existing conditions such as asthma. Risk is localized, direct, temporary during construction, and of moderate severity, but may be elevated in dry harmattan conditions in northern project areas.	Likely	Moderate	Moderate	Implement dust suppression measures including regular watering of unpaved construction roads and active works areas, particularly during dry season operations and harmattan conditions. Enforce speed limits for haulage vehicles on unpaved access roads. Ensure all construction equipment and vehicles are properly maintained and comply with applicable emission standards. Cover haulage trucks transporting excavated material, aggregates, and asphalt. Locate asphalt mixing plants and material stockpiles away from sensitive receptors including schools, health facilities, and residences. Monitor dust and air quality levels at sensitive

Activity	Potential Risk / Impact	Likelihood	Severity	Risk Rating	Standard Mitigation Measures
					receptor locations and adjust mitigation measures as needed. Provide appropriate Personal Protective Equipment (PPE) including dust masks for workers. Comply with WBG EHS Guidelines on air emissions and ambient air quality.
Use of construction machinery, vibratory compaction equipment, and blasting (if required)	Noise and vibration: The operation of heavy construction machinery, vibratory rollers, and potential blasting for rock excavation will generate noise and ground vibration, which may exceed permissible levels near sensitive receptors including schools, health facilities, residences, and wildlife habitats. Exposure can cause nuisance, impaired hearing, structural damage to buildings, and behavioral disturbance to sensitive fauna. Risk is direct, temporary during construction, localized within approximately 50–100 metres of the source, and of moderate severity. Cumulative exposure at sites with continuous works may increase impact severity.	Likely	Moderate	Moderate	Schedule high-noise and vibratory activities during daytime working hours only (typically 6:00 AM to 6:00 PM), avoiding early mornings, late evenings, and weekends near sensitive receptors. Maintain minimum buffer distances between noisy operations and sensitive facilities; where buffers cannot be maintained, implement temporary acoustic screening. Develop protocols to notify community for noise and vibration disturbance. Conduct vibration and noise monitoring near sensitive receptors throughout construction and adjust scheduling or methods if levels exceed WBG EHS Guidelines thresholds. Ensure construction equipment is regularly serviced and fitted with appropriate noise-suppression devices. Provide hearing protection PPE to workers operating near high-noise equipment. Avoid blasting near wildlife habitats; where blasting is required, notify communities in advance and conduct fauna displacement surveys.
Borrow pit operations for laterite, gravel, and aggregate extraction	Land degradation, erosion, and landscape scarring: Uncontrolled extraction of laterite and aggregates from borrow pits can result in significant land degradation, slope instability, soil erosion, sedimentation of nearby water bodies, and creation of stagnant water ponds that become mosquito breeding sites and safety hazards. Impacts can be long-lasting and difficult to reverse if borrow pits are not properly rehabilitated after use. Risk is localized, direct,	Likely	Major	Substantial	Conduct site-specific suitability assessments for all proposed borrow pit locations prior to extraction, including assessment of proximity to water bodies, settlements, farmlands, and ecologically sensitive areas. Obtain all required permits from the EPA, minerals commission and relevant local authorities. Implement progressive rehabilitation of borrow pits concurrent with extraction activities, including re-grading, drainage, and revegetation with native species. Prevent extraction within

Activity	Potential Risk / Impact	Likelihood	Severity	Risk Rating	Standard Mitigation Measures
	potentially permanent without mitigation, and of substantial significance.				riparian buffer zones and areas prone to slope instability. Install erosion and sediment controls around borrow pits including silt fences, sediment basins, and diversion drains. Fence active borrow pits to prevent unauthorized access and accidents. Conduct final inspection and sign-off of borrow pit rehabilitation before contractor demobilization. Include borrow pit management plans in C-ESMPs.
Construction of bridges, culverts, and drainage structures near watercourses	Water quality degradation and sedimentation: Construction activities near rivers, streams, and seasonal watercourses — including bridge construction, culvert installation, and drainage upgrades — carry risks of sedimentation, turbidity, and contamination of water resources from fuel spills, concrete washout, and construction runoff. These impacts can affect downstream water users, aquatic ecosystems, and community water supply sources, including shallow wells and boreholes. Risk is localized, direct, potentially reversible with mitigation, and of moderate to substantial significance depending on proximity to community water sources.	Likely	Moderate	Substantial	Respect riparian buffer zone setbacks consistent with the Riparian Buffer Zone Policy (2014). Install erosion and sediment controls upstream of works near watercourses, including silt curtains, check dams, and diversion channels. Prohibit concrete batching, fuel storage, and equipment washing within buffer zones or near watercourses. Implement concrete washout management procedures. Conduct works in watercourses during low-flow periods wherever feasible. Monitor water quality upstream and downstream of construction sites near watercourses throughout the construction period. In the event of a fuel or chemical spill, implement emergency spill response procedures immediately and notify the EPA. Ensure all water abstraction for construction purposes is covered by valid Water Use Permits from the WRC.
Fuel storage, vehicle maintenance, and equipment operations at construction sites	Soil and groundwater contamination from fuel and chemical spills: Improper storage and handling of fuel, lubricants, hydraulic fluids, and construction chemicals can result in fires, spills and leaks that contaminate soil and groundwater, posing risks to community water supply sources, agricultural land, and aquatic ecosystems. Risk is localized, direct, potentially	Possible	Moderate	Moderate	Store all fuel and hazardous chemicals in designated, bunded storage areas with impermeable liners and secondary containment capable of holding at least 110 percent of the largest storage vessel. Prohibit fuel storage and vehicle maintenance within buffer zones near watercourses, wetlands, and community water sources. Establish and implement a spill prevention and response

Activity	Potential Risk / Impact	Likelihood	Severity	Risk Rating	Standard Mitigation Measures
	long-lasting without remediation, and of moderate significance.				plan at each construction site. Equip construction sites with spill response kits (absorbent materials, containment booms). Ensure all used oils and chemical containers are collected and disposed of by a licensed hazardous waste contractor. Conduct regular site inspections to identify and remediate any contamination. Train site staff in spill prevention and emergency response procedures.
Solid waste generation from construction activities and worker camps	Waste mismanagement and environmental pollution: Construction activities will generate significant volumes of solid waste including excavated material, construction debris, packaging waste, food waste from worker camps, and e-waste from fiber optic and digital infrastructure installation. Improper disposal can result in visual pollution, soil and water contamination, and risks to community health. Risk is localized, direct, temporary during construction, and of moderate significance.	Likely	Moderate	Moderate	Prepare and implement site-specific Waste Management Plans as part of C-ESMPs. Apply the waste management hierarchy: reduce, reuse, recycle, and dispose. Segregate waste at source into recyclable, non-hazardous, and hazardous streams. Engage licensed waste contractors for collection and disposal of all construction waste, hazardous waste, and e-waste. Prohibit open burning and uncontrolled dumping of construction waste. Ensure worker camps are equipped with adequate sanitation facilities and solid waste collection points. Conduct regular waste audits and maintain waste management records. Comply with WBG EHS Guidelines on waste management and the Environmental Protection Act, 2025 (Act 1123) on hazardous waste management.
Road rehabilitation works — vegetation clearance, road surfacing, and bridge construction	Greenhouse gas emissions: The use of diesel-powered construction equipment and haulage trucks, asphalt production and heating, electricity consumption at construction sites, and the embodied carbon in construction materials (bitumen, cement, and steel) will generate greenhouse gas emissions contributing to climate change. The project also modifies baseline traffic emissions through improved road conditions and increased traffic volumes on rehabilitated corridors.	Certain	Moderate	Moderate	Minimize idle running of diesel equipment and enforce engine shut-off requirements when equipment is not in use. Prioritize use of well-maintained and fuel-efficient equipment. Source construction materials from local suppliers wherever feasible to reduce transport-related emissions. Monitor and report annual gross GHG emissions from project activities using the RED model methodology. Track net GHG emission reductions from improved vehicle fuel efficiency on rehabilitated roads. Report GHG

Activity	Potential Risk / Impact	Likelihood	Severity	Risk Rating	Standard Mitigation Measures
					emission estimates in biannual progress reports to the World Bank. Incorporate non-motorized transport infrastructure along road corridors to support modal shift and reduce transport-related emissions.
Road rehabilitation in proximity to protected areas, forest reserves, and key biodiversity areas	Biodiversity impacts — habitat fragmentation, invasive species introduction, and wildlife disturbance: Road improvements can increase access to previously remote areas, facilitating encroachment, illegal logging, poaching, and agricultural expansion into natural habitats adjacent to rehabilitated road corridors. Construction activities may also introduce invasive plant species through movement of equipment and fill materials between sites. Risk is potentially long-lasting and of substantial significance in ecologically sensitive locations.	Possible	Major	Substantial	Apply ESS6 screening during site selection to identify and avoid or minimize works in proximity to protected areas, forest reserves, and critical habitats. Include invasive species prevention provisions in C-ESMPs, including equipment cleaning protocols between sites. Engage the Forestry Commission and Wildlife Division in site-specific consultations for road segments adjacent to protected areas. Implement community awareness campaigns on biodiversity conservation and prohibitions on hunting, logging, and encroachment in protected areas along rehabilitated corridors. Consider use of physical barriers or signage at road entry points to protected areas. Where road improvements increase access to previously remote biodiversity-sensitive areas, prepare and implement a Biodiversity Management Plan as part of the site-specific ESMP.
Social					
Right-of-way clearance and road rehabilitation civil works	Physical displacement and land acquisition: Clearance of road rights-of-way and rehabilitation of feeder road corridors may require land acquisition and could result in the physical displacement of persons residing or operating within the road corridor, including squatters, encroachers, roadside vendors, and farmers with crops or trees in the right-of-way. This is a land acquisition impact requiring application of ESS5 and preparation of a Resettlement Framework (RF) and site-specific Resettlement Plans (RPs).	Likely	Major	Substantial	Prepare and disclose an RF prior to appraisal, and site-specific RPs prior to commencement of civil works on each road segment. Conduct socioeconomic surveys and census of all project-affected persons within road rights-of-way. Provide fair and adequate compensation at full replacement cost prior to displacement, consistent with ESS5 and the Land Act, 2020 (Act 1036). Engage the Lands Valuation Division (LVD) early in the process for agreement on modalities and formal asset valuation. Avoid physical displacement wherever possible through careful design and

Activity	Potential Risk / Impact	Likelihood	Severity	Risk Rating	Standard Mitigation Measures
					alignment optimization. Provide advance notice to affected persons and ensure all compensation is paid before civil works commence. Establish a project-level GRM accessible to all affected persons.
Right-of-way clearance and temporary road closures during construction	Economic displacement and loss of livelihoods: Roadside traders, market vendors, and farmers with crops, trees, or structures within road rights-of-way may suffer temporary or permanent loss of income and livelihood assets as a result of right-of-way clearance and temporary access restrictions during construction. Women, who constitute the majority of roadside traders in rural Ghana, are disproportionately affected. This is an economic displacement impact requiring application of ESS5.	Likely	Major	Substantial	Identify and document all economically affected persons through a census and socioeconomic survey prior to construction. Provide compensation for loss of crops, trees, structures, and business income at full replacement cost prior to clearance. Implement livelihood restoration measures for severely affected persons, including temporary relocation support and income restoration assistance. Maintain access to markets and essential services through phased construction scheduling and provision of alternative access routes wherever feasible. Engage affected traders, farmers, affected, impacted, vulnerable and other stakeholders early in the site-specific consultation process. Include livelihood restoration provisions in RPs. Monitor livelihood restoration outcomes through the M&E framework.
Engagement of construction workers and labor contractors	Labor influx and associated community risks: The engagement of construction workers — including contracted workers from outside project communities — can introduce social tensions, disrupt local community dynamics, increase pressure on local services and resources, and heighten risks of SEA/SH, communicable disease transmission (including HIV/AIDS and STIs), and alcohol and drug-related incidents. Risk is of moderate magnitude given that feeder road works are dispersed across rural areas and labor influx is expected to be minor.	Possible	Moderate	Substantial	Requires contractors to prepare and implement a Labor Management Plans (LMP) as part of the C-ESMPs document covering labor influx risk management. Prioritize recruitment of local workers from project communities to reduce in-migration. Include codes of conduct for all workers in contracts, covering prohibition of SEA/SH, GBV, VAC, and substance abuse. Provide mandatory pre-deployment training on codes of conduct, SEA/SH prevention, and community relations for all workers. Establish accessible, confidential GRM channels for community members to report concerns about worker behavior. Coordinate with Labour Department

Activity	Potential Risk / Impact	Likelihood	Severity	Risk Rating	Standard Mitigation Measures
					to conduct labour management monitoring and enforcement. Coordinate with local health authorities on communicable disease prevention and response. Engage GBV service providers in project areas to ensure referral pathways are operational before works commence.
Construction of road works and operation of worker camps	Sexual exploitation and abuse and sexual harassment (SEA/SH): The presence of construction workers in rural communities, power imbalances between workers and community members, and prevailing gender norms create conditions conducive to SEA/SH. Risks are heightened in remote rural areas with limited access to GBV support services. SEA/SH risk is rated Substantial for this project.	Likely	Major	Substantial	Prepare and disclose a SEA/SH Response Plan prior to project effectiveness, annexed to the ESMF. Include mandatory SEA/SH clauses in all civil works contracts and codes of conduct. Implement survivor-centered, confidential SEA/SH complaint management through the project GRM, with dedicated SEA/SH entry points and referral pathways to GBV service providers. Conduct community awareness campaigns on SEA/SH prevention and reporting mechanisms. Engage a GBV specialist within the DFR AIT. Establish a mapping of GBV service providers in each project area before works commence. Monitor SEA/SH incidents and response timeliness through the project M&E framework. Apply the World Bank's Good Practice Note on SEA/SH.
Engagement of construction contractors for civil works	Child labor risks: Construction sites and supply chains may present risks of child labor, particularly in contexts where children participate in informal quarrying, aggregate crushing, or water supply for construction. Risk is of moderate likelihood given Ghana's relatively robust child labor legal framework but requires active monitoring in rural project areas.	Possible	Major	Substantial	Include explicit prohibition of child labor in all civil works contracts, consistent with the Children's Act, 1998 (Act 560) and ILO Conventions 138 and 182. Conduct regular monitoring of construction sites and supply chains for child labor. Train site supervisors and DFR AIT E&S specialists to identify and report suspected child labor. Engage the Department of Social Welfare and local child protection authorities if child labor is identified. Include child labor provisions in the LMP and C-ESMPs.
Engagement of construction	Forced labor risks: Workers — particularly migrant workers from other regions or countries — may be vulnerable to debt bondage,	Unlikely	Major	Moderate	Prohibit all forms of forced and compulsory labor in civil works contracts. Include forced labor prevention provisions in the LMP. Train

Activity	Potential Risk / Impact	Likelihood	Severity	Risk Rating	Standard Mitigation Measures
contractors for civil works	confiscation of identity documents, and other forms of forced labor, particularly in remote construction settings.				site supervisors and PCU and AIT E&S specialists to identify and report indicators of forced labor. Establish accessible, anonymous worker grievance reporting channels. Conduct periodic labor audits of contractors and subcontractors.
Community consultations and subproject implementation	Social exclusion and discrimination: Certain groups — including women, persons with disabilities, youth, and residents of remote communities — may be excluded from project consultations, employment opportunities, or access to project benefits due to language barriers, mobility constraints, social norms, or geographic remoteness.	Possible	Moderate	Moderate	Implement an inclusive SEP with targeted engagement strategies for women, PwDs, youth, and remote communities, including use of local languages, accessible meeting locations, and alternative consultation formats. Ensure women's groups and community-based organizations are engaged as consultation channels. Apply non-discrimination provisions in recruitment for construction and maintenance jobs, with minimum targets for women's employment. Ensure that GRM channels are accessible to all community members, including PwDs and those with limited literacy. Coordinate with Labour Department to monitor inclusiveness of consultations and employment outcomes through the M&E framework.
Earthworks, excavation, and drainage construction along road corridors	Loss of cultural heritage and artifacts (chance finds): Civil works including excavation for drainage structures, bridge foundations, and borrow pit operations may uncover previously unknown archaeological sites, artifacts, burial grounds, or other tangible cultural heritage assets. Ghana's rich cultural heritage and the widespread presence of community shrines, sacred groves, and ancestral sites along rural road corridors heighten this risk.	Possible	Major	Substantial	Develop and include a standardized Chance Find Procedure in the ESMF and all site-specific ESMPs and civil works contracts. Train site supervisors and contractors on chance find identification and reporting obligations. In the event of a discovery, immediately suspend works in the vicinity, secure the site, and notify the Ghana Museums and Monuments Board (GMMB) and AIT within 24 hours. Do not resume works in the area of a chance find until the GMMB has conducted an assessment and provided written clearance. Conduct community consultations prior to commencement of works to identify known cultural heritage sites and sacred areas along proposed road corridors.

Activity	Potential Risk / Impact	Likelihood	Severity	Risk Rating	Standard Mitigation Measures
Road rehabilitation and right-of-way management	Social tensions, insecurity, and conflicts: Land acquisition, compensation disputes, perceived inequity in employment opportunities, and contractor-community interactions can generate social tensions and conflicts within and between communities. Boundary disputes between neighboring communities over road corridors and borrow pit locations may also arise.	Possible	Moderate	Substantial	Establish a robust, multi-channel project GRM before commencement of works, accessible to all community members. Conduct early and ongoing community consultations on road selection, land acquisition processes, and employment opportunities. Ensure transparent communication of project activities, timelines, and compensation processes. Engage traditional authorities and community leaders as mediators in land and community disputes. Coordinate with local police and security authorities for construction site security management, consistent with the WBG's Guidance Note on the Use of Security Personnel. Monitor and document community complaints and their resolution through the GRM. Conduct regular community feedback meetings throughout the construction period.
Community health and safety during civil works	Traffic safety hazards and construction accidents affecting communities: Active construction sites along operational road corridors create significant road safety hazards for local road users, particularly pedestrians, cyclists, motorcyclists, and children near schools, markets, and health facilities, who account for over 70 percent of road fatalities in rural Ghana.	Likely	Major	Substantial	Prepare and implement site-specific Traffic Management Plans (TMPs) at all civil works sites, including traffic control measures, flagging personnel, and clearly marked detour routes. Install warning signs, barriers, and lighting at all active construction sites. Conduct Road Safety Audits during design and construction phases using the Road Safety Screening and Appraisal Tool (RSSAT). Implement speed reduction measures near schools, markets, health facilities, and residential areas. Conduct community road safety awareness campaigns targeting vulnerable road users. Apply iRAP assessments on high-risk network segments. Ensure emergency response plans are in place at all construction sites and that first aid facilities are accessible.
Worker activities and camp operations	Occupational Health and Safety (OHS) risks to workers: Construction of feeder roads involves significant OHS risks, including exposure to	Likely	Major	Substantial	Prepare and implement site-specific OHS Management Plans as part of C-ESMPs. Provide all workers with appropriate PPE and

Activity	Potential Risk / Impact	Likelihood	Severity	Risk Rating	Standard Mitigation Measures
	heavy machinery and live traffic, falls, electrocution during fiber optic installation, respiratory hazards from dust and asphalt fumes, heat stress during outdoor works in northern Ghana, and snakebite and pest risks in rural environments. Previous transport projects in Ghana have recorded high fatality rates due to OHS failures.				ensure mandatory use is enforced. Conduct mandatory OHS induction training for all workers before deployment. Implement regular OHS inspections by PCU and AIT E&S specialists and the Department of Factories Inspectorate. Establish emergency response procedures and first aid facilities at all construction sites. Ensure all contractors register worksites with the Department of Factories Inspectorate and maintain valid workmen's compensation coverage. Comply with WBG EHS Guidelines on construction OHS. Report all OHS incidents, near-misses, and fatalities to the PCU, AIT and World Bank within 48 hours.
Road rehabilitation in areas with existing gender disparities	Disproportionate adverse impacts on women and vulnerable groups: If not actively managed, project activities including land acquisition, employment, and road selection could disproportionately disadvantage women, low-income households, persons with disabilities, and other vulnerable groups, perpetuating or deepening existing inequalities.	Possible	Moderate	Substantial	Conduct gender and social inclusion analysis as part of site-specific social assessments. Apply gender-responsive compensation procedures that recognize women's customary land and livelihood rights. Include minimum employment targets for women in civil works and maintenance contracts. Ensure GRM channels are accessible and safe for women to use. Design road infrastructure with universal accessibility standards for PwDs. Conduct targeted consultations with women's groups, youth associations, and community-based organizations serving vulnerable groups. Monitor gender and social inclusion outcomes through disaggregated M&E indicators.

5.4 Risks and Mitigation Measures Specific to Disadvantaged and Vulnerable Groups

The Ghana Market Access and Connectivity Project operates in rural areas characterized by deep-rooted social inequalities, limited access to services, and structural barriers that make certain groups more susceptible to adverse project impacts and less able to benefit equitably from project investments. Drawing on the project's social baseline and risk assessment, the following vulnerable and disadvantaged groups have been identified, along with the specific risks they face and the tailored mitigation measures required to ensure their protection and equitable inclusion throughout the project lifecycle.

5.4.1 Women and Female-Headed Households

Who they are: Women constitute approximately 51.6 percent of direct project beneficiaries and account for approximately 90 percent of the agricultural labor force in rural project areas, predominantly engaged in post-harvest activities, market trading, and subsistence farming. Female-headed households are disproportionately represented among low-income and food-insecure populations in the project clusters.

Specific risks: Women face heightened risks of economic displacement during right-of-way clearance, as they constitute the majority of roadside traders and informal market vendors whose livelihoods depend on road corridor locations. Their customary land rights are frequently undocumented and may be overlooked in formal compensation processes. Women are also disproportionately exposed to SEA/SH risks arising from labor influx and construction worker presence in rural communities, and face structural barriers to accessing employment opportunities in road construction and maintenance due to skills gaps, hiring discrimination, and safety concerns. Social norms may further limit their participation in community consultations if engagement processes are not specifically designed to be inclusive of women.

Mitigation measures:

- Conduct gender-disaggregated socioeconomic surveys and censuses of project-affected persons to identify and document women's livelihood assets, land use rights, and customary entitlements within road rights-of-way.
- Apply gender-responsive compensation procedures that explicitly recognize and compensate women's customary land and livelihood rights, including rights held informally or under tenancy arrangements.
- Implement minimum employment targets for women in medium and high-skilled road construction and maintenance jobs, including equal pay provisions and anti-harassment clauses in all civil works bidding documents.
- Deliver TVET-linked certification and mentorship programs to build women's technical skills and support access to long-term employment in the transport sector.
- Ensure that community consultation processes use women-friendly formats, including separate women's focus groups, appropriate meeting times and locations, and engagement through established women's groups and community-based organizations.
- Establish dedicated, safe, and confidential SEA/SH complaint entry points within the project GRM, with referral pathways to GBV service providers mapped in each project area before works commence.
- Track women's outcomes through disaggregated PDO and intermediate result indicators covering direct beneficiaries, employment shares, and post-harvest loss reduction for women farmers.

5.4.2 Youth

Who they are: Youth (persons aged 15–34) constitute approximately 35 percent of Ghana's population and are disproportionately affected by unemployment and underemployment in rural project areas, where agricultural seasonality limits year-round income opportunities and limited skills reduce access to better-paying jobs.

Specific risks: Youth in project communities face risks of exclusion from project employment opportunities if recruitment processes favor experienced workers from outside the community. Young women face compounded risks of SEA/SH and economic marginalization. Youth may also be at risk of engagement in child labor on construction sites or in supply chains — particularly in informal aggregate crushing, quarrying, and water carrying activities — where enforcement of age verification is limited.

Mitigation measures:

- Require contractors to allocate a minimum of 30 percent of total labor costs to local staff and personnel, with targeted outreach to youth within project communities.
- Implement age verification protocols for all workers at recruitment, consistent with the Children's Act, 1998 (Act 560) and ILO Conventions 138 and 182, and maintain worker age registers at all construction sites.
- Conduct regular monitoring of construction sites and supply chains for child labor, with clear escalation procedures to the Department of Social Welfare and local child protection authorities if violations are identified.
- Integrate youth employment and skills development objectives into TVET-linked certification programs under Component 3, providing pathways for young people to access certified skills in road construction and maintenance.
- Engage youth associations and community youth leaders as consultation channels in the SEP to ensure youth perspectives are represented in project decision-making.

5.4.3 Persons with Disabilities (PwDs)

Who they are: Persons with physical, sensory, cognitive, and psychosocial disabilities are present across all project communities. They face disproportionate barriers to mobility, market access, employment, and participation in public decision-making processes, and are among the least visible groups in rural community consultations.

Specific risks: PwDs face risks of exclusion from project consultations due to inaccessible meeting venues, communication formats unsuited to sensory impairments, and social stigma. They may be further disadvantaged by road designs that do not incorporate universal accessibility standards, limiting their ability to benefit from improved road connectivity. During construction, active worksites pose heightened physical safety risks for PwDs navigating road corridors, particularly those with visual or mobility impairments.

Mitigation measures:

- Design all rehabilitated road infrastructure to incorporate universal accessibility standards, including appropriate pedestrian crossing facilities, walkways with tactile paving, accessible signage, and drainage design that does not create mobility barriers.
- Ensure that community consultation venues, formats, and information materials are accessible to PwDs, including provision of sign language interpretation where required and use of accessible information formats for visually impaired persons.
- Ensure GRM channels are accessible to PwDs, including written, verbal, and community-based reporting options.
- Implement construction site safety measures — including clearly marked pedestrian detour routes and temporary crossings — that explicitly account for the needs of PwDs navigating around active worksites.
- Engage disabled persons' organizations (DPOs) active in project areas as consultation stakeholders in the SEP.

5.4.4 Elderly Persons

Who they are: Elderly persons — particularly those aged 65 and above — in rural project communities may have limited mobility, fixed incomes, dependency on subsistence agriculture, and reduced capacity to engage in consultation processes or assert their rights during compensation and land acquisition processes.

Specific risks: Elderly persons face heightened risks of disproportionate impact from temporary loss of access to markets and services during road construction, as they may have fewer alternative means of transport or income. They may also be less able to navigate formal compensation procedures, particularly where land and property rights are undocumented, and may be underrepresented in community consultations due to mobility constraints.

Mitigation measures:

- Conduct targeted household-level consultations with elderly persons during socioeconomic surveys and RAP preparation to ensure their assets and rights are fully documented.
- Provide facilitated support to elderly affected persons in navigating compensation and grievance procedures, including through community facilitators and local government social welfare officers.
- Ensure that construction phasing and traffic management plans maintain continuous access to essential services — including health facilities and markets — for persons with limited mobility.
- Include elderly persons as a specifically identified vulnerable group in the SEP, with targeted outreach and facilitated participation in community consultations.

5.4.5 Roadside Traders and Informal Vendors

Who they are: Roadside traders and informal vendors — the majority of whom are women — conduct their livelihoods along feeder road rights-of-way and at roadside market points. Many lack formal documentation of their trading locations and are not recognized as formal landowners under national law, making them particularly vulnerable during right-of-way clearance processes.

Specific risks: This group faces the most immediate and direct risk of economic displacement from road rehabilitation activities, including temporary or permanent loss of trading income, structures, and market access. As they frequently lack formal tenure or documentation of their trading rights, they risk being overlooked in compensation assessments if specific procedures are not established to identify and protect them. This constitutes an economic displacement impact under ESS5, requiring specific provisions in the RF and site-specific RPs.

Mitigation measures:

- Conduct detailed censuses and socioeconomic surveys of all roadside traders and informal vendors within road rights-of-way during RP preparation, regardless of their formal tenure status, consistent with ESS5 requirements.
- Provide compensation for all affected traders for loss of income, structures, and assets at full replacement cost prior to clearance, irrespective of formal land title.
- Implement livelihood restoration measures for severely affected traders, including temporary relocation to alternative trading locations and income restoration support during the construction period.
- Engage affected traders directly and meaningfully in consultations on road design, construction scheduling, and access management to minimize disruption to their livelihoods.
- Maintain access to existing market locations through phased construction scheduling and alternative access routes wherever feasible.

5.4.6 Residents of Remote Northern Communities

Who they are: Communities in the northern savannah regions — including the Northern, Savannah, and Upper West regions — face compounding vulnerabilities including the lowest road density in Ghana, highest food insecurity rates, limited access to health and education services, greater climate risk from irregular rainfall and flooding, and deeper infrastructure deficits relative to the rest of the country.

Specific risks: These communities face heightened risks of being underserved by the project if road selection processes do not adequately weight food insecurity and infrastructure deficits. They may also have lower capacity to engage in formal consultation and grievance processes due to limited literacy rates, geographic remoteness, and language diversity. Their dependence on subsistence agriculture and seasonal road access makes them acutely vulnerable to any construction-related disruption of market connectivity during the agricultural season.

Mitigation measures:

- The project's cluster selection methodology explicitly weights food insecurity and road network quality to direct resources toward the most underserved areas, including northern regions.
- Implement targeted community outreach and consultation using local languages — including Dagbani, Gurune, Gonja, Wali, and other northern languages — in all engagement activities within northern project clusters.
- Engage local community radio stations and mobile outreach teams to disseminate project information to remote communities with limited access to formal communication channels.

- Schedule construction activities to avoid peak agricultural periods wherever possible to minimize disruption to subsistence farming and market access in food-insecure communities.
- Ensure GRM entry points are accessible to remote communities, including through community facilitators, local government structures, and mobile complaint registration options.
- Engage NGOs and civil society organizations with established presence in northern Ghana as community liaison partners in the SEP.

5.5 Planning and Design Considerations for Avoidance of Environmental and Social Risks and Impacts

Avoiding and minimizing environmental and social risks at the earliest possible stage of subproject planning and design is the most cost-effective and impactful approach to E&S risk management. For the Ghana Market Access and Connectivity Project, where the exact road segments will be identified and finalized during implementation through the three-step prioritization framework, the integration of environmental and social considerations into planning and design processes — before civil works contracts are awarded — is both a regulatory requirement under the World Bank's ESF and a practical necessity for reducing implementation delays, cost overruns, and community conflicts. The following measures will be applied systematically during subproject planning and design.

5.5.1 Environmental and Social Screening

All candidate road segments identified through the project's prioritization framework will be subject to a structured environmental and social screening process before selection is finalized and designs are commissioned. The screening process will use a standardized E&S screening checklist — included as Annex 2 to the ESMF — to rapidly assess each candidate road segment against key environmental and social sensitivity parameters, including:

- Proximity to protected areas, forest reserves, Key Biodiversity Areas (KBAs), Ramsar sites, and riparian buffer zones.
- Presence of critical habitats, ecologically sensitive ecosystems, and wildlife corridors along the proposed road alignment.
- Presence of known cultural heritage sites, community shrines, sacred groves, and archaeological sites within or adjacent to the road corridor.
- Extent of anticipated land acquisition, physical displacement, and economic displacement within the road right-of-way.
- Presence of vulnerable groups — including roadside traders, female-headed households, elderly persons, and persons with disabilities — within the zone of influence.
- Proximity to sensitive community receptors including schools, health facilities, water sources, and residential areas.
- Flood risk, slope instability, and climate-related hazards along the road alignment.

Screening outcomes will determine the level of environmental and social assessment required for each subproject — ranging from application of Environmental Codes of Practice (ECOP) for low-risk road segments to preparation of full site-specific ESMPs and RPs for higher-risk segments — consistent with a proportionate, risk-based approach. Road segments presenting unacceptable risks — including those requiring massive displacement, significant impacts on critical habitats, or

serious risks to cultural heritage that cannot be adequately mitigated — will be excluded from the project in accordance with the negative list established in the ESMF.

5.5.2 Consideration of Alternative Alignments and Technologies

Where preliminary screening identifies significant environmental or social risks associated with a proposed road alignment, the project will systematically consider technically and economically feasible alternatives before finalizing designs. Alternative assessment will consider:

- **Alternative alignments:** Where a proposed road alignment traverses ecologically sensitive areas, protected area buffer zones, riparian buffers, or areas with significant cultural heritage or resettlement risk, alternative alignments that achieve equivalent connectivity outcomes while avoiding or reducing these sensitivities will be evaluated. The project's GIS-based road prioritization analytical tool enables rapid comparison of alternative road links based on both connectivity performance and E&S sensitivity layers, supporting evidence-based alignment decisions.
- **Alternative road technologies:** The choice between paved and unpaved road surfaces will be determined through the SPADE PLUS multicriteria methodology, which incorporates social, climate, environmental, and engineering considerations alongside economic justification. In areas with high biodiversity sensitivity or significant resettlement risk associated with road widening for paving, unpaved but climate-resilient surface treatments may be preferred where economically justified, limiting the footprint of civil works and reducing associated E&S impacts.
- **Alternative construction methodologies:** Where works near watercourses, wetlands, or sensitive habitats present significant risks, alternative construction methods — such as directional drilling for fiber optic cable installation under watercourses instead of open-cut trenching, or prefabricated bridge structures instead of in-situ concrete construction — will be considered to reduce environmental disturbance and construction timelines.
- **Phased construction scheduling:** Construction scheduling will be designed to avoid peak agricultural seasons and key wildlife breeding periods wherever feasible, minimizing disruption to farming communities and sensitive fauna in the project areas.

5.5.3 Climate-Resilient Road Design

All feeder road designs will incorporate climate resilience measures from the onset, consistent with the World Bank's Resilient Transport Guidance Note and the project's Paris Alignment commitments. Specific design provisions include:

- Upgraded drainage systems, including adequately sized culverts, side drains, and cross-drainage structures designed to accommodate projected increases in rainfall intensity under climate change scenarios.
- Climate-resilient road surface designs that account for temperature increases, flooding risk, and soil moisture variability along the road corridor.
- Bridge and drainage structure sizing based on hydrological analysis that incorporates climate change projections for flood return periods relevant to the design life of the infrastructure.
- Slope stabilization and erosion protection measures — including vegetative slope cover, retaining structures, and rock armoring — at locations prone to erosion and landslide risk.

- Road surface and pavement design specifications that account for increased temperatures and rainfall variability projected for each agroecological zone.

These measures are intended to ensure that the project's infrastructure investments remain functional and deliver their intended development benefits over the full design life of the rehabilitated roads, reducing the frequency and cost of emergency maintenance interventions.

5.5.4 Road Safety Integration from Design Stage

Road safety considerations will be integrated into feeder road designs from the earliest design stage, consistent with the World Bank's Road Safety Screening and Appraisal Tool (RSSAT) and the iRAP assessment methodology. Design-stage road safety provisions include:

- Geometric design standards that minimize sharp curves, steep gradients, and limited sight distances that increase accident risk.
- Provision of dedicated pedestrian walkways, pedestrian crossing facilities, rumble strips, and speed management measures at locations where vulnerable road users — including pedestrians, cyclists, and motorcyclists — are concentrated, such as schools, markets, health facilities, and residential areas.
- Roadside signage, road markings, and reflective delineators along the full length of rehabilitated corridors.
- Universal accessibility design at pedestrian crossings and roadside facilities, consistent with the needs of persons with disabilities and elderly users.
- Road Safety Audits conducted at the detailed design stage by qualified road safety auditors, prior to finalization of construction drawings, to identify and address safety risks before works commence.

5.5.5 Minimizing the Footprint of Civil Works

A core principle of the project's design approach is to limit the environmental and social footprint of civil works to the minimum necessary to achieve connectivity and durability objectives. Specific measures include:

- Rehabilitating roads within their existing alignments and rights-of-way wherever feasible, avoiding the need for new land acquisition or vegetation clearance beyond the established corridor.
- Limiting vegetation clearance strictly to the minimum width required for road works, retaining mature trees, riparian vegetation, and ecologically important species wherever possible.
- Siting construction camps, material stockpiles, and equipment laydown areas on previously disturbed land wherever feasible, avoiding clearance of natural vegetation for temporary construction facilities.
- Siting borrow pits on degraded or previously disturbed land, avoiding ecologically sensitive areas, riparian buffer zones, agricultural land, and community assets.
- Locating asphalt mixing plants, crushing facilities, and concrete batching plants at sufficient distance from sensitive community receptors — including schools, health facilities, and residential areas — to minimize dust, noise, and vibration impacts.

5.5.6 Integration of Environmental and Social Requirements into Technical Designs and Bidding Documents

Environmental and social requirements will be systematically integrated into technical design specifications, Bills of Quantities (BOQs), and bidding documents for all civil works contracts, ensuring that E&S management obligations are clearly defined and priced as part of the contract from the outset. Specific provisions include:

- Inclusion of Environmental Codes of Practice (ECOP) as a mandatory annex to all civil works contracts, establishing minimum E&S performance standards for all construction activities.
- Inclusion of site-specific ESMP requirements, OHS management plan requirements, Waste Management Plan requirements, Traffic Management Plan requirements, and Chance Find Procedure requirements in the contract specifications.
- Inclusion of mandatory SEA/SH clauses, codes of conduct, and worker GRM requirements in all civil works contracts.
- Specification of minimum local labor recruitment targets (at least 30 percent of total labor costs allocated to local staff) in bidding documents.
- Inclusion of borrow pit management plan requirements and environmental rehabilitation bond provisions in contracts.
- Clear delineation of contractor reporting obligations on E&S performance, OHS incidents, and GRM activity in Monthly Progress Reports submitted to the supervision consultant and PCU.

By embedding these requirements in contracts before works are awarded, the project ensures that contractors have priced and planned for E&S management from mobilization, reducing the risk of non-compliance, disputes, and cost claims during implementation.

5.5.7 Emergency Preparedness and Response Planning

Construction of feeder roads in remote rural areas carries inherent risks of accidents, environmental emergencies including fuel spills and flooding, and community health emergencies including disease outbreaks. Emergency preparedness provisions will be integrated into project design and contractor requirements, including:

- Mandatory preparation of site-specific Emergency Response Plans by all contractors prior to commencement of works, covering procedures for construction accidents, fuel and chemical spills, fire, and medical emergencies.
- Provision of first aid facilities, trained first aiders, and emergency communication equipment at all active construction sites.
- Establishment of clear notification and escalation procedures for environmental and social incidents, including reporting to the AIT within 24 hours and to the World Bank within 48 hours for serious incidents.
- Activation procedures for the project's Contingent Emergency Response Component (CERC) in the event of a natural disaster or climate-related emergency affecting project areas or completed infrastructure, with a CERC manual detailing the E&S aspects of eligible activities and a positive list of interventions.
- Coordination with local health authorities and emergency services in each project district to ensure that construction-related emergencies can be rapidly escalated to appropriate response agencies.

6 Procedures and Implementation Arrangements

6.1 Environmental and Social Risk Management Procedures

The environmental and social risk management procedures for the Ghana Market Access and Connectivity Project will be implemented through the procedural framework presented in Table 6.1 below. This framework provides a clear, time-bound, and role-specific roadmap to manage environmental and social risks and impacts across the full project cycle. It aligns national permitting requirements under Ghana's Environmental Assessment Regulations (L.I. 2504) and the Environmental Protection Act, 2025 (Act 1124) with the World Bank's Environmental and Social Framework (ESF), embeds inclusive stakeholder engagement and robust grievance mechanisms, and ensures that contractors and supervising entities have the tools and accountability needed to deliver outcomes consistent with Good International Industry Practice (GIIP) and the World Bank Group Environmental, Health, and Safety (EHS) Guidelines. Refer to Annex 4.

Table 6-1: Project Cycle and Environmental and Social Management Procedures

Project Stage	E&S Stage	E&S Management Procedures	Responsible Party	Timeframe
a. Assessment and Analysis: Subproject identification	Screening	- Prior to any road segment being confirmed for inclusion in the project, apply the project Exclusion List (Table 6.2) to verify subproject eligibility. Road segments that would require massive physical displacement, result in significant irreversible impacts on critical habitats or protected areas, or pose unacceptable risks to cultural heritage will be excluded from the project.	AIT/DFR E&S Specialists	During road selection, prior to detailed design commissioning
		- For all candidate road segments identified through the three-step prioritization framework, apply the standardized E&S Screening Form (Annex 1) to rapidly assess potential environmental and social risks and impacts, identify the zone of influence, determine the presence of sensitive receptors and vulnerable groups, and identify the level and type of E&S instrument required.	AIT/DFR E&S Specialists	During road selection
		- Based on screening outcomes, classify each subproject into one of three risk tiers: (i) Low risk — apply Environmental Codes of Practice (ECOP) only; (ii) Moderate risk — prepare a site-specific ESMP; (iii) Substantial risk — prepare a full ESIA and/or ESMP, RP, Biodiversity Management Plan (BMP), and/or other relevant instruments as indicated by screening results. Please refer to the exclusion list for interventions excluded.	AIT/DFR E&S Specialists, with World Bank review	At conclusion of screening
		- Identify all documentation, permits, and clearances required under Ghana's Environmental Assessment Regulations (L.I. 2504), including EPA environmental permit registration, Water Use Permits from the WRC, and any Minerals Commission permits for borrow pit operations. Initiate early engagement with the EPA to confirm permitting timelines and avoid construction mobilization delays.	AIT/DFR, MRH	During screening, at least 3 months before planned works commencement
		- Prepare a screening report for each subproject or package of subprojects summarizing the screening findings, proposed E&S risk classification, and recommended E&S instruments. Share the screening report with the World Bank for review and concurrence before proceeding to the planning stage.	AIT/DFR E&S Specialists	Within 30 days of completing screening for each package
		- Following World Bank concurrence on the screening report, prepare Terms of Reference (TOR) for the preparation of required E&S instruments (ESMPs, RPs, BMPs, etc.) and share with the World Bank for review and clearance before consultant engagement or in-house preparation commences.	AIT/DFR, with World Bank prior review	Within 2 weeks of receiving World Bank concurrence on screening report
b. Formulation and Planning: Planning for subproject activities, including human and budgetary	Planning	- Based on the agreed E&S instruments and TOR, commission or prepare all required site-specific environmental and social assessments and management plans. As a minimum, all road segments with Moderate or Substantial risk ratings must have site-specific ESMPs prepared and cleared before commencement of civil works. For road segments involving land acquisition or displacement, site-specific RPs must be prepared, disclosed, and fully implemented (including compensation payment) before civil works commence.	AIT/DFR E&S Specialists, or contracted E&S consultants	Completed and cleared before bidding documents are issued for each package

Project Stage	E&S Stage	E&S Management Procedures	Responsible Party	Timeframe
resources and monitoring measures		- For subprojects requiring any of the following instruments, prepare and share with the World Bank for prior review and No Objection before initiating bidding processes: (a) Environmental and Social Impact Assessment (ESIA); (b) Resettlement Plan (RP); (c) Biodiversity Management Plan (BMP); (d) Livelihood Restoration Plan (LRP); (e) SEA/SH Response Plan updates; (f) site-specific ESMPs for Substantial-risk road segments. The World Bank's prior review requirement applies to all first-year subprojects and to any subproject presenting novel or heightened risks.	AIT/DFR, World Bank (prior review)	At least 60 days before planned bidding for each package
		- Ensure all required EPA environmental permits, Water Use Permits, and other national regulatory clearances are obtained before civil works contracts are signed. Maintain copies of all permits in the AIT project files and make them available for World Bank review during implementation support missions.	AIT/DFR, MRH	Before contract signing for each road package
		- Conduct meaningful stakeholder consultations on site-specific ESMPs and RPs with project-affected communities and relevant stakeholders, consistent with the project SEP. Ensure consultation processes are inclusive of women, vulnerable groups, and remote communities, using local languages and accessible formats. Disclose finalized E&S instruments in accessible locations in project-affected communities and on the MRH/DFR website, consistent with the World Bank's Access to Information Policy.	AIT/DFR Social Specialists, community facilitators	During ESMP/RP preparation, before disclosure and finalization
		- Conduct census and socioeconomic surveys of all project-affected persons within road rights-of-way, using the RPF procedures. Prepare site-specific RPs for all road segments involving physical or economic displacement. Ensure all compensation is assessed by the Lands Valuation Division (LVD) and paid to affected persons at full replacement cost before any clearance or civil works commence in affected areas.	AIT/DFR Social Specialists, LVD	At least 3 months before planned works commencement in each affected area
		- Incorporate all relevant E&S requirements — including site-specific ESMP provisions, ECOP, OHS Management Plan requirements, Waste Management Plan requirements, Traffic Management Plan requirements, Chance Find Procedure, SEA/SH clauses, codes of conduct, and worker GRM requirements — into civil works bidding documents, contract specifications, and BOQs. Ensure that E&S management costs are explicitly priced in contractor bids.	AIT/DFR Procurement and E&S Specialists	During bidding document preparation, before tender issuance
		- Require all civil works contractors to prepare Contractor Environmental and Social Management Plans (C-ESMPs) before mobilization, covering OHS management, waste management, traffic management, spill prevention and response, borrow pit management, labor management, SEA/SH prevention, and community relations. Review and approve C-ESMPs before authorizing contractor mobilization to site.	AIT/DFR E&S Specialists, Supervision Consultant	Before contractor mobilization
		- Conduct pre-construction E&S induction training for all AIT E&S specialists, supervision consultants, and contractor site teams before works commence, covering: E&S obligations under the ESF and national legislation; ESMP and C-	AIT/DFR E&S Specialists, with	Before any works commence; repeated

Project Stage	E&S Stage	E&S Management Procedures	Responsible Party	Timeframe
		ESMP requirements; OHS standards; codes of conduct and SEA/SH prevention; GRM procedures; and Chance Find Procedure. Maintain training records in AIT project files.	World Bank support	for new staff and contractors as needed
c. Implementation and Monitoring: Implementation support and continuous monitoring	Implementation	- Implement all site-specific ESMPs, C-ESMPs, RPs, BMPs, and LRPs throughout the construction period. The AIT E&S Specialists, supported by the Supervision Consultant's resident E&S staff, will conduct weekly site inspections during active construction to verify contractor compliance with E&S requirements, OHS standards, and community engagement commitments. Inspection findings will be recorded using standardized site inspection checklists and included in Monthly Progress Reports.	AIT/DFR E&S Specialists, Supervision Consultant	Throughout construction period
		- The Supervision Consultant will prepare Monthly E&S Compliance Reports covering: progress on ESMP and C-ESMP implementation; OHS performance including incidents and near-misses; GRM activity including complaints received, under review, and resolved; RP implementation progress including compensation payment status; environmental permit compliance; SEA/SH prevention and response activities; and any non-compliance issues identified and corrective actions taken. Reports will be submitted to the PCU within 10 days of month-end.	Supervision Consultant, reviewed by AIT/DFR	Monthly throughout construction
		- The PCU will prepare biannual E&S Progress Reports covering all components and packages, for submission to the World Bank within 45 days from the end of each six-month reporting period. Reports will include the status of ESMP implementation, RP implementation, GRM performance, OHS performance, SEA/SH incident reporting, stakeholder engagement activities, and progress against E&S-related M&E indicators.	AIT/DFR E&S Specialists, Project Coordinator	Every six months throughout implementation
		- Operate and maintain the project-level GRM throughout the implementation period, consistent with the SEP. Ensure all grievances received through any GRM channel are logged, acknowledged within 5 working days, investigated, and resolved or escalated within 2 weeks of receipt. Maintain a GRM register and report GRM performance in Monthly and Biannual Progress Reports. Ensure dedicated, confidential SEA/SH complaint channels are operational at all times.	AIT/DFR Social Specialists, community facilitators	Throughout implementation; GRM operational before works commence in each area
		- Monitor and track RP implementation progress, including compensation payment status for all affected persons, livelihood restoration measures, and resolution of any outstanding disputes. No civil works will commence in any area where compensation payments under the RP have not been fully disbursed and documented.	AIT/DFR Social Specialists	Continuously throughout implementation
		- Conduct regular community feedback meetings — at minimum quarterly — in project-affected communities to provide updates on project progress, address community concerns, and collect feedback on contractor behavior and E&S	AIT/DFR Social Specialists, community facilitators	Quarterly throughout construction in each project area

Project Stage	E&S Stage	E&S Management Procedures	Responsible Party	Timeframe
		performance. Document meeting proceedings and integrate feedback into project management.		
		- The World Bank will conduct at minimum biannual Implementation Support Missions, including field visits to active construction sites, to review E&S performance, assess compliance with the ESCP, and provide technical guidance on E&S management. Mission findings and agreed action plans will be recorded in Aide Mémoires shared with MRH.	World Bank Task Team	Biannually throughout implementation
		- Report all serious E&S incidents — including fatalities, serious OHS incidents, SEA/SH incidents, environmental pollution events, and community conflicts — to the AIT within 24 hours of occurrence and to the World Bank within 48 hours, consistent with the ESCP. Investigate all serious incidents and prepare incident reports with root cause analysis and corrective action plans within 10 working days.	Contractor, Supervision Consultant, PCU	Within 24–48 hours of incident; investigation report within 10 working days
		- Monitor compliance with national EPA permit conditions, including submission of Annual Environmental Reports (AERs) to the EPA as required under L.I. 2504. Maintain records of all EPA, WRC, and Minerals Commission permit conditions and compliance status in the AIT project files.	AIT/DFR E&S Specialists	Annually; permit condition compliance monitored throughout construction
d. Review and Evaluation: Qualitative, quantitative, and/or participatory data collection	Completion	- Upon completion of civil works on each road package, conduct a post-construction E&S compliance assessment to verify that all ESMP commitments have been fulfilled, all RP obligations have been discharged, all borrow pits and construction camps have been rehabilitated, all construction waste has been removed and properly disposed of, and all OHS and GRM documentation is complete and archived.	AIT/DFR E&S Specialists, Supervision Consultant	Within 30 days of practical completion of each road package
		- Conduct a final verification of borrow pit rehabilitation, including re-grading, drainage restoration, and revegetation with native species, before contractor demobilization is approved and final payment certificates are issued. Retain borrow pit rehabilitation bonds until the PCU is satisfied that rehabilitation has been completed to the required standard.	AIT/DFR E&S Specialists, Supervision Consultant	Before contractor demobilization and final payment
		- Conduct post-construction stakeholder consultations and community feedback assessments in project-affected communities to evaluate community satisfaction with E&S management, road quality, contractor behavior, and GRM performance during construction. Document and report findings in the post-construction E&S compliance assessment report.	AIT/DFR Social Specialists	Within 60 days of practical completion of each road package
		- Assess whether all RP livelihood restoration measures have been effectively implemented and that affected persons have achieved at minimum their pre-project standard of living. Where livelihood restoration is incomplete or unsuccessful, implement remedial measures consistent with the RF and ESS5 requirements.	AIT/DFR Social Specialists	At project completion and 12 months post-construction for severely affected persons
		- Document any outstanding grievances, unresolved compensation disputes, environmental legacy issues, or outstanding permit conditions, and develop	AIT/DFR E&S Specialists,	At project completion

Project Stage	E&S Stage	E&S Management Procedures	Responsible Party	Timeframe
		time-bound remediation plans. Alert the World Bank to any outstanding issues that may require continued attention during the defects liability period or post-project.	Project Coordinator	
		- Prepare a final E&S completion report as part of the Government's Implementation Completion Report, to be submitted to the World Bank no later than six months after the project closing date. The report will document E&S performance against ESCP commitments, M&E indicators, and ESMP implementation outcomes, capture lessons learned and propose recommendations for future projects.	AIT/DFR E&S Specialists, Project Coordinator	No later than 6 months after project closing date (December 2031)

a. Subproject E&S Screening and Statutory Registration

Step 1: The DFR AIT Environmental and Social Specialist will screen all proposed road segments and associated subproject activities to ensure that they fall within the boundaries of the project's eligible activities and do not correspond to any activity listed on the E&S Exclusion List in Table 6.2 below.

Screening against the Exclusion List will be conducted as the first step of the E&S screening process for every candidate road segment identified through the project's three-step prioritization framework, before any design resources are committed or procurement processes are initiated. Where a proposed subproject activity or road segment is found to meet one or more of the exclusion criteria, it will be removed from the project pipeline and an alternative road segment or activity will be identified through the prioritization framework. The DFR AIT will document all exclusion decisions in the project's E&S Screening Register and report them to the World Bank as part of the biannual E&S Progress Reports.

No activity on the Exclusion List will be financed under the project under any circumstances, including under the Contingent Emergency Response Component (CERC). The CERC positive list — included as Annex 6 to the ESMF — will be developed consistently with the Exclusion List to ensure that emergency response activities activated under Component 4 also comply with these restrictions.

Table 6-1: E&S Exclusion List — Ghana Market Access and Connectivity Project

#	Excluded Activity	Basis for Exclusion
1	Activities involving the production, trade, storage, or transport of weapons, ammunition, mines, explosives, or military equipment of any kind.	World Bank Core Exclusion; incompatible with project development objectives
2	Activities supporting the production, processing, or trade of hazardous goods including alcohol, tobacco, gambling services, radioactive materials, or controlled substances.	World Bank Core Exclusion
3	Any construction, rehabilitation, or maintenance works within the boundaries of nationally designated protected areas, including national parks, resource reserves, wildlife sanctuaries, strict nature reserves, and Ramsar wetland sites, as defined under Ghana's Wildlife Conservation Regulations and international conservation designations.	ESS6; Environmental Protection Act, 2025 (Act 1123); Wildlife Conservation Regulations
4	Activities that have the potential to cause significant loss, degradation, or conversion of critical natural habitats — whether directly or indirectly — including primary forests, intact forest landscapes, ecologically sensitive riparian zones, coastal wetlands, and mangrove ecosystems, or which would lead to adverse and irreversible impacts on natural habitats and ecosystem services.	ESS6; World Bank Core Exclusion
5	Activities involving the extensive harvest, extraction, or commercial trade of forest resources — including timber, poles, bamboo, charcoal, non-timber forest products, and wildlife — for large-scale commercial purposes.	ESS6; Timber Resources Management Act; Forest and Wildlife Policy
6	Activities involving the conversion of forestland — including forest reserves, community forests, and riparian forest — into agricultural land, or logging activities in primary or intact forest areas.	ESS6; Ghana Forest and Wildlife Policy
7	Purchase, storage, use, or financing of pesticides, herbicides, insecticides, or other agrochemicals classified as WHO Category 1A or 1B (extremely or highly hazardous), or any chemical banned or restricted under Ghanaian national law, including the Environmental Protection Act, 2025 (Act 1123) and the Plants and Fertilizer Act, 2010 (Act 803).	ESS3; WHO Hazardous Pesticide Classification; Plants and Fertilizer Act, 2010
8	Construction of new dams or structural rehabilitation of existing dams, including any operational changes to existing dams; and irrigation or water supply	OP 7.50; World Bank Dam Safety Policy

#	Excluded Activity	Basis for Exclusion
	infrastructure that would depend on the storage and operation of an existing dam, a dam under construction, or a planned dam for its water supply.	
9	Activities involving the use, diversion, abstraction, or pollution of international waterways, transboundary rivers, or shared water bodies in a manner that may affect the quantity or quality of water available to riparian states, without the notification and consent procedures required under OP 7.50.	OP 7.50 on Projects on International Waterways
10	Any civil works, excavation, or construction activity that will knowingly cause direct, adverse, and irreversible impacts on known or documented physical and tangible cultural heritage sites, including graves, burial grounds, ancestral shrines, sacred groves, community cultural sites, temples, mosques, churches, historical monuments, archaeological sites, or other structures of historical, cultural, or spiritual significance, as identified through pre-construction community consultation or heritage screening.	ESS8; Ghana Museums and Monuments Act
11	Activities that may cause, facilitate, or lead to forced labor, debt bondage, human trafficking, or any form of modern slavery in connection with project-financed activities or supply chains.	ESS2; ILO Conventions; Labour Act, 2003 (Act 651)
12	Activities that employ or engage children under the minimum working age of 15 years in any project-related work, or that employ children between the ages of 15 and 18 in work that is hazardous, interferes with their education, or is harmful to their physical, mental, spiritual, moral, or social development, including informal quarrying, aggregate crushing, water carrying for construction, or any labor on active civil works sites.	ESS2; Children's Act, 1998 (Act 560); ILO Conventions 138 and 182
13	Any civil works, land acquisition, or right-of-way clearance activity on land that has disputed ownership, unresolved boundary conflicts, or tenure rights contested between two or more parties — including disputes between traditional authorities, families, individuals, or communities — without first ensuring that disputes are resolved through agreed legal or customary dispute resolution processes acceptable to all parties.	ESS5; Land Act, 2020 (Act 1036); Lands Commission Act, 2008 (Act 767)
14	Any activity that will require the physical relocation of households — involving the demolition of primary residences and the displacement of persons from their homes — without the prior preparation, disclosure, consultation, and implementation of a site-specific Resettlement Action Plan (RAP) consistent with the project's Resettlement Policy Framework (RPF) and ESS5, and without full compensation at replacement cost being paid to all affected persons before displacement occurs.	ESS5; Land Act, 2020 (Act 1036)
15	Any activity that would require the use of eminent domain or compulsory acquisition powers in a manner that does not comply with the procedural requirements of the Land Act, 2020 (Act 1036) and ESS5, including failure to provide timely, adequate, and effective compensation at full replacement cost prior to displacement.	ESS5; Land Act, 2020 (Act 1036)
16	Any subproject activity presenting significant and complex environmental and social risks and impacts that require a full Environmental and Social Impact Assessment (ESIA) — including activities involving major new road construction on greenfield alignments, large-scale land acquisition affecting more than 200 households, or significant irreversible biodiversity impacts — that cannot be adequately assessed and managed within the framework of a site-specific ESMP prepared under this ESMF. Such activities would require a standalone ESIA subject to separate World Bank review and approval before proceeding.	ESS1; Environmental Assessment Regulations, 2025 (L.I. 2504)
17	Any activity that would require Free, Prior and Informed Consent (FPIC) as defined under ESS7, involving Indigenous Peoples or Sub-Saharan African Historically Underserved Traditional Local Communities whose collective attachment to land, territories, or natural resources would be significantly affected by project activities. Should such communities be identified during subproject screening, the project will conduct a social assessment to determine the applicability of ESS7 and the FPIC requirement before any activity proceeds.	ESS7

#	Excluded Activity	Basis for Exclusion
18	New road construction on entirely greenfield alignments that would open up previously remote and ecologically intact areas, facilitating encroachment, illegal logging, poaching, or agricultural expansion into critical natural habitats, primary forests, or protected area buffer zones. Only rehabilitation of existing road alignments within established rights-of-way is eligible under this project.	ESS6; Project Development Objective
19	Activities involving large-scale commercial quarrying or mining operations for construction materials, including extraction operations that would result in significant and permanent landscape scarring, large-scale resettlement, or serious biodiversity impacts beyond the scale of borrow pit operations necessary to support road rehabilitation works.	ESS3; ESS6; Minerals and Mining Act, 2006 (Act 703)
20	Any feeder road rehabilitation activity located in areas classified as disputed territories under OP 7.60, or in areas subject to active armed conflict, political violence, or security conditions that would prevent the effective implementation of environmental and social management measures and community engagement processes required under the ESF.	OP 7.60 on Projects in Disputed Areas
21	Activities involving the procurement, installation, or use of asbestos-containing materials in any road infrastructure, construction facilities, or associated works financed under the project.	ESS3; WBG EHS Guidelines on Construction
22	Any activity that would knowingly damage, block, or divert the primary access route of a community to essential services — including health facilities, schools, markets, and water sources — for an extended period without providing adequate alternative access routes, consistent with the Traffic Management Plan requirements of the project.	ESS4; Community Health and Safety
23	Subprojects or road segments where the required resettlement impacts cannot be adequately assessed and managed — due to the scale of displacement, complexity of land tenure arrangements, or absence of functioning local government structures — within the timeframe available before planned construction commencement, thereby preventing full compliance with ESS5 prior to works commencing.	ESS5

Step 2: The DFR AIT Environmental and Social Specialists will use the E&S Screening Form in Annex 1 to identify the relevant environmental and social risks specific to the activities or subproject and assign an overall Environmental and Social Risk Category (ESRC) to the subproject. The ESRC will be based on a four-tier scale system: Low, Moderate, Substantial, and High (see Annex 2 for the criteria and thresholds). The assigned risk category will determine the level and type of E&S instrument required, as follows:

- Low: Application of Environmental Codes of Practice (ECOP) only; no standalone ESMP required.
- Moderate: Preparation of a site-specific ESMP or ESMP Checklist for minor works.
- Substantial: Preparation of a full site-specific ESMP, and additional specialized plans as required (e.g., Traffic Management Plan, Waste Management Plan, OHS Plan, Biodiversity Management Plan, RP).
- High: Preparation of a full Environmental and Social Impact Assessment (ESIA) with comprehensive management plans; subject to separate World Bank prior review and approval.

At this stage, where it is statutorily required under Ghana's Environmental Assessment Regulations, 2025 (L.I. 2504), the DFR AIT E&S Specialists will register the proposed undertaking with the Environmental Protection Authority (EPA) by submitting the required registration form and project information to initiate the permitting process. Early registration with the EPA is mandatory and must be completed before the detailed design stage to avoid delays in civil works mobilization. The AIT will

maintain a permit tracking register covering all road packages, updated monthly and reviewed at project progress meetings.

Step 3: The DFR AIT E&S Specialists, in coordination with the MRH PCU, will prepare and share with the World Bank a Screening Report for each subproject or package of road segments. The Screening Report will:

- Clearly describe the proposed subproject activities, geographic location, zone of influence, and estimated scale of works.
- Summarize the key environmental and social risks and impacts identified through the screening process, referencing the screening form findings.
- Identify any sensitive receptors, vulnerable groups, protected areas, cultural heritage sites, or other environmental and social sensitivities within or adjacent to the proposed road corridor.
- Confirm that the proposed subproject does not fall within any category on the E&S Exclusion List (Table 6.2).
- Propose the recommended E&S risk category and the relevant E&S instrument(s) or document(s) that should be prepared to assess and manage the identified risks and impacts.
- Indicate the national regulatory permitting requirements applicable to the subproject, including EPA registration requirements and any other permits required under Ghanaian law.

The Screening Report will be submitted to the World Bank within 30 days of completing the screening for each road package, and before any design resources are committed or procurement processes are initiated for the relevant works.

Step 4: The World Bank Task Team will review the Screening Report shared by the DFR AIT and advise the Borrower on the relevant and proportionate site-specific E&S instruments that should be prepared to assess and manage the identified risks and impacts. The Bank's review will typically be completed within 15 working days of receiving the Screening Report. At this stage, the Bank may also advise on:

- The timelines for preparing the relevant site-specific instruments or documents, taking into account planned procurement and construction schedules.
- Whether national frameworks — including the Environmental Protection (Environmental Assessment) Regulations, 2025 (L.I. 2504) — will be relied upon in full or in part, and any gap-filling measures required to ensure alignment with the World Bank ESF.
- Whether the proposed subproject requires escalation to a higher risk category based on the Bank's own review of the screening findings.
- Any additional studies, surveys, or assessments required before E&S instrument preparation can commence (e.g., biodiversity surveys, cultural heritage assessments, socioeconomic surveys).

Screening Assessment Instruments: Depending on the assigned risk category and the specific context of each subproject, the following instruments may be required, individually or in combination:

- Environmental and Social Management Plan (ESMP) or ESMP Checklist for minor or low-risk road rehabilitation works.
- Specialized management plans, including a Waste Management Plan, Traffic Management Plan, Occupational Health and Safety (OHS) Management Plan, Community Health and

Safety measures, and Biodiversity Management Plan where road alignments traverse or pass adjacent to ecologically sensitive areas.

- Labor Management Plans (LMP) for all project workers, including a worker Grievance Redress Mechanism (GRM).
- Stakeholder Engagement Plan (SEP), including a disclosure and inclusive consultation strategy with targeted measures for women and vulnerable groups.
- Land-related instruments under ESS5, including the Resettlement Framework (RF) — already prepared at project level — and site-specific Resettlement Plans (RPs) or Livelihood Restoration Plans (LRPs) where land acquisition, physical displacement, or access restrictions are anticipated.
- Cultural Heritage Chance Finds Procedure under ESS8, to be included as a standard annex to all site-specific ESMPs and civil works contracts.
- Security Management Plan, if security personnel are engaged at construction sites or along road corridors, consistent with the World Bank's Guidance Note on the Use of Security Personnel.

The ESMF includes decision trees and screening thresholds in Annex 2 to guide instrument selection, timing, and responsibilities. All instruments will be prepared, consulted upon, disclosed, and cleared by the World Bank prior to procurement and construction mobilization, and will be integrated into contracts and supervision plans.

b. Subproject Formulation and Planning — E&S Planning

Subprojects must: (i) align with the Project Development Objective of enhancing sustainable farm-to-market road connectivity and improving Road Asset Management systems; (ii) comply with applicable Ghanaian laws and regulations and the World Bank's Environmental and Social Standards; and (iii) demonstrate technical, financial, and environmental and social feasibility and sustainability. Selection will consider:

- Need and equity: magnitude of road connectivity gaps, pro-poor targeting, priority given to food-insecure and underserved communities, gender and disability considerations in design and implementation.
- Technical soundness: alignment with national road design standards, incorporation of climate resilience features, and viability of operation and maintenance arrangements under the Road Maintenance Trust Fund.
- E&S risk level: feasibility of implementing required mitigation measures within the available timeframe, and consideration of cumulative impacts from multiple road packages in the same cluster.
- Cost-effectiveness and lifecycle value: capital and operation and maintenance costs, climate resilience, and durability of road surface treatments across the design life.
- Community support: documented evidence of stakeholder consultation, community acceptance, and GRM readiness in project areas.

Step 5: Upon receipt of the World Bank's advice on the Screening Report, the DFR AIT E&S Specialists, in coordination with the MRH PCU, will prepare Terms of Reference (TOR) to guide the preparation of the relevant site-specific E&S instrument(s). The TOR will specify: the scope and objectives of the required assessment; the geographic area and zone of influence to be covered; the key environmental and social issues to be addressed; the qualifications required of the E&S consultant(s) who will prepare the instrument; the stakeholder consultation requirements; the disclosure requirements; and the timeline for preparation, review, and finalization. The DFR AIT will

share the TOR with the World Bank for review and No Objection before proceeding to consultant engagement or in-house preparation. The Bank will aim to provide its review of the TOR within 10 working days of receipt.

Step 6: Following the World Bank's No Objection on the TOR, the DFR AIT, with support from MRH PCU, will prepare the relevant E&S instrument(s) using competent E&S specialists — either drawn from the AIT's own staff or engaged as independent consultants — whose qualifications must comply with those specified in the cleared TOR. For site-specific ESMPs and RPs, the project will engage qualified environmental and social consultants with demonstrated experience in transport sector E&S management in Ghana and familiarity with the World Bank's ESF. The site-specific instrument(s) will:

- Adequately characterize the baseline environmental and social conditions of the road corridor and its zone of influence.
- Identify all potential environmental and social risks and impacts associated with the proposed road rehabilitation works across the pre-construction, construction, and operational phases.
- Evaluate the significance of identified risks and impacts, taking into account the sensitivity of affected receptors and the effectiveness of proposed mitigation measures.
- Prescribe appropriate, proportionate, and feasible mitigation measures, management plans, and monitoring requirements, consistent with the Screening Form in Annex 1 and the standard mitigation measures set out in Section 4 of this ESMF.
- Include an implementation schedule, budget, and clear assignment of responsibilities for all mitigation and monitoring measures.

The preparation of all E&S instruments must include meaningful stakeholder consultations with project-affected communities and relevant government authorities, consistent with the project SEP. Consultations must be conducted in accessible local languages, at appropriate times and venues, with targeted participation of women, vulnerable groups, and remote communities. Consultation records — including attendance lists, meeting minutes, photographs, and summaries of issues raised and responses provided — must be documented and included as annexes to the finalized instrument.

Step 7: The DFR AIT will share the draft final E&S instrument(s) with the World Bank for review and clearance. Simultaneously, where required under Ghana's Environmental Assessment Regulations (L.I. 2504), the DFR AIT will submit the relevant instrument — or a national EMP prepared in accordance with L.I. 2504 requirements — to the EPA for review and permitting. The DFR AIT will track the status of both the World Bank review and the EPA permitting process in the AIT's permit tracking register and will address all comments received from the World Bank and the EPA. Where significant revisions are required, the revised instrument will be resubmitted for further review. The World Bank will aim to provide its review of site-specific ESMPs and RPs for first-year packages within 20 working days of receiving the final draft, and within 15 working days for subsequent packages.

Step 8: The World Bank will issue a "No Objection" once all review comments have been satisfactorily addressed and the instrument meets the requirements of the applicable Environmental and Social Standards. Upon receiving No Objection from the World Bank, the DFR AIT will disclose the cleared E&S instrument(s) through appropriate channels, including:

- Publication on the MRH and DFR websites in English and, where applicable, in relevant local languages.
- Physical copies deposited at the offices of the relevant Metropolitan, Municipal, and District Assemblies (MMDAs) within the project areas.
- Physical copies available at community libraries, community information centers, and local government offices in project-affected communities.
- Publication on the EPA website where required as part of the national permitting process.
- Notification to project-affected communities through the project's community liaison officers and the channels established in the SEP.

All disclosure records — including dates of publication, locations of physical copies, and community notification records — will be documented in the AIT's disclosure register and reported in biannual E&S Progress Reports to the World Bank.

Step 9: By this stage, the EPA environmental permit — where applicable — will have been obtained and all World Bank No Objections on the relevant E&S instruments will be in place. The DFR AIT Procurement Specialists, in coordination with the AIT E&S Specialists, will now incorporate the relevant sections of the cleared E&S instrument(s) — including the ESMP mitigation measures, OHS requirements, waste management provisions, traffic management requirements, Chance Find Procedure, SEA/SH clauses, codes of conduct, and EPA permit conditions — into the relevant bidding documents and civil works contracts. This will include embedding E&S management costs explicitly in the Bills of Quantities (BOQs) to ensure contractors have priced E&S obligations from the outset.

It is a firm project requirement that, until the relevant E&S instruments have been cleared by the World Bank, disclosed in-country in accordance with Step 8, and all required EPA permits obtained, no related civil works, ground-disturbing activities, land clearance, or subproject activities of any kind may commence on the ground. This requirement applies to all road packages across all four regional clusters and to any activities activated under the CERC component.

Step 10: Before any civil works or project activities commence in a given road package or subproject area, the DFR AIT E&S Specialists, supported by the Supervision Consultant's E&S team, will conduct mandatory E&S induction training for all DFR AIT staff, supervision consultant personnel, and government officers who will be working on or overseeing the relevant subproject activities. Training will be tailored to each group's roles and responsibilities and will cover, at a minimum:

- The project's E&S obligations under the World Bank ESF and applicable Ghanaian legislation.
- The content and requirements of the cleared site-specific ESMP, RP, LMP, SEP, and other relevant instruments.
- OHS standards, PPE requirements, and emergency response procedures.
- The project's codes of conduct, SEA/SH prevention obligations, and worker and community GRM procedures.
- The Chance Find Procedure and cultural heritage protection requirements.
- Grievance reporting obligations and escalation procedures for serious incidents.

Training records — including attendance lists, training materials, and post-training assessment results — will be maintained by the DFR AIT and made available for review during World Bank Implementation Support Missions. Training will be repeated when new staff are onboarded and when significant changes to subproject scope or design occur.

Step 11: Once civil works contractors are selected and contracts are signed, the DFR AIT E&S Specialists and the Supervision Consultant's E&S team will ensure that all contractors, subcontractors, and primary suppliers understand and incorporate the relevant environmental and social mitigation measures into their Contractor's Environmental and Social Management Plans (C-ESMPs) before mobilization to site is authorized.

Specific responsibilities at this step include:

- Reviewing and approving each contractor's C-ESMP before authorizing site mobilization, confirming that the C-ESMP adequately addresses all ESMP requirements, OHS obligations, waste management measures, traffic management provisions, SEA/SH prevention measures, and GRM commitments.
- Conducting contractor E&S induction training for all site teams — including site managers, supervisors, equipment operators, and laborers — covering the specific E&S requirements applicable to their work, codes of conduct, OHS standards, GRM procedures, and community relations expectations. Training must be completed before any worker is permitted to commence work on site.
- Requiring contractors to develop and implement a cascading training plan to ensure that all subcontractors and primary suppliers receive equivalent E&S and OHS training relevant to their scope of work, and that training records are submitted to the AIT monthly.
- Ensuring that community structures, local government entities, and MMDAs responsible for the ongoing operation and maintenance of rehabilitated road infrastructure have received appropriate training or awareness sessions on operational-phase E&S management measures — including road safety, drainage maintenance, and environmental management during routine maintenance works — as applicable under the project's performance-based maintenance contracts.

c. E&S Implementation and Monitoring

Step 12: During implementation, the DFR AIT E&S Specialists, supported by the Supervision Consultant's resident E&S staff, will conduct regular monitoring visits to all active construction sites to verify contractor compliance with the cleared ESMPs, C-ESMPs, RPs, LMP, and other relevant E&S instruments. Monitoring arrangements are as follows:

- Weekly site inspections by the Supervision Consultant's resident E&S and OHS staff at each active construction site, using standardized site inspection checklists covering ESMP compliance, OHS performance, GRM activity, RP implementation status, community relations, and environmental permit compliance.
- Monthly site inspections by the DFR AIT E&S Specialists to verify the findings of the Supervision Consultant's weekly inspections, review contractor C-ESMP implementation, assess GRM performance, and identify any systemic non-compliance issues.
- Biannual field visits by the World Bank Task Team during Implementation Support Missions, including unannounced site visits to a representative sample of active construction sites across all project clusters.
- Remote monitoring using satellite imagery, drone surveys, and the project's GIS-based road asset management analytical tools — including WIGRAMS data collection outputs — to monitor environmental conditions, vegetation disturbance, borrow pit rehabilitation progress, and road construction progress across geographically dispersed subproject locations where physical access is limited.
- Community-based monitoring through the project's citizen engagement activities, leveraging mobile phone feedback platforms and community liaison officers to collect real-

time feedback from project-affected communities on contractor behavior, construction quality, and E&S performance.

All contractors are responsible for implementing the mitigation measures specified in their approved C-ESMPs, under the oversight of the DFR AIT and the Supervision Consultant. Non-compliance issues identified during monitoring will be recorded in the AIT's Non-Compliance Register and escalated to contractors for corrective action within a defined timeframe, with unresolved issues reported to DFR senior management, MRH PCU and the World Bank.

Table 6-3: Summary of Reporting Arrangements

	Report Prepared by	Submitted to	Frequency of Reporting
1	Contractor's E&S and OHS officers	Supervision Consultant's resident E&S and OHS officers	Daily
2	Supervision Consultant's resident E&S and OHS officers	DFR AIT E&S Specialists	Weekly
3	DFR AIT E&S Specialists	DFR AIT Head	Monthly
4	DFR AIT Head	Project Coordinator	Quarterly
5	Project Coordinator	World Bank Task Team	Half Yearly

Step 13: The DFR AIT E&S Specialists and the Supervision Consultant's E&S team will ensure that all monitoring activities systematically cover the full range of environmental and social risks identified in the ESMF, site-specific ESMPs, RPs, LMP, and other relevant instruments. Monitoring will be structured around the following thematic areas:

- Environmental monitoring: vegetation disturbance and revegetation progress; borrow pit operations and rehabilitation; water quality at construction sites near watercourses; dust, noise, and vibration levels at sensitive receptors; waste management and hazardous material handling; GHG emission reporting; and EPA permit condition compliance.
- Social monitoring: RP implementation progress and compensation payment status; livelihood restoration measures for economically displaced persons; labor influx and community relations; SEA/SH prevention and response; child and forced labor monitoring; cultural heritage chance find compliance; and social inclusion and gender outcomes.
- OHS monitoring: OHS incident statistics including lost-time injuries, medical treatment cases, near-misses, and fatalities; PPE compliance; emergency response preparedness; and worksite registration compliance with the Department of Factories Inspectorate.
- GRM monitoring: number of grievances received by channel, type, and location; response and resolution times; percentage of grievances resolved within 2 weeks; SEA/SH complaints received and referral status; and outstanding unresolved grievances.

Monitoring findings will be compiled by the Supervision Consultant in Monthly E&S Compliance Reports submitted to the AIT within 10 days of month-end, and aggregated by the AIT into Biannual E&S Progress Reports for submission to the World Bank within 45 days of each six-month reporting period.

Step 14: The DFR AIT E&S Specialists and Project Coordinator will prepare biannual E&S Progress Reports and include E&S abstracts in the regular Project Implementation Progress Reports submitted to the World Bank in line with the Environmental and Social Commitment Plan (ESCP). At a minimum, the reporting will include:

(i) The overall status of implementation of E&S risk management instruments and measures across all road packages and project components, including the status of ESMP, RP, LMP, and SEP implementation. (ii) Any environmental or social issues arising as a result of project activities and how these issues have been remedied or will be mitigated, including corrective action plans and timelines. (iii) Occupational Health and Safety performance, including a summary of incidents, accidents, near-misses, lost-time injuries, and fatalities during the reporting period, and corrective actions taken. (iv) Community health and safety performance, including the status of Traffic Management Plan implementation, road safety audit outcomes, and any community health and safety incidents. (v) Stakeholder engagement updates, including a summary of consultations conducted, key issues raised, and responses provided, consistent with the SEP. (vi) Public notification and communications activities, including disclosure of E&S instruments and community information sharing. (vii) Progress on the implementation and completion of project works, including kilometers of road rehabilitated by package and surface type, and status of borrow pit rehabilitation. (viii) A summary of grievances and beneficiary feedback received during the reporting period, including the number and type of complaints, actions taken, and complaints closed, consistent with the SEP and GRM procedures.

Monthly E&S field reports from the Supervision Consultant E&S Specialists at the subproject level will be compiled and aggregated by the DFR AIT at the national level and submitted to the World Bank as part of the biannual reporting cycle. Throughout the implementation stage, the DFR AIT and Supervision Consultant will continue to provide E&S training and awareness raising to relevant stakeholders — including AIT and DFR staff, contractors, subcontractors, and community members — to support the effective implementation of E&S risk management measures. An initial training needs assessment and training plan is provided in Section 6.5.

The DFR AIT will also track grievances and beneficiary feedback throughout project implementation, consistent with the SEP, and use GRM data as a real-time monitoring tool to identify emerging E&S risks, contractor performance issues, and community concerns that require management attention.

Step 15: If the DFR AIT, MRH, or the Supervision Consultant becomes aware of a serious incident in connection with the project that may have significant adverse effects on the environment, the affected communities, the public, or project workers, the Project Coordinator must notify the World Bank within 48 hours of becoming aware of such incident, consistent with the ESCP. A fatality is automatically classified as a serious incident and triggers mandatory 48-hour notification. The following are also classified as serious incidents requiring immediate notification:

- Incidents of forced labor or child labor identified in project activities or supply chains.
- Incidents of sexual exploitation, abuse, or sexual harassment involving project workers and community members.
- Serious OHS incidents including multiple lost-time injuries or permanent disability.
- Major environmental pollution events including significant fuel or chemical spills affecting water resources or community health.
- Violent community protests, civil unrest, or security incidents at or near project sites.
- Significant chance finds of cultural heritage discovered during civil works.

Following the initial 48-hour notification, the DFR AIT will prepare a formal Incident Report within 10 working days, covering a description of the incident, immediate actions taken, root cause analysis, corrective and preventive actions planned, and a timeline for implementation. Incident reports will

be shared with the World Bank and relevant national authorities (including EPA, DFI and Labour Department) as required.

d. Review and Evaluation — E&S Completion

Step 16: Upon completion of civil works activities on each road package, the DFR AIT E&S Specialists and the Supervision Consultant will conduct a comprehensive post-construction E&S compliance assessment before the contract is closed and any final payment certificates are issued. The assessment will verify that:

- All ESMP and C-ESMP commitments have been fully implemented and documented.
- All RP obligations have been discharged, including full compensation payment, livelihood restoration, and resolution of outstanding disputes for all project-affected persons.
- All construction sites, borrow pits, material stockpile areas, and construction camps have been fully rehabilitated and restored to at least the same condition and standard that existed prior to commencement of works, consistent with the site restoration provisions of the ESMP and C-ESMP. Sites must pass a final inspection by the AIT E&S Specialists before contractor demobilization is approved and performance bonds are released.
- All construction waste, hazardous materials, and equipment have been removed from sites and disposed of by licensed contractors.
- All outstanding grievances in the GRM register have been resolved or have agreed escalation pathways in place.
- All EPA permit conditions, including any post-construction monitoring or restoration requirements, have been fulfilled.
- All OHS and incident documentation is complete, archived, and available for audit.

Any pending issues identified during the post-construction assessment must be resolved before the relevant subproject is considered fully completed and the contract is formally closed. The DFR AIT will prepare a Post-Construction E&S Compliance Report for each road package and submit it to the World Bank within 30 days of practical completion.

A final project-wide E&S Completion Report will be prepared by the DFR AIT E&S Specialists and Project Coordinator as part of the Government's Implementation Completion Report, to be submitted to the World Bank no later than six months after the project closing date (i.e., by December 2031). The completion report will document overall E&S performance against ESCP commitments and M&E indicators, summarize lessons learned on E&S management across the project, identify any outstanding legacy issues requiring continued attention, and propose recommendations for future transport sector investments in Ghana. The completion report will be disclosed on the MRH/DFR website and shared with the EPA and other relevant national institutions.

6.2 Implementation Arrangements

The implementation of the environmental and social management procedures outlined in this ESMF involves multiple institutions operating at the national, regional, and local levels of government, as well as supervision consultants, civil works contractors, and community-level structures. Clear delineation of roles, responsibilities, reporting lines, and accountability arrangements is essential given the geographic dispersion of the project across four regional clusters and the Substantial E&S risk rating of the project. DFR's existing network of Regional Offices — which have established operational presence across Ghana's regions and serve as the primary field-level interface for feeder road management — forms the backbone of the project's regional and local E&S management

structure. This section describes the institutional arrangements and provides an analysis of capacity gaps, which are addressed through the capacity building plan in Section 6.5.

6.2.1 National Level

Ministry of Roads and Highways (MRH) is the lead implementing agency for the project and bears overall responsibility for project governance, fiduciary management, and compliance with the World Bank's Environmental and Social Framework. At the national level, MRH will exercise strategic oversight over the entire project — including both Component 1 (feeder road rehabilitation, implemented by DFR) and Component 2 (road maintenance and sustainability, implemented by MRH directly). The MRH's designated Environmental and Social focal points — an Environmental Specialist and a Social Specialist embedded within the MRH project management structure — will provide strategic oversight and quality assurance of all E&S instruments, coordinate with the World Bank Task Team on E&S matters, and ensure that E&S requirements are integrated into all project systems, including procurement, contract management, and financial management. MRH will also oversee the implementation of Sub-component 3.2, which supports institutional capacity building for the Environmental Protection Authority (EPA), the Department of Factories Inspectorate, and the Lands Valuation Division (LVD).

Department of Feeder Roads (DFR) — Headquarters is the primary implementing agency for Component 1, which accounts for the largest share of project financing and the majority of E&S risks. At the national level, DFR Headquarters will host an Agency Implementation Team (AIT), which serves as the operational hub for all day-to-day project activities, including E&S management. The AIT will be staffed with dedicated Environmental and Social Specialists who report to the AIT Head and maintain a functional reporting relationship with the MRH E&S focal points for quality assurance and strategic oversight purposes. The AIT's E&S Specialists will have overall responsibility for: coordinating and overseeing subproject screening; reviewing and clearing site-specific E&S instruments prepared by DFR Regional Offices or independent consultants; managing the project GRM at the national level; engaging with the EPA at the national level on permitting and regulatory compliance; preparing biannual E&S Progress Reports for the World Bank; and coordinating E&S training for all project stakeholders. DFR Headquarters will maintain close operational coordination with DFR's Regional Offices — which are the primary field-level E&S management nodes for the project — through the four regional cluster coordinators embedded in or designated from the Regional Offices.

Environmental Protection Authority (EPA) plays a statutory regulatory role in the project's E&S management framework. Under the Environmental Protection (Environmental Assessment) Regulations, 2025 (L.I. 2504), the EPA is responsible for reviewing and issuing Environmental Permits for project activities requiring mandatory environmental assessment. The EPA will also receive and review environmental monitoring reports as required by permit conditions and will provide regulatory oversight over borrow pit operations, quarrying activities, and other extraction activities financed by the project. Under Sub-component 3.2, the EPA will receive targeted institutional capacity support to strengthen its environmental assessment review capacity, with a particular focus on transport infrastructure projects. The EPA's regulatory independence is maintained throughout; World Bank No Objections and EPA environmental permits are complementary requirements, and both must be in place before works can commence, as described in Section 6.1.

Lands Commission / Lands Valuation Division (LVD) will provide statutory support for all land acquisition, compensation assessment, and resettlement activities required under the project. The LVD will conduct replacement cost valuations for all project-affected assets in accordance with the

Land Act, 2020 (Act 1036) and the project's RF. Under Sub-component 3.2, the LVD will receive capacity building support to strengthen its valuation capacity in project areas. The Lands Commission will also be consulted on land acquisition, registration and administration issues affecting project-affected communities.

Department of Factories Inspectorate of Ministry of Labour, Jobs and Employment (MLJE) will provide regulatory oversight over OHS conditions at all construction sites financed under the project, in accordance with the Factories, Offices and Shops Act, 1970 (Act 328) and applicable OHS regulations. All contractors will be required to register their worksites with the Department before commencing works. Under Sub-component 3.2, the Department of Factories Inspectorate will receive targeted capacity building to strengthen its ability to conduct OHS inspections at feeder road construction sites across the project areas.

The Labour Department, Ministry of Labour, Jobs and Employment (MLJE) will play a critical role in ensuring labour standards, decent work conditions, and compliance with national legislation and World Bank Environmental and Social Standards—particularly ESS2 (Labour and Working Conditions). The Labour Department of MLJE will provide regulatory oversight over labour and working conditions at all construction sites financed under the project, in accordance with the Labour Act, 2003 (Act 651) and Labour Regulations, 2007 (L.I. 1833). The Labour Department will ensure enforcement of the provisions of Act 651 and LI1833 for all employment relationships under the Project, including construction workers, maintenance contractors, AIT staff, and consultants. The Project's Labor Management Procedures (LMP) will be developed in consultation with the Labour Department and aligned with Act 651and the World Bank's ESS2, establishing clear requirements for employment contracts, fair wages, non-discrimination, freedom of association, and prohibition of child and forced labor. Contractors under Component 1 will be required to demonstrate compliance with Act 651 through their labor management plans and periodic reporting to the AITs. The Labour Department will be supported by the project to enforce its provisions on labour and working conditions and the LMP.

Ministry of Food and Agriculture (MoFA) and the Water Resources Commission (WRC) will serve as key technical coordination partners in areas where project activities intersect with agricultural land, irrigation infrastructure, and water resources. MoFA will be consulted during the subproject prioritization process to ensure alignment with the Feed Ghana Programme's agricultural hotspot mapping, and on mitigation measures for impacts on smallholder farmers during road rehabilitation. The WRC will be consulted on any subproject activities near water bodies, riparian buffer zones, or areas covered by existing water use permits.

6.2.2 Regional Level

DFR Regional Offices are the primary operational units responsible for field-level E&S management under the project. DFR maintains Regional Offices across Ghana's regions, and the four regional clusters defined under Component 1 — the Northern Cluster (Northern and Savannah Regions), the Upper East/West Cluster, the Brong-Ahafo and Bono East Cluster, and the Volta and Oti Cluster — will each be anchored around the existing DFR Regional Office structure. The DFR Regional Offices will serve as the interface between the national-level AIT and the subproject districts and communities, and they will carry primary responsibility for day-to-day E&S field management, monitoring, and reporting within their respective clusters.

Each DFR Regional Office participating in the project will designate or recruit a Regional E&S Field Officer — a qualified environmental or social specialist with relevant training and experience — who

will be embedded within the Regional Office and report to the Regional Director on administrative matters and to the AIT E&S Specialists at DFR Headquarters on all technical E&S matters. The Regional E&S Field Officer will be the primary point of contact for the Supervision Consultant's resident E&S staff, the Community Liaison Officers, and the MMDAs within the cluster on all day-to-day E&S matters. Where a single cluster spans multiple regions — as is the case with the Northern Cluster and the Upper East/West Cluster — the DFR Regional Offices for each region within the cluster will jointly coordinate E&S field management under the lead of a designated Regional Cluster Coordinator appointed from one of the participating Regional Offices.

The DFR Regional Offices will be responsible for: conducting or coordinating preliminary E&S screening of candidate road segments within their cluster; completing the Screening Form in Annex 1 for each proposed subproject and submitting Screening Reports to the DFR AIT; supporting the preparation of site-specific ESMPs, RPs, and other E&S instruments — either using the Regional E&S Field Officer or coordinating the engagement of independent consultants under DFR AIT oversight; facilitating EPA registration and permitting at the regional level in coordination with EPA Regional Offices; overseeing and monitoring contractor C-ESMP implementation through the Supervision Consultant's resident E&S staff; managing the regional GRM register and escalating unresolved grievances to the DFR AIT within defined timeframes; and compiling monthly E&S field monitoring reports for submission to the DFR AIT.

The DFR Regional Offices will also coordinate closely with the EPA Regional Offices for environmental permitting, regulatory inspections, and post-construction monitoring compliance; with the Regional Lands Commission offices and LVD district offices on land acquisition and compensation processes; with the DFI and Labour Department Regional offices for coordination on labour and working conditions and OHS related issues; with the Regional Coordinating Councils for broader coordination with regional government; and with the MMDAs within their cluster for community engagement, disclosure, and local GRM support.

6.2.3 District and Local Level

Metropolitan, Municipal, and District Assemblies (MMDAs) within the project areas will facilitate community engagement, support the GRM at the local level, and provide administrative coordination for land acquisition and resettlement activities. MMDAs will host physical copies of disclosed E&S instruments at their offices, provide venues for community consultations, facilitate access to project-affected community members during RP implementation, and support the project's community liaison activities. MMDAs will be kept informed of project progress through the DFR Regional Offices and will be formally copied on all community-level disclosure notices and consultation summaries.

Community Liaison Officers (CLOs) — recruited from within or near project-affected communities — will serve as the first point of contact between the project and project-affected communities on E&S matters. CLOs will be deployed by the Supervision Consultant in each active construction zone and will be responsible for: receiving and recording grievances at the community level; facilitating community-level GRM hearings; providing community members with information on project activities, timelines, and E&S measures in local languages; monitoring contractor compliance with community health and safety provisions; and reporting community concerns to the DFR Regional E&S Field Officer. CLOs will include women and, where relevant, representatives of vulnerable groups.

The Supervision Consultant — a qualified engineering and E&S consulting firm to be procured under the project — will provide independent, full-time construction supervision services for all civil works packages across the four regional clusters. The Supervision Consultant will embed qualified Resident E&S and OHS Specialists at each active construction site or group of adjacent sites throughout the construction period. These specialists will be responsible for: weekly ESMP compliance inspections using standardized checklists; review and approval of contractor C-ESMPs before site mobilization; daily oversight of OHS conditions and PPE compliance; monitoring of borrow pit operations, vegetation clearance, waste management, and water quality protection measures; documentation and reporting of non-compliance issues and corrective actions; and preparation of monthly E&S compliance reports for the DFR Regional Offices and the DFR AIT. The Supervision Consultant's E&S staff will report to the Supervision Consultant's Team Leader on administrative matters and to the DFR Regional E&S Field Officers and DFR AIT E&S Specialists on technical E&S reporting matters. The Supervision Consultant's contract will include explicit KPIs for E&S supervision performance, assessed at each Implementation Support Mission.

Civil Works Contractors **-** Local and national civil works contractors engaged under the project will be contractually required to comply in full with all of the project's E&S risk management plans and procedures, including the cleared site-specific ESMPs, Contractor's Environmental and Social Management Plans (C-ESMPs), Environmental and Social Codes of Practice (ESCOPs), Labor Management Procedures, Traffic Management Plan, OHS requirements, SEA/SH prevention and response obligations, the Cultural Heritage Chance Find Procedure, and all applicable national environmental, labor, land, and OHS legislation. This obligation will be explicitly specified in all civil works contracts and bidding documents, and contractors' pricing must include all costs associated with E&S compliance as explicit line items in the Bills of Quantities.

Contractors will be expected to: prepare and implement a C-ESMP approved by the AIT before mobilizing to site; appoint a qualified site-level Environmental, Social, and OHS Officer; disseminate the code of conduct and all E&S and OHS requirements to all workers — including subcontractors and casual laborers — through mandatory pre-commencement induction training; implement cascading training to subcontractors and primary suppliers; maintain daily site records of OHS incidents, GRM complaints, and ESMP compliance; and report serious incidents to the DFR Regional Office and AIT within 24 hours. Non-compliance with E&S obligations will be subject to the contract's non-compliance notification and remediation provisions, including the withholding of payment certificates where material non-compliance is not remedied within the prescribed timeframe.

The table below summarizes the roles and responsibilities regarding the implementation arrangements for environmental and social management.

Table 6-*4*: Implementation Arrangements for Environmental and Social Management

Level / Responsible Party	Roles and Responsibilities
MRH — National Level (Lead Implementing Agency)	- Exercise overall governance and strategic oversight of the entire project, including E&S compliance across all components. - Directly implement Component 2 (Road Maintenance and Sustainability) and Component 3, including Sub-component 3.2 capacity building. - Designate MRH Environmental and Social focal points to provide strategic quality assurance and oversight of all E&S instruments prepared under the project. - Review and endorse AIT-prepared biannual E&S Progress Reports before submission to the World Bank. - Oversee integration of E&S requirements into procurement systems, contract management, and financial management. - Coordinate with the EPA, LVD, Department of Factories Inspectorate, and other national institutions on permitting, regulatory

Level / Responsible Party	Roles and Responsibilities
	compliance, and capacity building. - Report to the World Bank on E&S performance as part of the overall project reporting framework.
DFR Headquarters / AIT — National Level (Primary Implementing Unit for Component 1)	- Staff and maintain the AIT with dedicated, qualified Environmental and Social Specialists and a Project Coordinator. - Provide overall coordination, technical guidance, and quality assurance for E&S management across all four regional clusters and DFR Regional Offices. - Review and clear Screening Reports submitted by DFR Regional Offices; submit Screening Reports to the World Bank. - Review and approve TORs for site-specific E&S instruments before sharing with the World Bank for No Objection. - Oversee the preparation of site-specific ESMPs, RAPs, LRPs, and other E&S instruments by Regional E&S Field Officers or independent consultants. - Manage the EPA permitting process at the national level and maintain the centralized permit tracking register. - Review and approve contractor C-ESMPs before authorizing site mobilization, in coordination with DFR Regional Offices and the Supervision Consultant. - Manage the project GRM at the national level; maintain the national grievance register; prepare GRM performance summaries for biannual E&S reports. - Prepare and submit biannual E&S Progress Reports to the World Bank in line with the ESCP. - Compile monthly E&S field reports from DFR Regional Offices and the Supervision Consultant into national E&S reporting. - Lead E&S training and capacity building for AIT staff, DFR Regional Office staff, supervision consultants, and contractors. - Maintain the centralized Non-Compliance Register and track corrective actions to closure. - Notify the World Bank within 48 hours of any serious incident. - Prepare post-construction E&S compliance reports and the final project-wide E&S completion report.
DFR Regional Offices — Regional Level (4 clusters across participating regions)	- Serve as the primary field-level E&S management node for the project within each regional cluster, leveraging existing regional operational infrastructure and staff networks. - Designate or recruit a qualified Regional E&S Field Officer embedded within each participating Regional Office, reporting to the Regional Director on administrative matters and to the AIT E&S Specialists on technical E&S matters. - Conduct preliminary E&S screening of candidate road segments within the cluster; complete Screening Forms in Annex 1 and submit Screening Reports to the AIT within agreed timeframes. - Support preparation of site-specific ESMPs, RAPs, and other E&S instruments for road packages within the cluster — either through the Regional E&S Field Officer or by coordinating the engagement of independent consultants under AIT oversight. - Coordinate EPA registration and permitting with the EPA Regional Office for subprojects within the cluster; maintain a regional permit tracking log. - Oversee and verify the Supervision Consultant's weekly site inspection reports; conduct monthly independent E&S field monitoring visits to all active construction sites within the cluster. - Receive, record, and manage grievances at the regional level through the regional GRM register; escalate unresolved grievances to the AIT within defined timeframes. - Liaise with MMDAs, community structures, CLOs, EPA Regional Offices, LVD district offices, and Regional Coordinating Councils on E&S matters. - Facilitate community-level disclosure of E&S instruments in local languages, in coordination with CLOs and MMDAs. - Compile monthly E&S field reports and submit to the AIT E&S Specialists within 10 days of month-end. - Conduct pre-demobilization site restoration inspections within the cluster; recommend contract closure to the AIT only after confirming sites meet restoration standards.
MMDAs — District and Local Level	- Facilitate community engagement and consultation activities within their administrative areas, including providing venues for public consultations and RAP disclosure meetings. - Host physical copies of disclosed E&S instruments at MMDA offices for community access throughout implementation. - Support the project GRM at the local level by receiving grievances from community members and forwarding them to the DFR Regional E&S Field Officer. - Facilitate access to project-affected persons during RAP compensation payment and livelihood restoration activities. - Provide administrative support for land acquisition and resettlement processes within their jurisdiction, in coordination with the Lands Commission and LVD. - Monitor and report community-level health and safety concerns to DFR Regional Offices.
Community Liaison Officers (CLOs)	- Serve as the first point of contact for project-affected communities on all E&S matters during construction. - Receive and record grievances from community members in the local

Level / Responsible Party	Roles and Responsibilities
	GRM register; facilitate community-level GRM hearings; escalate unresolved grievances to the DFR Regional E&S Field Officer. - Provide communities with timely information on project activities, construction schedules, potential impacts, and mitigation measures in local languages. - Monitor contractor compliance with community health and safety and traffic management measures at the local level. - Facilitate meaningful participation of women, elderly persons, persons with disabilities, and other vulnerable groups in consultations and GRM processes. - Report weekly community observations and E&S concerns to the DFR Regional E&S Field Officer.
Supervision Consultant	- Provide full-time independent construction supervision, including dedicated Resident E&S and OHS Specialists at each active construction site or cluster of sites. - Conduct weekly E&S and OHS compliance inspections at all active construction sites using standardized checklists; issue non-compliance notices to contractors and track corrective actions. - Review and recommend approval of contractor C-ESMPs to the DFR Regional Office and AIT before site mobilization. - Monitor contractor implementation of ESMP mitigation measures, OHS, traffic management, waste management, and Chance Find procedures on a daily basis. - Prepare monthly E&S compliance reports for all active sites; submit to the DFR Regional Office and AIT within 10 days of month-end. - Review and certify contractor OHS and E&S performance records before recommending payment certificate issuance. - Conduct pre-demobilization site restoration inspections and provide written certification to the DFR Regional Office that restoration standards have been met before contract closure is recommended. - Report serious incidents to the DFR Regional Office and AIT within 24 hours of occurrence.
Civil Works Contractors and Subcontractors	- Prepare and implement a C-ESMP approved by the AIT — through the DFR Regional Office and Supervision Consultant — before mobilizing to site. - Appoint a qualified site-level Environmental, Social, and OHS Officer with authority to halt works in the event of a serious E&S or OHS incident. - Register all active worksites with the Department of Factories Inspectorate before commencing works. - Conduct mandatory E&S and OHS induction training for all workers — including subcontractors and casual laborers — before they commence work on site; maintain and submit training records monthly. - Implement cascading training to all subcontractors and primary suppliers on relevant E&S and OHS requirements. - Comply fully with the project Code of Conduct on SEA/SH prevention; report any SEA/SH allegations through the designated survivor-centered reporting channel within 24 hours. - Maintain daily site records of OHS incidents, near-misses, GRM complaints, ESMP compliance status, and waste disposal records; submit records to the Supervision Consultant monthly. - Report serious incidents to the Supervision Consultant and DFR Regional Office within 24 hours. - Implement the Cultural Heritage Chance Find Procedure immediately upon discovery of any potential heritage artifact during excavation or earthworks. - Ensure full site restoration — including rehabilitation of all borrow pits and material stockpile areas — before demobilization and submission of final payment claims. - Comply with all applicable Ghanaian environmental, labor, land, and OHS legislation, and with EPA permit conditions applicable to the works.
EPA (National and Regional)	- Receive and process environmental permit applications from the DFR AIT (national level) and DFR Regional Offices (regional level) for project activities requiring mandatory environmental assessment under L.I. 2504. - Review site-specific ESMPs and issue environmental permits with conditions within the statutory review period. - Conduct regulatory site inspections to verify compliance with permit conditions. - Receive and review post-construction environmental monitoring reports as required by permit conditions. - Receive capacity building support under Sub-component 3.2 at both national and regional office levels.
LVD / Lands Commission (National and Regional)	- Conduct replacement cost valuations for all project-affected assets in accordance with the RPF and the Land Act, 2020 (Act 1036). - Provide administrative support for any compulsory acquisition processes in accordance with national law and ESS5. - Advise on land registration and land administration issues arising in project areas. - Receive capacity building support under Sub-component 3.2 to strengthen valuation capacity in project regions.

Level / Responsible Party	Roles and Responsibilities
Department of Factories Inspectorate	- Receive worksite registration notifications from contractors before construction commences at each site. - Conduct OHS regulatory inspections at active construction sites in project areas. - Receive capacity building support under Sub-component 3.2 to strengthen OHS inspection capacity in the transport sector.
Labour Department	- Oversight of labour and working conditions. – Prevention and management of Child Labour. – Support to the Grievance Redress Mechanism (GRM) for workers. - Conduct labour regulatory enforcement inspections at active construction sites in project areas. - Receive capacity building support under GMACP to strengthen its regulatory and enforcement systems.

6.3 National permitting and compliance pathway

The project will meet national requirements by:

- Completing screening, scoping, public consultations, and environmental assessment steps set by the national environmental authority, and obtaining environmental permits/clearances prior to works;
- Securing construction and sectoral permits, licenses, and authorizations (e.g., waste transport/disposal, water abstraction/discharge, protected area consents);
- Including ESHS requirements and ESMP provisions in bidding documents and contracts and ensuring contractors' compliance, training, and reporting;
- Conducting compliance monitoring and reporting to national authorities and the World Bank on a regular basis

6.4 Capacity Assessment

An assessment of the E&S management capacity of the key institutions involved in project implementation reveals the following:

- DFR Headquarters and Regional Offices have an established national and regional presence through their network of Regional Offices, which provides a strong operational foundation for project E&S management. DFR has Environmental Risks Management Capacity but have limited Social Risks Capacity and largely draws on support from consultants on managing Social risks. However, DFR's Regional Offices have historically focused on technical road engineering functions, and dedicated Environmental and Social specialists are not currently embedded at the regional level in a systematic manner. The DFR AIT will require the recruitment or secondment of qualified Social Specialists with demonstrated experience in World Bank ESF projects. Each participating DFR Regional Office will similarly require a designated Regional E&S Field Officer with relevant qualifications, to be either recruited or trained from existing regional staff. DFR's institutional familiarity with World Bank ESF standards — including ESMP preparation, RP implementation, GRM management, and SEA/SH response — is limited, and systematic capacity building will be required before and during project implementation.
- MRH has experience with donor-financed and World Bank infrastructure projects including the Transport Sector Improvement Project which ended in 2025. The Ministry has limited E&S capacity and largely draws on consultants to support project implementation. The MRH E&S focal points will require targeted training on World Bank ESF standards and on their strategic oversight responsibilities under this project.
- EPA has established environmental assessment review procedures under L.I. 2504, but its capacity to manage a large volume of simultaneous road rehabilitation subprojects across

multiple regions is constrained by staffing and resources at both the national and regional office levels. Sub-component 3.2 will specifically target EPA's transport sector environmental assessment review and monitoring capacity.

- LVD has existing valuation capacity but limited experience with World Bank-standard replacement cost valuations in rural and peri-urban settings. Targeted training on RF-consistent valuation methodologies will be provided under Sub-component 3.2.
- DFI and Labour Department have established national and regional presence through their national Head Offices and network of Regional Offices, which provides a strong operational foundation for project E&S management. Labour Department also have some presence at the MMDA levels with their network of Labour Offices across the country. However, both entities have limited World Bank-related environmental and social risks management capacity, especially ESS2 and ESS4 operational experience. The project would invest in building operational and monitoring capacity of the two entities under sub-component 3.2.
- Contractors in the Ghanaian feeder road sector typically have limited in-house E&S and OHS capacity, and compliance with ESMP requirements on feeder road projects has historically been inconsistent. Mandatory pre-mobilization contractor E&S induction and the contractual requirement to appoint a dedicated site E&S/OHS Officer will address this in part, supported by the training program described in Section 6.5.

6.5 Proposed Training and Capacity Building

6.5.1 Capacity Needs Assessment

Successful implementation of the Ghana Market Access and Connectivity Project will depend significantly on the effective application of the environmental and social risk management measures outlined in this ESMF across multiple institutional levels and a geographically dispersed project area. A capacity needs assessment was conducted as part of ESMF preparation, drawing on the institutional analysis and a review of past performance on comparable feeder road projects in Ghana. The assessment identified the following key capacity gaps:

- At the national level, the DFR AIT will be newly established for this project, and its Environmental and Social Specialists — while expected to possess relevant qualifications — will require orientation on the specific requirements of the World Bank's Environmental and Social Framework (ESF), the structure and application of this ESMF and its associated instruments (RF, SEP, LMP, SEA/SH Response Plan, ESCP), and the project's reporting and disclosure obligations. MRH's E&S focal points will similarly require training on their quality assurance and oversight roles under the ESF.
- At the regional level, DFR Regional Offices have established operational capacity in road engineering and project administration, but their E&S management capacity is limited. Regional E&S Field Officers — whether recruited or designated from existing DFR regional staff — will require substantial training on E&S screening procedures, ESMP preparation and review, RP implementation support, community engagement, and GRM management. Given that the Regional Offices will serve as the primary field-level E&S management nodes, this level of the cascade is particularly critical.
- At the site and contractor level, civil works contractors in the Ghanaian feeder road sector typically have limited in-house E&S and OHS capacity. Past feeder road projects in Ghana have identified inconsistent OHS compliance, inadequate borrow pit management, poor community relations by contractor staff, and low awareness of SEA/SH prevention

obligations as recurring issues. Targeted, practical, site-level training for contractor staff — delivered before mobilization and reinforced during construction — is therefore essential.

- At the community level, project-affected communities will need to understand their rights under the project, including the GRM procedures, their rights in any resettlement or compensation process, community health and safety obligations during construction, and how to raise concerns and receive feedback. Community engagement and awareness activities must be conducted in relevant local languages and must specifically target women and vulnerable groups.
- The EPA's regional offices, LVD regional offices, and the Department of Factories Inspectorate and Labour Department's regional and district offices have been identified as having constrained capacity to manage the volume of permitting, valuation, labour and OHS inspection activities that the project will generate across multiple regions simultaneously. Targeted institutional capacity building for these agencies under Sub-component 3.2 is therefore an integral part of the project's E&S management approach.

6.5.2 Training Approach

A cascading training model is proposed, under which E&S knowledge and requirements flow from the World Bank to the national MRH and DFR AITs, from the AITs to DFR Regional Offices, from the Regional Offices and Supervision Consultant to contractors, and from contractors and CLOs to workers and communities. This model ensures that training is contextually appropriate at each level — from ESF policy and instrument design at the national level to practical on-site application at the contractor and community level. Training will be integrated into the project cycle wherever possible, with initial training delivered before each implementation phase begins and refresher training provided as new staff are onboarded or significant changes to project scope occur.

Training will be delivered through a combination of formal workshop sessions, on-the-job coaching by AIT E&S Specialists and the Supervision Consultant's E&S staff, practical field exercises, and community information sessions in local languages. Where relevant, training materials will be translated into major local languages spoken in the project regions — including Dagbani, Twi, Ewe, and other relevant languages — and will use visual, audio, and participatory formats accessible to community members with limited literacy. The DFR AIT will maintain training records — including attendance registers, training materials, and post-training assessment outcomes — for all training activities at all levels, to be reported in biannual E&S Progress Reports to the World Bank.

The budget for training and capacity building activities is included in the ESMF implementation budget in Section 6.6.

Table 6-*5*: Proposed E&S Training and Capacity Building Plan for the Project

Level	Responsible Party	Audience	Timing	Topics / Themes to Be Covered
National Level	World Bank Task Team (with support from MRH/DFR AIT)	AIT Environmental and Social Specialists; MRH E&S focal points; DFR Headquarters project management staff; AIT Procurement and Financial Management staff with E&S interface responsibilities	Before project effectiveness; repeated at project mid-term review	- Overview of the World Bank Environmental and Social Framework (ESF) and applicable Environmental and Social Standards (ESS1, ESS2, ESS3, ESS4, ESS5, ESS6, ESS8, ESS10). - Structure, purpose, and application of the ESMF, RPF, LMP, SEP, ESCP, and SEA/SH Response Plan. - E&S screening procedures: Exclusion List application, Screening Form completion, ESRC assignment, and Screening Report preparation. - Preparation of TORs for site-specific E&S instruments; supervision and quality review of ESMPs, RAPs, and other instruments. - Disclosure requirements and consultation standards under the ESF. - E&S monitoring framework: monitoring indicators, data collection methods, use of GIS and remote sensing for dispersed subproject monitoring, and monthly and biannual reporting requirements. - GRM design, management, and performance monitoring at the national level; escalation procedures; SEA/SH complaint handling and survivor-centered referral pathways. - Incident and accident classification, 48-hour notification procedures, and incident investigation and reporting. - Integration of E&S requirements into procurement processes, bidding documents, Bills of Quantities, and contract management. - World Bank ESF requirements for Technical Assistance activities (Section 6.2). - CERC component activation procedures and E&S requirements.
National Level	AIT E&S Specialists (with World Bank support as needed)	EPA national office staff; LVD national and regional staff; Department of Factories Inspectorate staff; Labour Department staff; MLGCRA, MoFA and WRC technical staff	Year 1, before commencement of first civil works packages; refresher in Year 3	- Overview of the project, its components, and E&S risk profile. - Roles and responsibilities of each institution in the project's E&S management framework. - Interface between national EPA permitting requirements under L.I. 2504 and World Bank ESF requirements: areas of alignment and gap-filling measures. - EPA Environmental Assessment registration, review, permitting, and monitoring procedures for road rehabilitation subprojects. - World Bank ESF ESS5 requirements for land acquisition, compensation at replacement cost, and resettlement; interface with the Land Act, 2020 (Act 1036) and LVD valuation procedures; RPF-consistent valuation methodologies for rural and peri-urban road projects. - Department of Factories Inspectorate: worksite registration procedures, OHS inspection protocols for road construction sites, enforcement mechanisms, and reporting interfaces with the AIT. - Borrow pit management and regulatory requirements under Ghanaian mining and environmental legislation. - Stakeholder engagement and public participation requirements for environmental permitting under L.I. 2504 and ESS10. - Coordination mechanisms between national agencies, DFR Regional Offices, and the AIT for efficient permitting and regulatory oversight.
Regional Level	AIT E&S Specialists (lead); Supervision	DFR Regional Office E&S Field Officers; DFR Regional	Before commencement of civil works in each	- Project overview, geographic scope of the cluster, and E&S risk profile specific to the cluster area (including biodiversity sensitivities, cultural heritage sites, key water bodies, and vulnerable communities identified in the

Level	Responsible Party	Audience	Timing	Topics / Themes to Be Covered
	Consultant E&S team (support)	Directors and technical staff with project responsibilities; EPA Regional Office staff; LVD district offices; DFI and LD Regional Office staff; Regional Coordinating Council representatives; MMDA planning and development officers in project areas	regional cluster; refresher training annually	baseline). - ESMF screening procedures: use of the Screening Form (Annex 1), Exclusion List (Table 6.2), ESRC assignment criteria (Annex 2), and Screening Report preparation and submission to the AIT. - Site-specific ESMP preparation: structure, content requirements, baseline data collection, impact assessment methodology, mitigation measure specification, monitoring plan, and budget. - RAP implementation: compensation payment procedures, livelihood restoration measures, grievance management for affected persons, and monitoring and reporting requirements under the RPF. - GRM management at the regional level: receiving, recording, and responding to grievances; maintaining the regional GRM register; escalation to the AIT; SEA/SH complaint handling; and reporting to the AIT. - E&S monitoring at the regional level: monthly site monitoring visit protocols, use of standardized ESMP compliance checklists, documentation standards, and monthly reporting to the AIT. - Community engagement and meaningful consultation: facilitation of inclusive consultations with women, youth, PwDs, elderly persons, and remote communities; documentation of consultations; and local language communication strategies. - Contractor oversight: review of C-ESMPs, authorization of site mobilization, non-compliance identification and remediation procedures. - EPA permitting at the regional level: coordination with EPA Regional Offices, submission of permit applications, and tracking permit compliance. - Borrow pit management, quarry oversight, and environmental monitoring of extraction sites. - Coordination with MMDAs, CLOs, and community structures for local E&S management. - Incident reporting: classification of incidents, 24-hour notification to the AIT, and incident documentation procedures.
Site / Contractor Level	DFR Regional E&S Field Officers (lead); Supervision Consultant Resident E&S and OHS Specialists (primary delivery)	Contractor site management teams (site engineers, site supervisors, foremen); contractor-appointed Environmental, Social, HR and OHS Officers; subcontractor management; primary suppliers	Before site mobilization for each works package; refresher every 6 months; on-boarding training for new workers throughout construction	- Project E&S requirements overview: ESMP, C-ESMP, ESCOP, LMP, and contract E&S obligations; consequences of non-compliance including payment withholding provisions. - Preparation and implementation of the Contractor's ESMP (C-ESMP): structure, content, integration with the site ESMP, and submission and approval process. - Occupational Health and Safety management: OHS plan requirements; site-specific hazard identification and risk assessment; PPE requirements and proper use; safe work procedures for excavation, earthworks, operation of heavy equipment, river crossing works, and borrow pit operations; worksite registration with the Department of Factories Inspectorate; OHS incident recording, reporting, and investigation procedures; emergency response and first aid. - Environmental management during construction: vegetation clearance and grubbing protocols; topsoil stripping and stockpiling; dust suppression; water quality protection including silt barriers and sediment traps near watercourses; drainage management; fuel and chemical storage and spill prevention; waste

Level	Responsible Party	Audience	Timing	Topics / Themes to Be Covered
				segregation, storage, and disposal; management of construction camps and sanitation facilities; noise and vibration monitoring and management near sensitive receptors; compliance with EPA permit conditions. - Borrow pit management: selection, operation, progressive rehabilitation, and final restoration of borrow pits; compliance with EPA borrow pit permit conditions. - Traffic Management Plan implementation: temporary signage, flagmen deployment, pedestrian safety, protection of school children and market traders, dust control on access routes, and community notification of road closures. - Cultural Heritage Chance Find Procedure: how to recognize potential artifacts; immediate works stoppage obligations; notification chain; and liaison with the Ghana Museums and Monuments Board. - Labor and working conditions: workers' rights under the Labour Act, 2003 (Act 651) and ESS2; prohibition of forced labor and child labor; working hours, rest periods, and fair wage payment obligations; grievance channels for workers. - Code of Conduct: standards of behavior expected of all project workers; zero tolerance for SEA/SH, harassment, and violence; community interaction standards; social media and photography restrictions near communities. - SEA/SH prevention and response: definitions and forms of SEA/SH; risk factors in labor influx contexts; reporting obligations; survivor-centered approach; referral pathways to support services; consequences of violations. - Worker GRM: how to raise a grievance; confidentiality protections; non-retaliation policy; escalation procedures. - Community health and safety: communicable disease prevention; management of labor influx impacts on host communities; community complaint handling by contractor staff. - Cascading training obligations: contractor's responsibility to deliver equivalent training to all subcontractors and casual laborers and to maintain training records.
Community Level	DFR Regional E&S Field Officers; CLOs; Supervision Consultant's Community Liaison team	Project-affected community members (general); women's groups; youth groups; persons with disabilities; elderly community members; roadside traders; smallholder farmers in road corridors; local leaders and	Before construction commences in each community; updated sessions at key project milestones (e.g., compensation payment, borrow pit opening, road completion)	- Project overview and benefits: purpose of the road rehabilitation works, anticipated duration of construction, and expected benefits for community access and livelihoods. - Community rights under the project: right to information, right to meaningful consultation, right to raise grievances and receive feedback, and rights of project-affected persons under the RPF. - GRM procedures: how to register a grievance or concern (in person, by phone, at MMDA offices, or through CLOs); what happens after a grievance is registered; expected response timeframes; and escalation options if not satisfied with the response. - Community health and safety during construction: road safety and pedestrian behavior near active construction sites; dust and noise impacts and mitigation measures; risks of open excavations and trenches; safe distance from heavy construction equipment; and access to emergency services if injured. - SEA/SH awareness: community members' rights in relation to project workers; how to report incidents of SEA/SH or harassment

Level	Responsible Party	Audience	Timing	Topics / Themes to Be Covered
		traditional authorities		by project workers through the survivor-centered reporting channel; confidentiality protections; and available support services. - Land acquisition and compensation: RAP process, compensation eligibility and entitlement principles, valuation and payment procedures, and appeal rights for affected persons not satisfied with compensation offers. - Environmental awareness: management of construction waste; community responsibility for maintaining rehabilitated drainage structures after project completion; reporting of environmental incidents such as fuel spills or unauthorized vegetation clearance to the CLO or DFR Regional Office. - Post-construction road safety: safe road use behaviors after rehabilitation, including pedestrian crossings, speed awareness, and child safety near improved roads. - Women and vulnerable group inclusion: targeted sessions in formats accessible to women, persons with disabilities, and elderly persons, conducted in local languages, at times and locations accessible to these groups.

6.6 Estimated Budget

Table 6-6: ESMF Implementation Budget for the Project

Activity / Cost Item	Notes	Estimated Cost (USD)
Travel and accommodation — AIT E&S Specialists (national-level oversight and site visits, 5 years)	Covers monthly field visits by AIT E&S Specialists to regional clusters for oversight, monitoring, and quality assurance of Regional Office E&S management.	200,000
Travel and accommodation — Regional E&S Field Officers (monthly site monitoring visits within clusters, 5 years)	Covers monthly site inspection visits by Regional E&S Field Officers to active construction sites within their cluster, using DFR Regional Office vehicle fleets where available.	150,000
Training for national and regional staff (AIT, MRH focal points, DFR Regional Office staff; initial and refresher training over 5 years)	Covers venue hire, travel, daily subsistence allowances, training materials, and facilitation fees for national and regional-level E&S training workshops as described in Section 6.4, including initial training before project effectiveness and annual refresher sessions.	200,000
Training for civil works contractors and subcontractors (pre-mobilization and refresher training across all packages and clusters)	Covers venue hire, travel, training materials, and facilitation for mandatory contractor E&S and OHS induction training before site mobilization and semi-annual refresher training throughout construction, delivered by AIT and Supervision Consultant E&S staff.	120,000
Community awareness raising and SEP implementation (CLO deployment, community information sessions, translation, and disclosure events, 5 years)	Covers Community Liaison Officer fees; facilitation of community consultations and RAP disclosure events; translation of key E&S instrument summaries into local languages; community radio broadcasts and other local communication channels for project-affected communities across four clusters.	400,000
Printing and reproduction of awareness raising and GRM materials	Covers printing of community information leaflets, GRM complaint forms, poster materials, and E&S instrument summaries for distribution at MMDA offices, community information centers, and construction sites, in English and local languages.	60,000
Software and technology for E&S data collection, monitoring, and GRM management	Covers procurement and licensing of mobile data collection applications for ESMP compliance monitoring; GRM case management software for tracking grievances across all clusters; and GIS mapping tools for subproject tracking and environmental monitoring.	150,000
Preparation of site-specific ESMPs and ESMP checklists (estimated 25–30 road packages over the project period)	Covers fees for qualified E&S consultants engaged to prepare site-specific ESMPs or ESMP checklists for individual road packages, including baseline data collection, stakeholder consultations, and finalization following World Bank and EPA review. Average cost estimated at USD 25,000–35,000 per ESMP.	800,000
Preparation of other specialized management plans (Biodiversity Management Plans, Traffic Management Plans, OHS Plans, and Waste Management Plans, as required for specific packages)	Covers preparation of specialized plans required for higher-risk packages, including packages passing through ecologically sensitive areas, packages near schools or health facilities, and packages with complex traffic management requirements.	150,000
Cost of obtaining EPA environmental permits and other statutory clearances (registration fees, permit application fees, and laboratory testing required for permit applications, 5 years)	Covers EPA Environmental Assessment registration fees, permit application processing fees, and any required environmental laboratory analysis — such as water quality baseline sampling — for statutory permit applications across all road packages.	80,000
Environmental quality monitoring (water quality sampling, noise and dust	Covers costs of environmental monitoring activities not embedded in civil works contracts, including periodic	400,000

Activity / Cost Item	Notes	Estimated Cost (USD)
monitoring, borrow pit inspections, laboratory analysis, 5 years)	water quality sampling at construction sites near watercourses, noise and dust monitoring at sensitive receptors, and independent borrow pit rehabilitation inspections.	
Subtotal		**2,710,000**
Contingency		271,000
TOTAL ESMF IMPLEMENTATION BUDGET		**2,981,000**

6.7 Technical Assistance Activities

The MRH and DFR AIT will ensure that all consultancies, studies — including feasibility studies for road selection and detailed design — capacity building programs, training activities, and other technical assistance activities financed under the project are carried out in accordance with Terms of Reference acceptable to the World Bank, that are consistent with the applicable Environmental and Social Standards. Specifically:

- TORs for all technical assistance activities will include explicit E&S requirements, specifying the scope of E&S analysis to be undertaken, the qualifications of E&S specialists to be engaged, and the consultation and disclosure requirements applicable to the study outputs. This applies particularly to the feasibility studies and detailed design studies undertaken by DFR's technical team for road segment selection, which will include E&S screening and preliminary impact assessment as an integral component of the study scope.
- TORs for the Road Fund reform support activities under Sub-component 2.1 will include requirements for assessing the distributional and equity implications of proposed tariff and revenue management reforms on vulnerable groups, consistent with the social risk identified in the ESRC assessment.
- The PCU will review all technical assistance outputs against their cleared TORs before finalizing and using the outputs to inform project decisions. Any significant deviations from the TOR scope or methodology must be documented and shared with the World Bank for review.
- All technical assistance activities involving field surveys, data collection, or community engagement — including road asset data collection for WIGRAMS and agricultural hotspot mapping with MoFA — will be conducted in accordance with the project SEP and the project's community engagement standards, including the use of local languages, inclusive participation of women and vulnerable groups, and documentation of consultation records.

6.8 Contingent Emergency Response Component

The Contingent Emergency Response Component (CERC) Manual will be prepared by the MRH/DFR AIT as an annex to this ESMF before project effectiveness and will include a comprehensive description of the environmental and social risk assessment and management arrangements applicable if the CERC component is activated in response to an eligible crisis or emergency in Ghana. The CERC Manual will specifically include:

- A positive list of eligible CERC activities — limited to immediate emergency road repair, drainage restoration, bridge repair, and related infrastructure rehabilitation works — that are consistent with the project's E&S Exclusion List and do not present unacceptable environmental and social risks.
- A negative list of activities that will not be eligible for CERC financing under any circumstances, consistent with the Exclusion List in Table 6.2.

- Simplified, time-bound E&S screening and assessment procedures for CERC activities, acknowledging the emergency context while ensuring that minimum E&S standards are maintained, consistent with the World Bank's guidance on emergency response operations.
- Rapid RP or abbreviated resettlement procedures for any emergency works that may involve temporary occupation or minor land acquisition, consistent with ESS5.
- A description of the institutional arrangements for E&S oversight during CERC activation, including the roles and responsibilities of the AIT, DFR, MRH, EPA, and the World Bank Task Team.
- Requirements for post-emergency E&S assessment and site restoration following completion of CERC-financed works.

If the activation of the CERC component requires E&S assessment and management arrangements that go beyond what is covered in the CERC Manual annex to this ESMF — due to the specific nature, scale, or location of the emergency activities — the MRH/DFR AIT will prepare, consult, adopt, and disclose a CERC-specific ESMF Addendum in accordance with the CERC Manual procedures and the World Bank's ESF, and will implement the measures and actions specified therein before CERC-financed works commence.

7 Chance Find Procedures

7.1 Chance Find Process

If any person — including contractors, subcontractors, workers, DFR staff, or the Supervision Consultant's team — discovers a physical cultural resource during excavation, grading, borrow pit operations, or any other ground-disturbing activity associated with project works, the following procedure shall be applied immediately and without exception:

Table *7-1*: Chance Find Process

Step	Action	Responsible Party	Timeframe
Step 1: Immediate Work Stoppage	Stop all construction activities within a minimum radius of 50 meters of the chance find, or a larger area as determined by the Resident Engineer. No equipment shall be operated and no further ground disturbance shall occur in the vicinity of the find until authorized to resume. Workers must stand back from the discovery and not touch, move, remove, or disturb the item(s) in any way.	Contractor's Site Manager; Supervision Consultant's Resident Engineer	Immediately upon discovery
Step 2: Immediate Notification	The discovering worker notifies their direct supervisor, who notifies the Contractor's Site Manager and the Supervision Consultant's Resident Engineer. The Resident Engineer notifies the DFR Regional E&S Field Officer and the DFR AIT E&S Specialists. The DFR AIT notifies the World Bank Task Team, the GMMB, the relevant District Assembly, and traditional authorities. All notifications must be documented in writing with timestamps.	Worker → Supervisor → Contractor's Site Manager → Resident Engineer → DFR Regional E&S Field Officer → AIT → World Bank / GMMB / District Assembly / Traditional Authorities	Worker to supervisor: immediately; Supervisor to Resident Engineer: within 1 hour; Resident Engineer to AIT and GMMB: within 24 hours
Step 3: Site Protection	The Contractor installs temporary site protection measures around the discovery area, including: warning tape and clearly marked stakes demarcating the exclusion zone; avoidance signage in English and the relevant local language(s); and a designated site guard if required. All contractor personnel are informed of the chance find, the exclusion zone boundaries, and access restrictions. The no-go area is strictly enforced for the duration of the assessment and treatment process.	Contractor's Site Manager; Supervision Consultant's Resident Engineer	Immediately following work stoppage
Step 4: Documentation of the Find	The Supervision Consultant's Resident E&S Specialist, in coordination with the Contractor's Site E&S Officer, documents the find without disturbing it through: photographs from multiple angles with scale reference markers; written descriptive notes on the nature, composition, dimensions, and context of the find; GPS coordinates and spatial mapping data for integration into the project's cultural heritage GIS layer; and a preliminary sketch showing the find's location relative to the road alignment, excavation area, or borrow pit. An Initial Chance Find Report is prepared and submitted to the AIT and GMMB.	Supervision Consultant's Resident E&S Specialist; Contractor's Site E&S Officer	Initial Chance Find Report submitted within 48 hours of discovery

Step	Action	Responsible Party	Timeframe
Step 5: Preliminary Assessment by Responsible Authorities	The GMMB, in coordination with the responsible District Assembly and, where relevant, traditional authorities, conducts a preliminary assessment of the find. The assessment evaluates the nature and significance of the find according to aesthetic, historical, scientific, research, social, and economic criteria. The DFR AIT facilitates site access for GMMB assessors and provides logistical support.	GMMB; District Assembly; Traditional Authorities; AIT (facilitation)	Within 5 working days of receiving the Initial Chance Find Report
Step 6: Community and Stakeholder Consultation	Where the GMMB's preliminary assessment confirms or indicates likely cultural heritage significance, the DFR AIT Social Specialist and DFR Regional E&S Field Officer — in coordination with the GMMB — initiate structured consultations with the affected community, traditional authorities, and local government. Consultations inform communities of the discovery, explain the assessment and treatment process, and solicit community views on culturally appropriate management. Consultation findings are documented and submitted to the GMMB.	DFR AIT Social Specialist; DFR Regional E&S Field Officer; GMMB	Following confirmation of likely cultural heritage significance; prior to treatment decision
Step 7: Treatment Decision by Responsible Authorities	The GMMB, in consultation with the District Assembly, traditional authorities, and the AIT, determines the appropriate treatment of the confirmed cultural heritage find. Treatment options include: (i) in-situ preservation, which may require road realignment or design modification; (ii) salvage excavation and documentation by GMMB-qualified archaeologists; (iii) reburial or ritual treatment for human remains or sacred items, facilitated by traditional authorities and religious leaders; or (iv) controlled relocation and conservation to a museum or heritage facility under GMMB supervision. The DFR AIT ensures any required design changes are reflected in revised drawings and communicated to the contractor and World Bank. Costs of treatment and design modifications are borne by the project.	GMMB (decision); District Assembly; Traditional Authorities; DFR AIT (coordination and cost)	As determined by GMMB following preliminary assessment and community consultation
Step 8: Final Chance Find Report	Where the find is confirmed as cultural heritage, the DFR AIT E&S Specialists — in coordination with the Supervision Consultant and the GMMB — prepare a Final Chance Find Report documenting: full details of the discovery; preliminary and full assessment results; community consultation process and findings; treatment decision and rationale; implementation of agreed treatment measures; and conditions for works resumption. The report is submitted to the World Bank Task Team and disclosed in	DFR AIT E&S Specialists; Supervision Consultant; GMMB	Upon completion of treatment measures; prior to works resumption

Step	Action	Responsible Party	Timeframe
	accordance with project disclosure requirements.		
Step 9: Written Authorization and Communication	The GMMB and District Assembly communicate their decision on the management and treatment of the find, and their authorization for works to resume, to the Contractor and the DFR AIT in writing. No verbal instructions alone are sufficient to authorize resumption. The DFR AIT communicates the written authorization to the World Bank and maintains copies in the project E&S documentation files.	GMMB; District Assembly (authorization); DFR AIT (communication to World Bank and Contractor)	Before any resumption of works in the affected area
Step 10: Coordination During Treatment	While treatment is ongoing, the DFR AIT coordinates with the Contractor, subcontractors, GMMB, District Assembly, traditional authorities, and affected communities — keeping all parties informed of the investigation and treatment schedule, status, and expected timeline for works resumption. The DFR AIT includes an update on all active chance find cases in biannual E&S Progress Reports to the World Bank.	DFR AIT; Supervision Consultant; GMMB; District Assembly; Traditional Authorities	Throughout the duration of the treatment process
Step 11: Resumption of Works	Construction works in the affected area may only resume after written permission is granted by the GMMB and the relevant District Assembly, confirming that the required treatment has been completed to their satisfaction and that cultural resources have been adequately safeguarded. The Supervision Consultant's Resident Engineer confirms that the exclusion zone has been formally lifted before authorizing contractor mobilization back to the affected area.	GMMB; District Assembly (authorization); Supervision Consultant's Resident Engineer (site confirmation)	Only after written authorization is received from GMMB and District Assembly

8 Stakeholder Engagement, Disclosure, and Consultations

A separate Stakeholder Engagement Plan (SEP) has been prepared for the Ghana Market Access and Connectivity Project, based on the World Bank's Environmental and Social Standard 10 on Stakeholder Engagement and Information Disclosure.

This ESMF, as well as the SEP and the Environmental and Social Commitment Plan (ESCP) that have been prepared for this project, will be disclosed in draft for stakeholder consultations on the MRH and DFR websites. Printed copies will also be made available at the offices of DFR and the relevant MMDAs within the four project clusters and at community information centers in project-affected areas.

8.1 Stakeholder Identification

For this project, the following stakeholders have been identified and consulted to inform project design:

- Government entities: Ministry of Roads and Highways (MRH); Department of Feeder Roads (DFR) — Headquarters and Regional Offices; Environmental Protection Authority (EPA) — national and regional offices; Lands Commission and Lands Valuation Division (LVD); Ministry of Labour, Jobs and Employment (including Department of Factories Inspectorate; Labour Department); Ministry of Food and Agriculture (MoFA); Ministry of Trade, Agribusiness and Industry (MoTAI); Water Resources Commission (WRC); Ministry of Local Government, Chieftaincy and Religious Affairs (MLGCRA); Metropolitan, Municipal, and District Assemblies (MMDAs) in the Northern, Savannah, Eastern, Western North, Western, Upper West, Central, Ashanti, Ahafo, Bono, Bono East, Volta, and Oti Regions; Regional Coordinating Councils in project regions; Ghana Museums and Monuments Board; and the National Road Safety Authority (NRSA).
- Community actors: Traditional rulers and paramount chiefs in project-affected communities; unit committee members; community-based organizations (CBOs) including farmer-based organizations and cooperatives aligned with the Feed Ghana Programme; women's groups and associations; youth groups; market traders' associations along project road corridors; community water and sanitation management committees; and religious leaders.
- Private sector: Local civil works contractors and road construction firms operating in the project regions; aggregate and construction materials suppliers; transport operators and commercial vehicle owners; and professional associations including the Ghana Institution of Engineers and the Ghana Road Contractors Association.
- Civil society and academia: Non-governmental organizations (NGOs) working in transport, agriculture, gender, and livelihoods in the project regions; research institutions including the Council for Scientific and Industrial Research (CSIR) and relevant university departments; environmental and social watchdog groups; and disability rights organizations.
- Project Districts/communities: As specific routes have not been specified at this stage, communities within proposed project districts whose land, crops, structures, businesses, or livelihoods would potentially be affected; communities whose access routes or farming areas will be temporarily disrupted during construction; and other communities within the proposed project districts.
- Beneficiaries: Smallholder farming households — particularly women farmers — in agricultural production zones within proposed project districts; rural households with currently limited access to markets, health facilities, schools, and other services;

commercial and subsistence farmers whose produce transport costs will be reduced; women and girls who will benefit from improved road access to maternal health and education services; youth in rural communities with improved employment and market access opportunities; and transport operators serving rural communities.

- Persons with disabilities and vulnerable groups: Persons with physical, sensory, and cognitive disabilities in proposed project districts/communities; elderly persons with mobility limitations; female-headed households; households in remote communities with the most limited road access; households in extreme poverty; communities in the Upper East and Upper West regions with historically marginalized access to infrastructure; and persons resettled or economically displaced by road corridor activities.

8.2 Stakeholders Consulted During Preparation of ESMF

Stakeholder engagement was initiated during project preparation and will continue throughout the full project cycle — covering preparation, appraisal, implementation, and completion. Engagement during preparation included consultations with government entities, community actors, civil society organizations, and vulnerable groups across the four regional clusters. The purpose of these consultations was to: inform stakeholders about the project's objectives, components, and anticipated environmental and social impacts; identify and incorporate community priorities and concerns into project design; assess the needs of vulnerable groups; and establish the foundation for ongoing engagement during implementation. Annex 4 contain the list and dates and photographs of engagements undertaken to inform preparation of the ESMF.

Engagement of stakeholders from the start of the project — and their continuous involvement throughout — helps to identify potential conflicts and minimize misinformation, supports the development of design alternatives informed by local knowledge, and aids decision-making through increased mutual understanding between the project and affected communities. It promotes a sense of ownership and cooperation among communities and establishes the good rapport necessary for the smooth and effective implementation of the project, particularly in the context of physical resettlement, borrow pit management, and community health and safety during construction.

8.3 Key Feedback from Stakeholder Consultations

Key feedback received from stakeholders during project preparation consultations, and how the project design addresses or will address these concerns during implementation, are summarized in the table below.

Table *8-1*: Summary of Issues from Stakeholder Consultation and Engagement

Stakeholder	Key Concern / Issue	How the Project Mitigates the Concern
Smallholder farmers and farming communities	Temporary disruption of access to farmland during road rehabilitation, particularly during the cropping season, leading to loss of planting time and income.	The project's road prioritization framework and works scheduling will, to the maximum extent possible, avoid active planting and harvesting seasons for civil works in agricultural areas. Site-specific ESMPs will include a Traffic and Access Management Plan ensuring that farmers retain access to their plots during construction. Affected farmers will be compensated for crop and income losses in accordance with the site-specific RPs and the RF.
Women farmers and female-	Concern that compensation and resettlement benefits for affected land and assets may	The RF and site-specific RPs will explicitly recognize women's customary land use and usufruct rights as compensable interests. Compensation payment procedures

Stakeholder	Key Concern / Issue	How the Project Mitigates the Concern
headed households	default to male household heads, excluding women with customary use rights from receiving payments due to them.	will require direct payment to the specific rights-holder, including women farmers, regardless of household headship. DFR AIT Social Specialists will conduct gender-disaggregated PAP consultations and verification during RP implementation.
Roadside traders and market women	Disruption to trading activities during construction, including temporary closure of market access routes, loss of customers, and physical displacement of roadside stalls.	Site-specific RPs will include a livelihood restoration entitlement for economically displaced traders. Traffic Management Plans will maintain access to markets and minimize disruption periods. The GRM will be accessible to roadside traders through community-level channels, including CLOs at or near active market areas.
Communities in remote northern regions	Fear that road selection will prioritize more accessible and politically connected areas, leaving the most remote and underserved communities behind.	The project's three-step road prioritization framework explicitly applies equity-based criteria — including proximity to agricultural production zones, connectivity gaps, and food security indicators from the Feed Ghana Programme's agricultural hotspot mapping — to prioritize roads serving the most underserved communities. DFR Regional Offices in the Northern, Savannah, Upper East, and Upper West regions will be directly involved in road selection to ensure local knowledge informs prioritization.
Community members in project areas	Concern about labor influx impacts, including an influx of non-local workers into communities, increased risk of communicable disease transmission, and incidents of SEA/SH involving construction workers and community members.	The LMP includes provisions requiring contractors to preferentially hire from local communities for unskilled and semi-skilled labor. The SEA/SH Response Plan establishes a survivor-centered reporting and referral mechanism with trained CLOs. All workers will sign and abide by the project Code of Conduct. Contractors will be required to implement awareness campaigns on communicable disease prevention including HIV/AIDS. The project GRM includes a confidential SEA/SH reporting channel accessible to community members.
Traditional authorities and community leaders	Concern that community consultation will be perfunctory and that communities will not have a meaningful voice in road selection, design decisions, or grievance resolution.	The SEP establishes a structured, multi-round consultation process that includes traditional authorities and community leaders from the earliest stages of road prioritization. GRM procedures include community-level hearings facilitated by CLOs with traditional authority representation. The project's community engagement framework requires that consultation findings be documented, shared back with communities, and demonstrably incorporated into design decisions.
Persons with disabilities and elderly community members	Concern that road designs will not account for the mobility needs of persons with disabilities and elderly persons, and that consultation processes will not be accessible to them.	The project's technical design standards under Component 1 include accessible pedestrian infrastructure features — such as gentle road shoulders, accessible crossing points, and safe walkways — at key community nodes. Consultation processes, as required by the SEP, must be conducted in formats and at venues accessible to persons with disabilities and elderly persons, including home visits where mobility limitations prevent attendance at community meetings.
Local government authorities (MMDAs)	Concern about insufficient resources and capacity at the MMDA level to support RAP implementation, GRM management, and community liaison activities without additional project support.	The project's implementation arrangements formally integrate MMDAs into the project structure, with defined roles in community consultation, GRM support, and RP facilitation. The project will provide orientation and training to MMDA planning officers on their project roles, consistent with Section 6.4. CLOs will be deployed at the community level to support MMDAs in managing local-level engagement and grievance handling, reducing the administrative burden on MMDA staff.

Stakeholder	Key Concern / Issue	How the Project Mitigates the Concern
EPA regional offices	Concern that the volume of environmental permit applications generated by the project may overwhelm existing EPA regional office review capacity, leading to permitting delays that hold up civil works.	The project's phased, rolling approach to E&S instrument preparation and EPA permitting — managed through the DFR AIT's permit tracking register — will distribute the permitting workload across the five-year implementation period rather than generating a single large batch of applications. Early engagement with EPA regional offices at the commencement of each cluster's implementation will be prioritized to agree on realistic review timelines.
Civil works contractors (local)	Concern that E&S and OHS compliance requirements in contracts will impose costs and administrative burdens that smaller local contractors are not equipped to manage, putting them at a disadvantage relative to larger firms.	The project's contractor capacity building program will provide targeted pre-mobilization E&S and OHS training to all selected contractors, including smaller local firms. E&S and OHS costs will be explicitly priced in Bills of Quantities to ensure all contractors — regardless of size — can budget for compliance. The Supervision Consultant's resident E&S staff will provide ongoing on-site technical support to contractor E&S officers during implementation.
Youth groups	Concern about whether local youth — particularly in the Upper East, Upper West, and Savannah regions — will have meaningful access to project employment opportunities, and whether they will receive adequate OHS training and protection as construction workers.	The LMP includes a preference for local labor hiring, with specific attention to youth employment. All workers — including young workers — will receive mandatory OHS induction training before commencing work and will be covered by the project's OHS management requirements. The minimum working age under the project is 18 years for hazardous works, consistent with ESS2 and ILO Conventions 138 and 182. Youth employment data will be disaggregated in E&S Progress Reports.

8.4 Grievance Redress Mechanism

The Ghana Market Access and Connectivity Project (GMACP) has developed and publicly disclosed a comprehensive Stakeholder Engagement Plan (SEP) that includes a well-structured and accessible Grievance Redress Mechanism (GRM). The GRM provides a transparent, fair, and culturally appropriate system through which project-affected persons (PAPs), workers, community members, and other stakeholders can submit complaints, concerns, or suggestions related to project activities.

In line with the SEP, this ESMF adopts and operationalizes the same grievance management system as the core mechanism for resolving environmental and social grievances across all GMACP components. The GRM is designed to ensure timely identification, assessment, and resolution of grievances in a manner that prevents escalation, strengthens community trust, and enhances the project's overall social performance.

The GMACP GRM establishes multiple, inclusive, and confidential intake channels, including in-person submission at district offices, community focal points, phone hotlines, SMS/WhatsApp platforms, email, and a digital reporting system managed by the MRH/DFR AIT.[2] Complaints may be lodged anonymously, and complainants are not required to pay any fees. The mechanism ensures that no complainant faces retaliation for submitting a grievance.

A key feature of the GRM is the incorporation of distinct and survivor-centered pathways for handling sensitive complaints, specifically Gender-Based Violence (GBV), Sexual Exploitation and Abuse

[2] Contact details will be in the ESMPs

(SEA), Sexual Harassment (SH), and Child Labour. These cases follow a confidential, specialized protocol that ensures[3]:

- Immediate protection of the survivor,
- Confidential handling of information,
- Rapid referral to qualified service providers, including health facilities, psychosocial support, legal aid, and protection services,
- Non-investigative response by the project, respecting survivor autonomy and safety, and
- Coordination with relevant state institutions, such as DOVVSU, Department of Social Welfare, and community-based child protection structures.

The GMACP GRM is structured in clearly defined tiers, starting at the community level, escalating to the District Assembly, the Regional and finally to the national AIT for unresolved cases. The system ensures specific timelines for acknowledgement, assessment, resolution, and feedback. All grievances—including those related to environmental impacts, labour issues, land acquisition, compensation disputes, OHS concerns, contractor performance, and community health and safety—are logged in the GRM database and tracked until closure.

This ESMF mandates all contractors, service providers, implementing partners, and district-level stakeholders to integrate the GRM into their operational processes, disclose GRM procedures to workers and communities, and regularly report grievances and resolution outcomes to the AITs. Regular monitoring and evaluation of the GRM will be undertaken to assess performance, identify systemic issues, and improve responsiveness.

In summary, the ESMF affirms that the SEP and its constituent GRM will serve as the authoritative framework for grievance management under GMACP. All environmental and social grievances will be addressed through this established mechanism, ensuring consistency, accountability, and alignment with World Bank standards and national regulatory requirements.

[3] These have been detailed in the project Stakeholder Engagement Plan and GBV/SEA/SH Response Plan

ANNEXES

Annex 1

Tentative List of Beneficiary Regions and Districts

No.	Region	District
1	Upper West	Wa East
2		Sissala-East
3		Sissala-West
4	Northern	Kumbungu
5		Tolon
6		Nanton
7		Sagnerigu
8	Oti	Nkwanta North
9		Krachi East
10		Guan
11		Nkwanta South
12		Krachi Nchumuru
13		Biakoye
14		Krachi West
15		Kadjebi
16		Jasikan
17	Volta	North Dayi
18		South Dayi
19		Kpando
20		Adaklu
21		Agortime Ziope
22		Afadjato South
23		Hohoe Municipal
24		North Tongu
25		South Tongu
26		Central Tongu
27		Keta Municpal
28		Anloga
29		Ketu South
30		Ketu North
31		Akatsi South
32		Ho West
33		Akatsi North
34		Ho Municipal

No.	Region	District
35	Western	Wassa East
36		Shama
37	Central	Twifo-Atti-Morkwa
38		Assin Central
39		Asikuma-Odoben-Brakwa
40		Assin South
41		Komenda Edina Eguafo Abirem
42		Upper Denkyira East
43		Ajumako-Enyan-Essiam
44		Upper Denkyira West
45		Twifo-Hemang-Lower Denkyira
46		Cape Coast Mun.
47	Bono	Wenchi
48	Ahafo	Asutifi North
49		Asunafo North
50		Asunafo South
51		Asutifi South
52	Bono East	Kintampo North
53		Atebubu-Amantin
54		Pru East
55		Sene East
56		Sene West
57		Kintampo South
58		Nkoranza North
59		Nkoranza South
60		Techiman
61	Ashanti	Ejura-Sekyedumase
62	Eastern	Kwahu Afram Plains North
63		Asuogyaman
64		Kwahu Afram Plains South
65	Western North	Suaman
66		Bia East
67		Bia West
68		Sefwi Bibiani Anhwiaso Bekwai
69		Juaboso
70		Bodi
71		Sefwi-Wiawso
72	Savannah	North Gonja

No.	Region	District
73		Bole
74		Sawla Tuna Kalba

Annex 2

Environmental and Social Screening Form (Template)

Project Name	
Name of person undertaking the screening exercise	
Designation:	
Address (Email, Phone number)	
Date of site visit	
GPS coordinates of the site (if applicable)	

A. Description of Activity

Nature/Type of Activity	
Describe the Scope of Activity:	
Estimated land area to be taken by sub-project in acres/ha	
Any existing property to be affected, and by how much (total or partial demolition)	
Will construction involve move of earth, changes in land cover	
State the Region where the activity will be implemented:	
State the name of town and Metropolitan/Municipal/District Assemblies (MMDAs) where the activity will be implemented:	
Proposed Date of Commencement of work:	
Expected Completion date and estimated cost	
Indicate if Technical Drawing is required:	

B. Site Characteristics [complete this section if applicable]

#	Site Characteristics	
1	Adjoining Land Uses or Land Cover	
2	South	
3	North	
4	East	
5	West	
6	Proximity to a natural habitat (in meters) e.g. wetland, river/stream, wetlands, forest reserves, protected areas etc.	

7	Proximity to residence or any community resource or facility (in meters)	
8	Proximity to a road (in meters)	
9	Are there outstanding land disputes on the land? (Yes/No)	
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**
Air Quality and Noise							
Cause air pollution? • generation of dust • generation of smoke • generate fumes? • generate emissions • Create objectionable odor affecting people?							
Expose workers or the public to substantial air pollution?							
Cause noise pollution							
Expose persons to excessive vibration and noise?							
Biological Resources and Natural Resources							
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,							

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
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?							

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
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?							
Water Quality and Hydrology							
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? • by generating liquid waste? • by generating liquid with human or animal waste? • by generating liquid with pH outside 6-9 range? • by generating liquid with an oily substance? • by generating liquid with a chemical substance? • 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?							

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
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: • Solvent-based paints, • Pesticides and other agro chemicals, • Batteries (for example car, mobile phone or regular household batteries etc.) • Motor oils (Petrol, kerosene, lubricants for vehicles), • Cleaning and polishing chemicals,							

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
• Pharmaceuticals (all medicines), • 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)) • Medical waste? • Other hazardous waste							
Lead to the transportation of hazardous waste?							
Lead to the recycling of hazardous waste?							
Lead to the storage and disposal of hazardous waste?							
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?							

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
Lead to the physical displacement? Physical displacement occurs when individuals or communities are fully or partially no longer able to occupy an area and must relocate to a new location due to project activity.							
Lead to economic displacement? 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							
Cause a disruption on Power or other utility supply?							
Affect livelihood opportunities of people?							
Labor and Working Conditions							
Involve the use of direct workers? 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.							
Involve the use of community workers? Community workers are people employed or engaged in providing community labor.							
Involve the use of contracted workers? contracted workers are people employed or engaged through third parties to perform work related to core functions of the project, regardless of the location.							
Involve the use of primary supply workers?							

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
Primary supply workers are people employed or engaged by the Borrower's primary suppliers.							
Involve the use of Children?							
Involve the use of forced labour?							
Workers' grievance redress mechanism with GBV/SEA/SH procedures (for existing SMEs)							
Is an Occupational Health and Safety (OHS) Management Plan in place? (for existing SMEs)							
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 labour influx? 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							

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
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).							
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 of 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.							

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
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 is negligible)	Moderate Risk (Risk that can cause an impact but not a serious one and can be easily mitigated)	Substantial Risk (Risk that falls between Moderate and High	High Risk (Risks that can result in huge impact and mitigation is complex or unavailable)
Air Quality and Noise				
Biological Resources and Natural Resources				
Water Quality and Hydrology				
Agricultural and Forestry Production				
Hazardous Waste and Materials				
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement				
Labor and Working Conditions				
Social Inclusion				
Cultural Heritage				
Community Health and Safety				

Overall proposed activity risk classification: .....

E. Recommendations for Instruments to be prepared

Recommendation:	Tick as appropriate	Suggested timelines	Justification
No further instrument required			
Requires the preparation of:			
Environmental and Social Impact Assessment (ESIA)			
Environmental and Social Management Plan (ESMP)			
Resettlement Action plan (RAP or ARAP)			
Labor Management Plan			
Sexual Exploitation and Abuse/Sexual Harassment Prevention Plan			
Environmental and Social Audit			
Hazard or Risk Assessment			
Social and Conflict Analysis			

Cultural Heritage Management Plan or Chance Find Procedures			
Biodiversity Management Plan			
Integrated Pest Management Plan			
Other (s)			

F. National Requirements

#	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			
10	Fire Service			
11	Other (s)			

G. Reviewer Details

Name of Officer	
Designation	
Signature:	
Date:	

Annex 3
World Bank Group Environmental Health and Safety (EHS) Guidelines

Guideline	Description	Relevance to the GMACP
Air Emissions and Ambient Air Quality	This applies to facilities or projects that generate emissions to air at any stage of the project life cycle. Provides techniques for emissions management, assessment, and monitoring of impacts, particularly in areas of poor air quality. Dust generation during construction activities is anticipated.	This guideline is relevant for managing dust and other air emissions from construction activities, ensuring compliance with air quality standards, and implementing measures to mitigate impacts on local air quality during the project's lifecycle.
Hazardous Material Management	This applies to projects that use, store, or handle hazardous materials posing risks to human health, property, or the environment. Includes various classifications of hazardous materials.	Relevant for ensuring safe handling, storage, and disposal of hazardous materials that may be used at project construction sites, mitigating potential risks to workers and the environment.
Waste Management	This applies to projects generating, storing, or handling waste. It does not apply to projects primarily focused on waste management.	This guideline is critical for managing excavated spoils and domestic waste generated from construction activities, ensuring appropriate waste management practices are followed.
Noise Management	Addresses the impacts of noise beyond the property boundary of facilities or subprojects. It focuses on public health risks from noise generated by the project rather than occupational health risks.	Relevant for managing noise generated during construction activities (e.g., from handheld compactors), ensuring compliance with noise regulations and minimising impacts on nearby communities.
Occupational Health and Safety	Guides managing principal occupational health and safety risks during construction, operation, and decommissioning activities.	This guideline is essential for implementing safety measures to protect workers during various construction activities (land clearing, excavation, hauling) and ensuring compliance with health and safety standards.
Community Health and Safety	Focuses on specific guidelines for traffic safety, water quality, disease prevention, and health impacts during construction and decommissioning activities.	This guideline is crucial for ensuring the health and safety of surrounding communities during project activities, particularly during construction.
Construction and Decommissioning	Guides preventing and controlling community health and safety impacts during project development, modifications, and decommissioning.	This guideline is relevant for managing community health and safety impacts during the project, ensuring appropriate measures are in place to mitigate potential risks.

Annex 4

Records of Stakeholder Consultation for Preparation of ESMF

Stakeholder	Meeting Date	Region /Entity Visited
National Level		
Minerals Commission	March 4, 2026	Greater Accra
Environmental Protection Agency (EPA)	March 4, 2026	Greater Accra
Ministry of Food and Agriculture (MoFA)	March 11, 2026	Greater Accra
National Road Safety Authority (NRSA)	March 9, 2026	Greater Accra
Ministry of Local Government, Chieftaincy and Religious Affairs	March 12, 2026	Greater Accra
Lands Commission	March 10, 2026	Greater Accra
Ministry of Trade, Agribusiness and Industry	March 4, 2026	Greater Accra
Ministry of Labour, Jobs and Employment	March 11, 2026	Greater Accra
Forestry Commission	March 12, 2026	Greater Accra
Water Resources Commission	March 11, 2026	Greater Accra
Regional Level		
Northern Regional Coordinating Council	April 8, 2026	Regional Administration, Tamale
Savanna Regional Coordinating Council	April 9, 2026	Regional Administration, Damango
Upper West Regional Coordinating Council	April 10, 2026	Regional Administration, Wa
Oti Regional Coordinating Council	March 26, 2026	Regional Administration, Dambai
Volta Regional Coordinating Council	March 27, 2026	Regional Administration, Ho
Bono East Regional Coordinating Council	April 8, 2027	Regional Administration, Techiman
Western North Regional Coordinating Council	April 9, 2026	Regional Administration, Sefwi Wiawso
EPA, Western North	April 8, 2026	Regional Office, Sefwi Wiawso
DFR, Northen Region	April 8, 2026	Regional Office, Tamale
National Road Safety Authority	April 9, 2026	Greater Accra
DFR, Upper West	April 10, 2026	Regional Office, Wa
NRSA, Bono Region	April 8, 2026	Regional Office, Techiman
EPA, Bono Region	April 8, 2026	Regional Office, Techiman
District Level		
Sagnarigu Municipal	April 8, 2026	District Assembly, Sagnarigu
Tolon District	April 8, 2026	District Assembly, Tolon
Kumbungu District	April 9, 2026	District Assembly, Kumbungu
Sawla-Tuna-Kalba District	April 9, 2026	District Assembly, Sawla
Bole District	April 9, 2026	District Assembly, Bole
Wa East District	April 10, 2026	District Assembly, Funsi
Kadjebi District	March 26, 2026	District Assembly, Kadjebi
Adaklu North District	March 25, 2026	District Assembly, Adaklu
North Tongu District	March 25, 2026	District Assembly, Battor
Ejura Sekyedumase Municipal	April 9, 2026	Municipal Assembly, Ejura
Techiman South Municipal	April 8, 2026	Municipal Assembly, Techiman
Wenchi Municipal	April 8, 2026	Municipal Assembly, Wenchi
Nkoranza South Municipal	April 9, 2026	Municipal Assembly, Nkoranza
Asunafo South District	April 8, 2026	District Assembly, Kukuom
Shama District	April 10, 2026	District Assembly, Shama
Komenda-Edina-Eguafo-Abrem District	April 10, 2026	District Assembly, Komenda
Ajumako-Enyan-Essiam District	April 10, 2026	District Assembly, Ajumako

Selected Photos from Engagements

Meeting with Minerals Commission, Head Office – Accra [Mar 4, 2026]

Meeting with EPA, Head Office - Accra (4th March, 2026)

Ministry of Trade, Agribusiness and Industry (4th March, 2026)

National Road Safety Authority (NRSA) (9th March, 2026)

Meeting with Lands Commission, Head Office (10th March, 2026)

Ministry of Jobs, Labour and Employment, Accra (11th March, 2026)

Meeting Water Resources Commission, Accra (11th March, 2026)

Local Government, Chieftaincy and Religious Affairs, (12th March, 2026)

Northern Regional Department of Feeder Roads, Tamale [Apr 8, 2026]

Northern Regional Coordinating Council, Tamale [Apr 8, 2026]

Savannah Regional Coordinating Council, Damango [Apr 9, 2026]

Upper West Regional Department of Feeder Roads, RCC & Wa East Apr 10,]

Meeting with Sagnarigu Municipal Assembly, Sagnarigu [Apr 8, 2026]

Meeting with Tolon District Assembly, Tolon [Apr 8, 2026]

Meeting with Kumbungu District Assembly, Kumbungu [Apr 9, 2026]

Sawla-Tuna-Kalba District Assembly, Sawla [Apr 9, 2026]

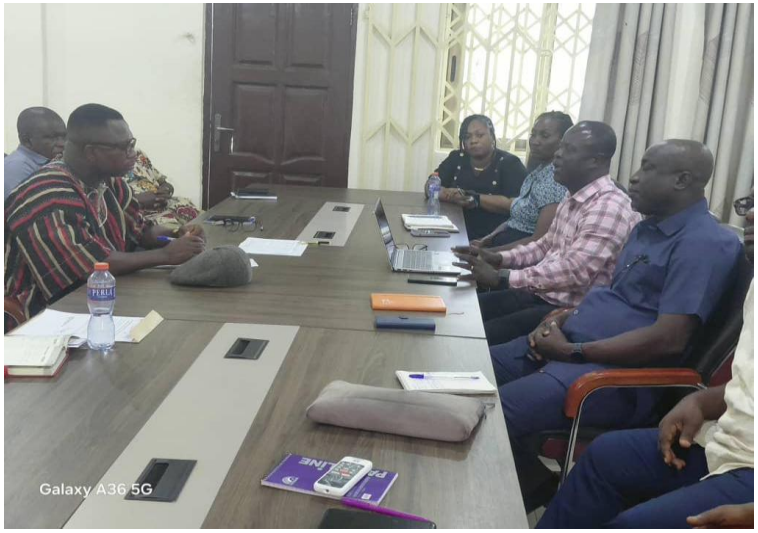
Bono East Regional Coordinating Council (8th April, 2026)

Ejura Sekyedumase Municipal Assembly (9th April, 2026)

Meeting with Oti Regional Coordinating Council (26th March, 2026)

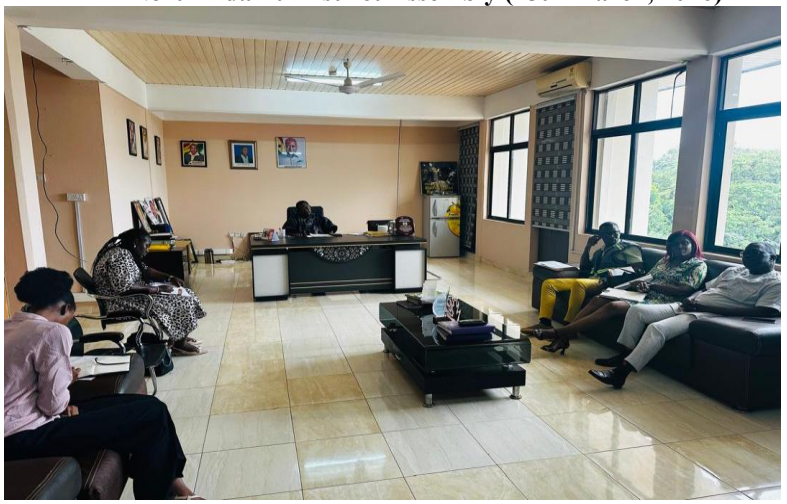
Volta Regional Coordinating Council (27th March, 2026)

North Tongu District Assembly (25th March, 2026)



North Adaklu District Assembly (25th March, 2026)

Kadjebi District Assembly (26th March, 2026)



Meeting with EPA, Techiman (8th April, 2026)

Meeting with Western North RCC (9th April, 2026)

Asunafo South District Assembly (8th April, 2026)

Shama District Assembly (10th April, 2026)

Ajumako Enyan Essiam District (10th April, 2026)