GHANA TREE CROP DIVERSIFICATION PROJECT (TCDP)

P180060

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

COCOA REHABILITATION ACTIVITIES
ASAMANKESE COCOA DISTRICT

July 2026

Confidential

List of Acronyms

ACCEL	Accelerated Cocoa Enhancement Programme
AER	Annual Environmental Report
AIDS	Acquired Immune Deficiency Syndrome
AMADA	Asene Manso Akroso District Assembly
BOD	Biochemical Oxygen Demand
CEA	Community Extension Agent
C-ESMP	Contractor's Environmental and Social Management Plan
CHC	Community Health Committee
CHED	Cocoa Health and Extension Division of COCOBOD
CHPS	Community-Based Health Planning System
CLC	Community Level Committee
CMS	Cocoa Management System
CoC	Codes of Conduct
COCOBOD	Ghana Cocoa Board
COD	Chemical Oxygen Demand
CRIG	Crop Research Institute of Ghana
CSA	Climate Smart Agriculture
CSIR	Council for Scientific and Industrial Research
CSO	Civil Society Organization
CSSVD	Cocoa Swollen Shoot Virus Disease
DA	District Assembly
DC	District Coordinator
DCE	District Chief Executive
DCO	District Cocoa Officer
DLC	District Level Committee
DOVVSU	Domestic Violence and Victim Support Unit
EA	Environmental Assessment
EHS/ESHS	Environment, Health and Safety / Environment, Social, Health and Safety
EIA	Environmental Impact Assessment
EIRR	Economic Internal Rate of Return
EMIS	Education Management Information System
EOAI	Encouraging Organic Agriculture in Ghana
EPA	Environmental Protection Authority
EPR	Environmental Performance Report
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESIA	Environmental and Social Impact Assessment

ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESMS	Environmental and Social Management Systems
ESS	Environmental and Social Standards
E&S	Environmental and Social
FBOs	Farmer Business Organisations
FGD	Focus Group Discussion
GBV	Gender Based Violence
GDHS	Ghana Demographic and Health Survey
GHS	Ghana Health Service
GIS	Geographic Information System
GRC	Grievance Redress Committee
GRM	Grievance Redress Mechanism
GSS	Ghana Statistical Service
GTCDA	Ghana Tree Crop Diversification Authority
HIV	Human Immunodeficiency Virus
IPM	Integrated Pest Management
IPMP	Integrated Pest Management Plan
JHS	Junior High School
JV	Joint Venture
KG	Kindergarten
LMP	Labour Management Procedure
LI	Legislative Instrument
LRP	Livelihood Restoration Plan
LSP	Livelihood Support Plan
M&E	Monitoring and Evaluation
MDA	Ministries, Departments and Agencies
MMDA	Metropolitan, Municipal and District Assemblies
MOFA	Ministry of Food and Agriculture
MSIP	Management Strategies and implementation Plan
NADMO	National Disaster Management Organisation
NGO	Non-Governmental Organization
NLC	National Level Committee
OHS	Occupational Health and Safety
PAPs	Project Affected Persons
PC	Project Coordinator
PDO	Programme Development Objective
PIM	Project Implementation Manual

PIU	Project Implementation Unit
PPE	Personal Protective Equipment
PWD	Persons with Disabilities
QCC	Quality Control Company (COCOBOD)
RA	Rehabilitation Assistants
RAP	Resettlement Action Plan
RLC	Regional Level Committee
R&D	Research and Development
RPF	Resettlement Policy Framework
SH	Sexual Harassment
SEA	Sexual Exploitation and Abuse
SEP	Stakeholder Engagement Plan
SOPs	Standard Operating Procedures
SPD	Seed Production Division (COCOBOD)
STI	Sexually Transmitted Infection
TA	Technical Assistants
TCDP	Tree Crop Diversification Project
ToR	Terms of Reference
UNDP	United Nations Development Programme
UWADA	Upper West Akim District Assembly
WB	World Bank
WAMA	West Akim Municipal Assembly

Executive Summary

The Environmental and Social Management Plan (ESMP) for the Asamankese Cocoa Rehabilitation Programme outlines the measures required to manage environmental and social risks associated with the cutting-out and re-establishment of cocoa farms affected by Cocoa Swollen Shoot Virus Disease (CSSVD) across all communities in the Asamankese Cocoa District. The ESMP serves as a plan for ensuring that rehabilitation activities are implemented in a safe, environmentally sound, socially responsible, and compliant manner. The Asamankese Cocoa District spans three administrative areas – West Akim Municipal, Upper West Akim District, and Asene Manso Akroso District – with smallholder farms averaging 2 acres across a largely homogeneous landscape. For the cocoa rehabilitation activities covered by this ESMP, the interventions will apply standardized COCOBOD protocols – cutting, farm treatment, replanting, and nurturing - limited to existing cocoa farms. The associated environmental risks and impacts are similar, well-known, uncomplicated and mitigation measures are readily available. Considering these characteristics, farm sizes and the dispersed farm structure, the World Bank recommended preparation of a single Cocoa District-level ESMP to guide implementation.

Asamankese Cocoa District has a humid tropical climate with bimodal rainfall averaging 1,200 to 2,000 mm annually and year-round temperatures of 22-32°C. The terrain is generally undulating, promoting drainage and limiting waterlogging. Key water bodies – including the Asuobena, Mante, Bamtama, Duabone, Abesim, Sukurong, Nyarnoa, Atimatim, and Okotokrom streams – support domestic use, smallholder agriculture, and nursery operations. Cocoa rehabilitation activities present potential water pollution risks from agrochemical misuse, spillage, and erosion-induced runoff. While some forest reserves (Atewa Range Extension, Esuboni, Esen Epam, and Oboyow) exist within the district, they lie outside the designated rehabilitation areas. Vegetation is largely modified due to sustained human pressure, notably including logging and artisanal mining.

On the social side, the Asamankese Cocoa District comprises numerous rural and semi-urban communities under both formal local government and traditional authorities. The broader population is estimated at about 307,000 (based on 2021 Census). Females constitute a slight majority (51%), while males account for 49%.). Literacy averages 72%, with persistent gender gaps and declining school retention beyond primary level. The economy is largely agriculture-based, dominated by cocoa farming, with limited diversification and growing pressures from youth unemployment and teenage pregnancy. Production systems are mostly rain-fed, low-input, and traditional, making households vulnerable to income shocks, particularly during cocoa rehabilitation phases. Vulnerable groups include female-headed households, elderly farmers, landless sharecroppers, and youth with limited access to land. Land tenure is largely customary under Akyem traditional authorities, governed through inheritance, tenancy, and sharecropping systems such as *abunu* and *abusa*. Complex and often informal tenure arrangements, especially for migrant farmers, can constrain investment and rehabilitation uptake, underscoring the need for tenure clarification, sensitization, and formalized agreements. The socio-cultural context is shaped by strong traditional institutions and a diverse population tied to cocoa production. Child labor risks, including exposure to hazardous tasks, and GBV/SEA/SH vulnerabilities persist, particularly among women and children. While support structures exist, targeted safeguards, community sensitization, and strengthened service delivery are essential to mitigate risks and protect vulnerable groups during implementation.

The cocoa rehabilitation process under the Tree Crop Diversification Project (TCDP) involves the removal of diseased cocoa trees, establishment of nurseries, replanting with improved seedlings, and maintenance activities to restore farm productivity and farmers livelihood. These activities will generate potential impacts on land, livelihood, water, biodiversity, public health, worker safety, and community wellbeing. The ESMP identifies these risks, evaluates their significance and prescribes mitigation measures as well as a monitoring framework for effective implementation.

The environmental risk of the cocoa rehabilitation activities at Asamankese Cocoa District will be substantial which aligns with the overall Environmental Risk Classification (ERC) of TCDP. Key environmental risks include soil erosion, sedimentation of watercourses, surface and groundwater pollution from agrochemical contamination, air pollution, temporary vegetation loss, waste generation and farm littering. Potential Occupational Health and Safety (OHS) risks include cuts, trips, slips, manual handling injuries, heat stress, and mechanical hazards from machinery use. Biodiversity impacts, although reversible, may occur due to clearing of diseased trees and human–wildlife interactions. Most impacts are expected to be short-term and manageable with proper mitigation.

The social risk of project activities at Asamankese Cocoa District is high. Key social risks relate to labour rights (especially for informal workers), child labour, community health and safety, gender-based violence and Sexual Exploitation and Abuse (SEA)/ Sexual Harassment (SH), increased risk of teenage pregnancy, HIV/STI transmission, cultural heritage sensitivities, and potential conflicts among landowners, farmers, and farm workers. Economic vulnerabilities, particularly delayed income recovery during rehabilitation also increase the risk of farm conversion to other land uses such as illegal small-scale mining. Lack of transparent, meaningful, and sustained involvement of the stakeholders can result in lack of trust in the process and could lead to breakdown of social license. And finally, lack of clear and participatory grievance redress mechanism and increase in implementation cost.

Most risks are assessed as low to Moderate, requiring structured mitigation and consistent monitoring. The ESMP outlines targeted mitigation measures including safe agrochemical handling, buffer zone management, PPE provision, labour rights enforcement, fair compensation processes, child labour reporting procedures, SEA/SH prevention protocols, and strengthened community sensitization.

The ESMP provides a comprehensive implementation structure, led by COCOBOD's Project Implementation Unit (PIU), with defined roles for CHED, Seed Production Division, the Service Provider/Contractor, West Akim Municipal, Upper West Akim District and Asene Manso Akroso District Assemblies, regulatory agencies, traditional authorities, and farmer-based groups. Clear responsibilities and costs are assigned for Environment, Social, Health and Safety (ESHS) supervision, compliance monitoring, stakeholder engagement, and grievance management.

The Project Implementation Unit (PIU) of COCOBOD currently includes one Environmental Specialist, one Social Development Specialist, and one GBV Specialist who supports both COCOBOD and Tree Crops Development Authority (TCDA) – a counterpart implementing agency. A robust capacity-building programme is included to strengthen institutional competencies in E&S management, labour standards, emergency response, community relations, and monitoring. Both COCOBOD and the Service Provider are required to conduct induction training, toolbox sessions, refresher courses, and role-specific ESHS training for workers.

The ESMP also outlines a stakeholder engagement framework consistent with national regulations and ESS10 requirements. As part of screening the subproject sites, the PIU engaged the fringe communities and farmers. Engagement will continue throughout the project lifecycle through community meetings, focus group discussions, technical consultations, and transparent information disclosure. A multi-tiered grievance redress mechanism (GRM) ensures timely resolution of complaints and supports accountability. The GRM should have a survivor-centered approach to handling sensitive cases such as GBV/SEA/SH and child labor.

A monitoring and evaluation framework defines indicators, frequency of monitoring, responsible institutions, and reporting requirements. Performance monitoring will focus on environmental quality, labour practices, community health and safety, training delivery, stakeholder engagement effectiveness, and compliance with mitigation measures.

Overall, the ESMP ensures that cocoa rehabilitation activities in the Asamankese District are planned, executed, and monitored in a manner that safeguards the environment, protects workers and communities, strengthens local livelihoods, and enhances the long-term sustainability of Ghana's cocoa sector.

Table of Contents

LIST OF ACRONYMS I
EXECUTIVE SUMMARY IV
LIST OF FIGURES XI
LIST OF TABLES XI
SECTION 1: INTRODUCTION 1
1.1 PROJECT BACKGROUND 1
1.2 COCOA REHABILITATION ACTIVITIES 2
1.3 PROJECT LOCATION 2
1.4 ENVIRONMENTAL AND SOCIAL ASSESSMENT OF THE PROJECT 4
1.5 CONTENTS OF THE REPORT 4
SECTION 2: PROJECT DESCRIPTION 6
2.1 PROJECT OBJECTIVES 7
2.2 PROJECT SCOPE OF WORKS AND PHASES 7
2.3 COCOBOD'S COCOA REHABILITATION PROTOCOLS 8
2.4 EQUIPMENT, MATERIALS AND INPUTS 9
2.5 PROJECT BENEFICIARIES AND STAKEHOLDERS 9
2.6 WORKFORCE AND LABOUR REQUIREMENTS 10
SECTION 3: APPLICABLE GOG REGULATIONS AND WORLD BANK ENVIRONMENTAL AND SOCIAL STANDARDS 11
3.1 RELEVANT NATIONAL REGULATORY REQUIREMENTS AND APPLICABLE ESSS 11
3.2 GAP ANALYSIS BETWEEN GHANAIAN REGULATORY REQUIREMENTS AND THE WORLD BANK ESF 13
SECTION 4: ENVIRONMENTAL AND SOCIAL BASELINE CONDITIONS 17
4.1 ENVIRONMENTAL BASELINE CONDITIONS 17
4.1.1 Physical Environment 17
4.1.2 Biological Environment 18
4.2 SOCIO-ECONOMIC ENVIRONMENT 19
4.2.1 Communities and Population 19
4.2.2 Livelihoods and Land Tenure 21
4.2.3 Infrastructure and Services 22
4.3 SOCIO-CULTURAL AND CHILD PROTECTION CONTEXT 23
4.4 VULNERABILITIES AND RISKS 24
4.4.1 Main Vulnerabilities and Risks 24
SECTION 5: POTENTIAL ENVIRONMENTAL AND SOCIAL RISKS AND IMPACTS 27
5.1 METHODOLOGY FOR ASSESSING AND RANKING IMPACTS 27
5.3 RISKS AND ADVERSE IMPACTS 29
5.3.1 Occupational Health and Safety 29
5.3.2 Infringement of Labor Rights 30
5.3.3 Child Labour Risks 31
5.3.4 Impacts on Water Resources 31
5.3.5 Improper Waste Handling and Disposal 32
5.3.6 Pest Infestation and Diseases 33
5.3.7 Inappropriate Handling, Usage, and Disposal of Agrochemicals 33
5.3.8 Community Health and Safety 34
5.3.9 Loss of Cocoa Farmlands to Small Scale Illegal Mining 35
5.3.10 Gender-Based Violence and Gender Disparity 35
5.3.11 Increased Risk of Teenage Pregnancy 36
5.3.12 Spread of HIV and Other Sexually Transmitted Infections (STIs) 36
5.3.13 Farm Loss 36
5.3.14 Threat to Biodiversity 37
5.3.15 Socio-Cultural Conflict 38
5.3.16 Potential Disagreements Among Farm Interest Holders 38

SECTION 6: ENVIRONMENTAL AND SOCIAL MITIGATION MEASURES AND STANDARD OPERATING PROCEDURES (SOPS) 39
6.1 ESMP IMPLEMENTATION 39
6.2 OCCUPATIONAL HEALTH AND SAFETY 41
6.2.1 General OHS Management Measures (Applicable to All Activities) *41*
6.2.2 Farm Accidents, Chainsaw Risks, Manual Handling Hazards, and Snakebites *42*
6.2.3 Nursery-Related Injuries *42*
6.2.4 Nursery Construction Accidents *42*
6.2.5 Noise and Vibration *43*
6.2.6 Exposure to Dust and Other Emissions *43*
6.2.7 Agrochemical Poisoning *43*
6.3. LABOUR RIGHTS RISKS 43
6.3.1 General Labour and Working Conditions Measures *43*
6.3.2 Non-Issuance of Employment Contracts *44*
6.3.3 Unfair or Delayed Compensation *44*
6.3.4 Restrictions on Freedom of Association *44*
6.3.5 Marginalization of Women and Persons with Disabilities (PWD) *45*
6.4 CHILD LABOUR RISKS 45
6.4.1 Strengthening Child Labour Prevention and Compliance Framework *45*
6.4.2 Enhance Awareness, Training, and behavioral Change *45*
6.4.3 Strengthening Monitoring, Verification, and Reporting *46*
6.4.4 Address Labour Supply and Workload Pressures *46*
6.4.5 Protect and Support Affected Children *46*
6.4.6 Strengthening Accountability and Enforcement *46*
6.5 IMPACTS ON WATER RESOURCES 47
6.5.1 Agrochemical Management to Prevent Water Contamination *47*
6.5.2 Sustainable Water Abstraction for Nursery Operations *47*
6.5.3 Machinery Operation, Fuel Handling, and Waste Oil Management *48*
6.5.4 Monitoring and Compliance Assurance *48*
6.6 IMPROPER WASTE HANDLING AND DISPOSAL 48
6.6.1 General Waste Management *48*
6.6.2 Domestic Waste *49*
6.6.3 Agrochemical Waste *49*
6.6.4 Spent Oils and Lubricants *49*
6.6.5 Monitoring Requirements *49*
6.7 PEST INFESTATION AND DISEASES 49
6.7.1 Integrated Pest and Disease Management (IPDM) *49*
6.7.2 Strengthened Surveillance and Early Detection *50*
6.7.3 Capacity Building and Extension Support *50*
6.7.4 Agrochemical Management *50*
6.7.5 Farm Rehabilitation and Sanitation *50*
6.7.6 Monitoring and Reporting *50*
6.8 INAPPROPRIATE HANDLING, USAGE AND DISPOSAL OF AGROCHEMICALS 51
6.8.1 Agrochemical Procurement and Quality Control *51*
6.8.2 Safe Storage and Inventory Management *51*
6.8.3 Safe Handling and Application *51*
6.8.4 Environmental Protection Measures- *51*
6.8.5 Emergency Preparedness and Spill Response *52*
6.8.6 Container Management and Safe Disposal *52*
5.8.7 Awareness Raising and Behavioral Change *52*
5.8.8 Monitoring and Compliance *52*
6.9 COMMUNITY HEALTH AND SAFETY 52

6.9.1 General Community Safety Measures *52*
6.9.2 Noise from Machinery Use *53*
6.9.3 Pesticide Spray Drift and Chemical Exposure *53*
6.9.4 Monitoring and Compliance *53*
6.10 Loss of Cocoa farmlands to Small Scale Illegal Mining (Galamsey) 54
6.10.1 Economic Vulnerability of Farmers and Landowners *54*
6.10.2 Labour Intensity and Perceived Profitability *54*
6.11 Gender-Based Violence and Disparity 54
6.11.1 Gender-Based Discrimination and Disparity *54*
6.11.2 Sexual Exploitation, Abuse, and Sexual Harassment (SEA/SH) *54*
6.12 Increased Teenage Pregnancy 55
6.12.1 Exposure of Adolescent Girls to SEA and Early Sexual Debut *55*
6.12.2 Health Risks and Interruption of Schooling *55*
6.12.3 Long-Term Socio-Economic Consequences *55*
6.13 Spread of HIV and Other Sexually Transmitted Infections (STIs) 56
6.13.1 General Prevention and Awareness Measures *56*
6.13.2 Worker Management and Code of Conduct *56*
6.13.3 Access to Preventive and Health Services *56*
6.13.4 Community-Focused Risk Reduction *57*
6.13.5 Monitoring, Reporting and Enforcement *57*
6.13.6 Coordination and Institutional Strengthening *57*
6.14 Farm Loss 57
6.14.1 Use of Unimproved or Non–True-to-Type Seedlings *57*
6.14.2 Cross-Cutting Livelihood and Farm Resilience Measures *58*
6.15 Threat to Biodiversity 58
6.15.1 Effects on Flora and Fauna *58*
6.15.2 Effects on Carbon Sequestration *59*
6.16 Climate-Responsive Implementation Measures 60
6.17 Socio-Cultural Conflicts 60
6.17.1 Implement a Cultural Awareness and Induction Programme *60*
6.17.2 Develop and Enforce a Worker Code of Conduct *60*
6.17.3 Strengthening Community Engagement Mechanisms *60*
6.17.4 Integrate Local Labour Where Feasible *60*
6.17.5 Establish a Culturally Responsive Grievance Mechanism *61*
6.17.6 Monitor Worker–Community Interactions *61*
6.17.7 Limit Worker Movements in Community Spaces *61*
6.17.8 Support Cultural Preservation Initiatives *61*
6.18 Potential Disagreements Among Farm Interest Holders 61
6.18.1 Undertake Comprehensive Stakeholder Identification and Verification *61*
6.18.2 Facilitate Early and Inclusive Consultations *61*
6.18.3 Formalize Agreements Through Written Consent *61*
6.18.4 Apply COCOBOD's Standard Rehabilitation Protocol Consistently *61*
6.18.5 Implement a Livelihood Support Plan for Affected Farmers *62*
6.18.6 Enable Transparent Communication of Entitlements and Obligations *62*
6.18.7 Strengthen Grievance Redress Mechanisms (GRM) *62*
6.18.8 Monitor Agreement Compliance Throughout the Rehabilitation Cycle *62*
6.18.9 Promote Conflict-Sensitive Mediation *62*
SECTION 7: CORE COMPONENTS AND IMPLEMENTATION FRAMEWORK OF ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN 63
7.1 Institutional Arrangements 63
7.1.1 COCOBOD (Project Executing Agency) *63*
7.1.2 Project Implementation Unit (PIU) *63*

7.1.3 PIU Environmental and Social Safeguard Specialists *64*
7.1.4 Monitoring and Evaluation (M&E) Specialists *64*
7.1.5 Service Providers and Contractors *65*
7.1.6 Service Provider/Contractor Field Supervisors, Health and Safety Officer and Site Officers *65*
7.1.7 Cocoa Health and Extension Division (CHED) *65*
7.1.8 West Akim Municipal, Upper West Akim District and Asene Manso Akroso District Assemblies (Municipal/District Planning and Environmental Management Units) *66*
7.1.9 Environmental Protection Authority (EPA) *66*
7.1.10 Asamankese, Akroso and Adeiso Traditional Divisional Authorities and Community Leaders *66*
7.1.11 Farm Interest Holders / Farmer Groups / Project-Affected Communities *66*
7.1.12 Civil Society Organizations (CSOs) / Non-Governmental Organizations (NGOs) (as applicable) *66*
7.2 ESMP Implementation Capacity 67
7.2.1 Project Training Programme *67*
7.2.2 Service Provider / Contractor Training Program *68*
7.3 Monitoring and Evaluation (M&E) Framework 74
7.3.1 Monitoring Framework *74*
7.3.2 Evaluation Framework *77*
7.4 Emergency Preparedness and Response (EPR) 80
SECTION 8: STAKEHOLDER ENGAGEMENT 84
8.1 Objectives and Purpose of Stakeholder Engagement 84
8.2 Identification and Categorization of Stakeholders 84
8.3 Engagement Methods and Tools 85
8.4 Undertaken and Planed Engagement Activities During ESMP Implementation 87
8.5 Stakeholder Engagement Information Disclosure 90
8.6 Roles and Responsibilities for Stakeholder Engagement 90
8.7 Engagement of Vulnerable Groups 90
8.8 Grievance Redress Mechanism (GRM) Linkages 91
8.9 Monitoring and Reporting of Stakeholder Engagement 91
8.10 Budget for Stakeholder Engagement 93
SECTION 9: GRIEVANCE REDRESS MECHANISM (GRM) 94
9.1 Objectives of Grievance Redress Mechanism (GRM) 94
9.2 Scope and Types of Grievances 94
9.3 Guiding Principles 95
9.4 GRM Institutional Structure, Process and Roles 95
9.4.1 Overall GRM Structure and Process *95*
9.5 Sensitive Cases of Grievance 101
9.5.1 Gender-Based Violence, Sexual Exploitation and Abuse and Sexual Harassment (GBV/SEA/SH) *101*
9.5.2 Child Labour *102*
9.6 Worker Grievance Management Framework 104
9.6.1 Objectives of the Worker GRM *105*
9.6.2 Scope of the Worker GRM *105*
9.6.3 Institutional Arrangements *105*
9.6.4 Grievance Uptake Channels *105*
9.6.5 Grievance Resolution Process *105*
9.6.6 Confidentiality and Non-Retaliation *106*
9.6.7 Documentation and Reporting *106*
9.6.8 Training and Awareness *106*
9.6.9 Monitoring and Performance Indicators *107*
9.7 Monitoring and Evaluation of GRM 107
9.8 Disclosure, Feedback and Closure of Complaints 107
9.9 GRM Record-Keeping and Reporting 108
9.10 World Bank Escalation 108

SECTION 10: BUDGET FOR ESMP IMPLEMENTATION 109
ANNEXES 111
ANNEX 1 – EXCERPTS OF COCOBOD'S COCOA REHABILITATION PROTOCOL 111
ANNEX 2A – LIST OF REGISTERED COCOA FARMERS COOPERATIVES IN ASAMANKESE COCOA DISTRICT 117
ANNEX 2B - COCOA-SECTOR RELATED CSOS AND NGOS OPERATING IN ASAMANKESE COCOA DISTRICT 122
ANNEX 3 - ROLES AND RESPONSIBILITIES OF KEY ACTORS IN COCOA REHABILITATION PROCESS 123
ANNEX 4: RISK AND VULNERABILITY MATRIX FOR CHILD LABOUR AND TRAFFICKING 125
ANNEX 5A - NATIONAL ENVIRONMENTAL QUALITY STANDARDS (GHANA STANDARDS –GS), AMBIENT AIR QUALITY 127
ANNEX 5B - NATIONAL ENVIRONMENTAL QUALITY STANDARDS (GHANA STANDARDS –GS), AMBIENT NOISE CONTROL 128
ANNEX 5C - NATIONAL ENVIRONMENTAL QUALITY STANDARDS (GHANA STANDARDS –GS), EFFLUENT DISCHARGE 129
ANNEX 6 - RELEVANT INTERNATIONAL CONVENTIONS & REQUIREMENTS 130
ANNEX 7: PERSONAL PROTECTIVE EQUIPMENT (PPE) REQUIREMENTS 133
ANNEX 8: SAMPLE CODE OF CONDUCT 134
ANNEX 9: LIST OF DESIRABLE AND UNDESIRABLE SHADE TREE SPECIES 136
ANNEX 10: OUTLINE OF ESMP MONITORING REPORT FOR THE ASAMANKESE COCOA REHABILITATION PROJECT 137
ANNEX 11: OUTLINE OF EVALUATION REPORTS 139
ANNEX 12: GRIEVANCE REGISTRATION AND REDRESS FORM 142
ANNEX 13: GRIEVANCE ACKNOWLEDGEMENT RECEIPT 144
ANNEX 14: SAMPLE GRIEVANCE REDRESS MECHANISM (GRM) LOGBOOK ASAMANKESE COCOA REHABILITATION ESMP 145
ANNEX 15: GRIEVANCE CLOSURE FORM 146
ANNEX 16: GRIEVANCE RESOLUTION MEETING RECORD TEMPLATE 148
ANNEX 17: GRIEVANCE REFERRAL TEMPLATE 150
ANNEX 18: COSTED ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) BUDGET TABLE 153
ANNEX 19: CHILD LABOUR PREVENTION PROTOCOL 154
ANNEX 20: BIOMASS WASTE MANAGEMENT PLAN FOR CSSVD-AFFECTED COCOA REHABILITATION 156
ANNEX 21: PICTURES OF STAKEHOLDER ENGAGEMENT AT ASAMANKESE DISTRICT 160

List of Figures

FIGURE 1.1 – MAP OF LOCATIONS OF BENEFICIARY COCOA DISTRICTS 3
FIGURE 2.1 – MAP OF ASAMANKESE COCOA DISTRICT AND ADJOINING COCOA DISTRICTS 6
FIGURE 2.2 – MAP OF ASAMANKESE COCOA DISTRICT IN THE CONTEXT OF LOCAL GOVERNMENT BOUNDARIES 7
FIGURE 9.1 – GRM PROCESS FLOW DIAGRAM 100
FIGURE 9.2 - GBV/SEA/SH REFERRAL PATHWAYS 101
FIGURE 9.3 - CATEGORIZATION AND ADDRESSING OF CHILD LABOUR ISSUES UNDER THE GRM 104

List of Tables

TABLE 4.3 - HEALTH FACILITIES BY DISTRICT 23
TABLE 7.1 - PROPOSED TRAINING PROGRAM FOR THE IMPLEMENTATION OF THE ESMP 68
TABLE 7.2 - TRAINING PROGRAM FOR SERVICE PROVIDER / CONTRACTOR 69
TABLE 7.3 - ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN (ESMP) – MITIGATION AND MONITORING PLAN 70
TABLE 7.3 - E&S MONITORING INDICATORS 75
TABLE 8.1 - STAKEHOLDER ENGAGEMENT MATRIX 86
TABLE 8.3 - STAKEHOLDER ENGAGEMENT ACTIVITY MATRIX 89
TABLE 9.1 - GRM TIMEFRAMES SUMMARY 99
TABLE 10.1: PROVISIONAL COSTED ESMP IMPLEMENTATION BUDGET (USD) 109

Section 1: Introduction

Cocoa remains a critical pillar of Ghana's agricultural economy, sustaining millions of smallholder farmers and contributing substantially to national export earnings. Productivity, however, continues to be undermined by Cocoa Swollen Shoot Viral Disease (CSSVD), which causes significant yield losses and farm decline. In response, the Government of Ghana, with support from the World Bank through the Ghana Tree Crop Diversification Project (TCDP), is rehabilitating 21,185 hectares of CSSVD-affected cocoa farms across the Adabokrom, Essam, and Asamankese Cocoa Districts.

Given the unique nature of the cocoa rehabilitation sub-project and the wide geographical dispersion of the affected cocoa farms, it was agreed at the outset that a cocoa district-specific Environmental and Social Management Plan (ESMP) would be developed for each cocoa district under the project. Cocoa district boundaries differ from the conventional political administrative districts. In the case of the Asamankese Cocoa District, the project area spans three political administrative districts, namely the West Akim Municipal Assembly (WAMA), the Asene-Manso-Akroso District Assembly (AMADA), and the Upper West Akim District Assembly (UWADA). This cocoa district specific ESMP provides measures for ensuring that rehabilitation activities in the Asamankese Cocoa District are implemented in an environmentally sound and socially responsible manner, consistent with national regulatory requirements and the World Bank Environmental and Social Framework (ESF).

1.1 Project Background

The TCDP, launched in 2023, aims to strengthen economic, climate, and social resilience in the cocoa, cashew, rubber, and coconut value chains. The project is jointly coordinated by the Ghana Cocoa Board (COCOBOD) and the Tree Crop Development Authority (TCDA) and is being implemented in the Western North, Eastern, Savanna, Bono, and Bono East Regions.

The project comprises four components:

- **Component 1: Institutional Strengthening and Value Chain Governance**

  Enhances the institutional capacity of COCOBOD and TCDA and strengthens governance systems for sustainable tree crop development.

  - Subcomponent 1.1: Institutional capacity, policies, and regulations
  - Subcomponent 1.2: Digitization and traceability
  - Subcomponent 1.3: Prevention and response to child labour

- **Component 2: Improving Tree Crop Productivity and Climate Resilience**

  Supports productivity enhancement and climate resilience of tree crop farms.

  - Subcomponent 2.1: Demand-driven research
  - Subcomponent 2.2: On-farm productivity enhancement and resilience
  - Subcomponent 2.3: Strengthening Farmer-Based Organizations (FBOs)

- **Component 3: Post-Harvest Management, Value Addition, and Market Access**

  Facilitates private sector investment in secondary value addition and processing within cocoa, cashew, and coconut value chains.

- **Component 4: Project Coordination, Management, Monitoring and Evaluation**

  Supports overall project coordination and M&E by COCOBOD's PIU and TCDA's PCU.

1.2 Cocoa Rehabilitation Activities

Under Subcomponent 2.2, COCOBOD is implementing a targeted rehabilitation programme for cocoa farms affected by CSSVD. The intervention involves removing infected cocoa trees and re-establishing farms with improved, disease-resistant cocoa varieties and appropriate shade trees. Key rehabilitation activities include slashing, cutting diseased trees, applying arboricides to stumps, re-inspection, and replanting.

The Project finances the following activities:

1. **Core rehabilitation works by competitively selected private firms**, including:
   - Slashing, cutting diseased trees, arboricide application, and hacking;
   - Production and supply of plantain seedlings and permanent shade trees;
   - Planting and nurturing of plantain, shade trees, and cocoa seedlings.
   - Maintenance of the re-established farms
2. **Livelihood support payments** to farmers and landlords to support income losses resulting from cocoa tree removal.
3. **Maintenance activities** including weeding, refilling, pesticide and fertilizer application.
4. **Support for e-extension services** on Climate-Smart Agriculture (CSA) practices.
5. **Certification of rehabilitated farms** as compliant with project standards.

All phases of the rehabilitation process are required to comply with the environmental and social risk management protocols established under the ESMF and agreed between the Government of Ghana and the World Bank.

1.3 Project Location

Figure 1.1, below, shows the locations of the Asamankese project district for the cocoa rehabilitation interventions.

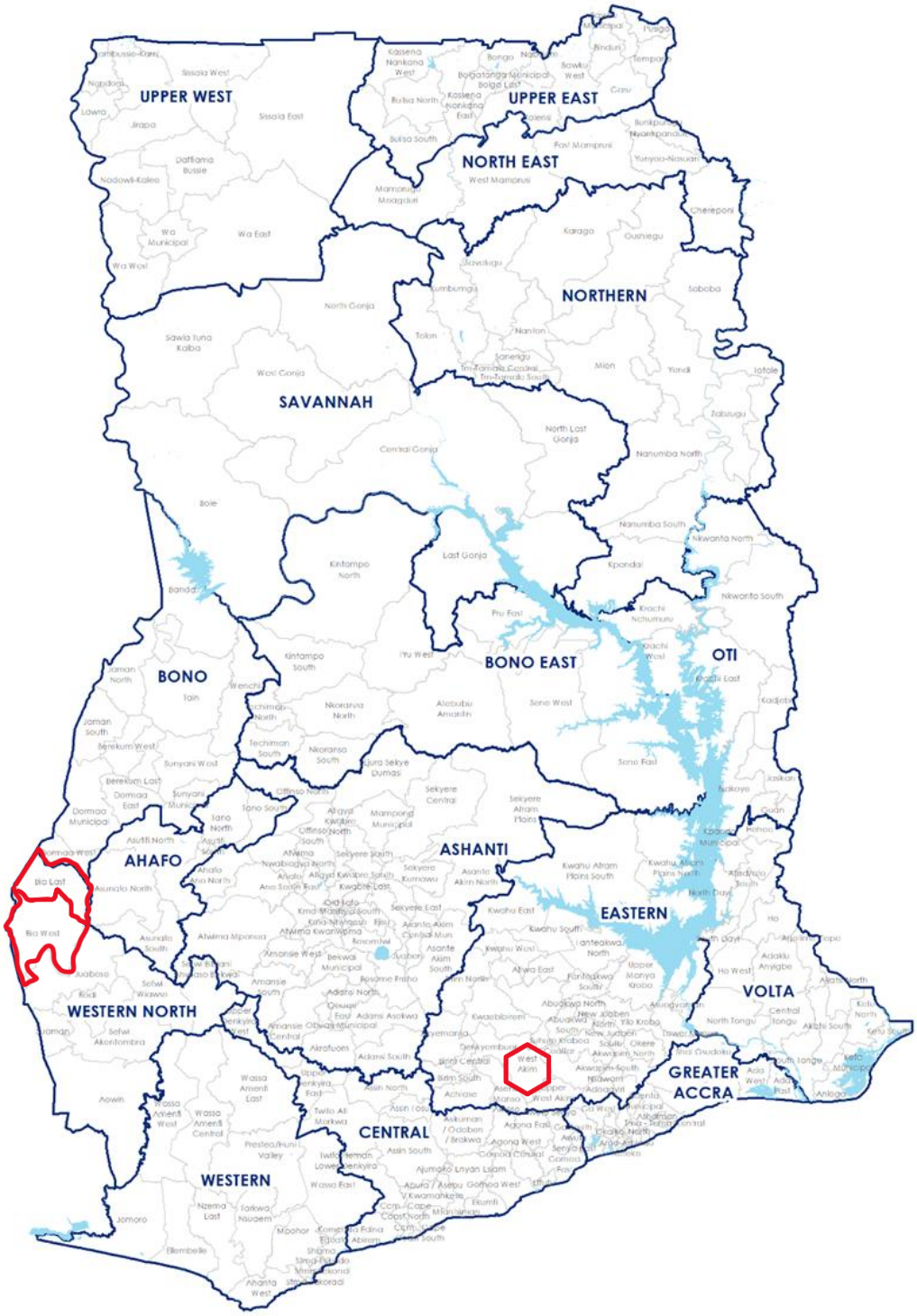


Figure 1.1 – Map of Locations of Beneficiary Cocoa Districts

1.4 Rationale for Preparing Environmental and Social Management Plan

TCDP conducted an environmental and social assessment of the Project and prepared an Environmental and Social Management Framework (ESMF) prior to appraisal, in line with World Bank Environmental and Social Framework (ESF) requirements. For this subproject (rehabilitation of cocoa farms at Asamankese Cocoa District), the activities and subproject sites were screened. Considering the fragmented and dispersed nature of farms across the cocoa landscape, and the potential environmental and social risks and impacts which are well-known and similar with readily available mitigation measures, the World Bank recommended preparation of this Environmental and Social Management Plan (ESMP) at the Cocoa District level to guide the rehabilitation activities. This ESMP therefore provides practical mitigation measures for managing the environmental and social risks associated with the rehabilitation of 3,401 hectares of CSSVD-affected cocoa farms in the Asamankese Cocoa District. It outlines mitigation measures, stakeholder engagement processes, monitoring and reporting arrangements, and procedures to guide daily implementation.

The ESMP establishes a formal process for identifying, mitigating, and monitoring risks to ensure the health, safety, and livelihoods of farmers, workers, and surrounding communities, while promoting equitable participation and adaptive management throughout implementation.

The specific objectives of the ESMP are to:

- Identify potential direct and indirect environmental and social impacts arising from the rehabilitation of diseased cocoa farms.
- Assess the significance of these impacts on the biophysical and human environment.
- Propose practical, socially acceptable, technically feasible, and economically sound measures to prevent, reduce, or manage adverse impacts.
- Ensure compliance with national policy, legal, and regulatory requirements and with the World Bank Environmental and Social Standards (ESS1–ESS10).

1.5 Contents of the Report

In addition to Section 1, the ESMP is organized into the following sections:

- **Section 2: Project Description** – Provides an overview of the cocoa rehabilitation activities to be implemented by COCOBOD and details the specific interventions to be carried out in the Asamankese project district.
- **Section 3: Applicable GoG Regulations and World Bank Environmental and Social Standards** – Summarizes the relevant national policy, legal, and institutional frameworks, as well as the World Bank Environmental and Social Standards (ESSs), and explains how these requirements have guided project design and ESMP preparation.
- **Section 4: Baseline Environmental and Social Conditions** – Describes the existing environmental and social characteristics of the project area.
- **Section 5: Environmental and Social Impacts, Risks, and Management Actions** – Identifies the potential environmental and social impacts and risks associated with the

rehabilitation activities and presents the proposed mitigation measures and monitoring plan.

- **Section 6: Environmental and Social Management Actions** – Provides detailed management plans and measures to address identified impacts and risks, along with corresponding monitoring arrangements.
- **Section 7: Core Components and Implementation Framework of the ESMP** – Outlines the ESMP's implementation structure, including monitoring systems, compliance documentation, performance reporting, and procedures for identifying and implementing corrective actions.
- **Section 8: Stakeholder Engagement** – Presents the stakeholder engagement approach for the Asamankese Cocoa Rehabilitation Programme and defines the framework for inclusive, transparent, and participatory communication throughout implementation.
- **Section 9: Grievance Redress Mechanism** – Describes the GRM process, including structures, procedures, and protocols for managing complaints—including GBV/SEA/SH and child labour cases—throughout the project lifecycle.
- **Section 10: Budget for ESMP Implementation** – Provides the estimated costs for ESMP implementation, including mitigation, monitoring, and stakeholder engagement, and outlines the implementation timeline and key milestones.

Section 2: Project Description

This Environmental and Social Management Plan (ESMP) applies specifically to the rehabilitation of cocoa farms affected by Cocoa Swollen Shoot Virus Disease (CSSVD) within the Asamankese Cocoa District, which cuts across three local government areas (West Akim Municipal Assembly (WAMA), Asene Manso Akroso District (AMAD) and Upper West Akim District (UWAD)) of Ghana's Eastern Region. The total land area of the cocoa district is 760.5 km² (i.e., 76050ha) out of which 3,401ha is to be rehabilitated under this project.

It shares boundaries with:

- Bawdua Cocoa District to the north,
- Oda Cocoa District to the west,
- Agona Nyakrom Cocoa Districts to the south, and
- Suhum Cocoa District to the east.

Asamankese, the municipal capital of West Akim Municipality, serves as the administrative and commercial hub of the cocoa district.

Figure 2.1 presents the schematic map of the Asamankese Cocoa District, illustrating adjoining cocoa districts and project coverage areas.

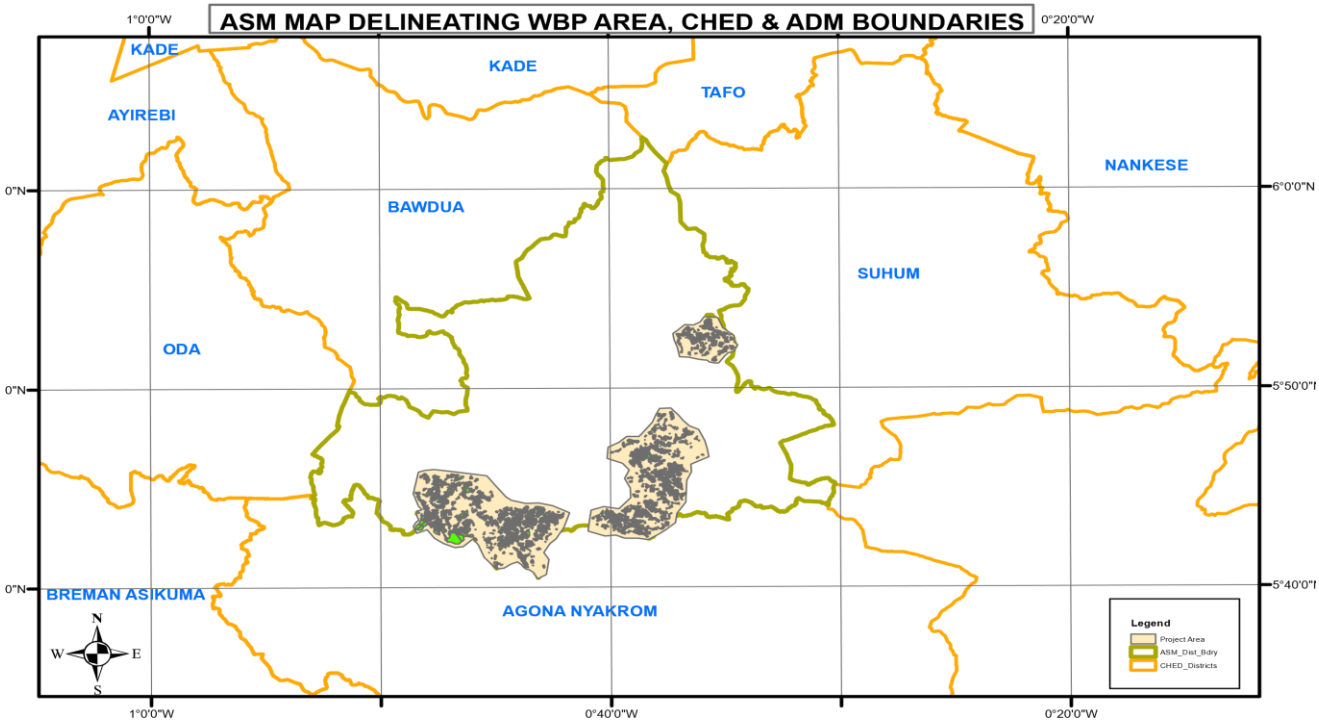


Figure 2.1 – Map of Asamankese Cocoa District and Adjoining Cocoa Districts

Figure 2.2 presents the schematic map of the Asamankese Cocoa District, illustrating its location with respect to the three local administrative assemblies within which it is located.

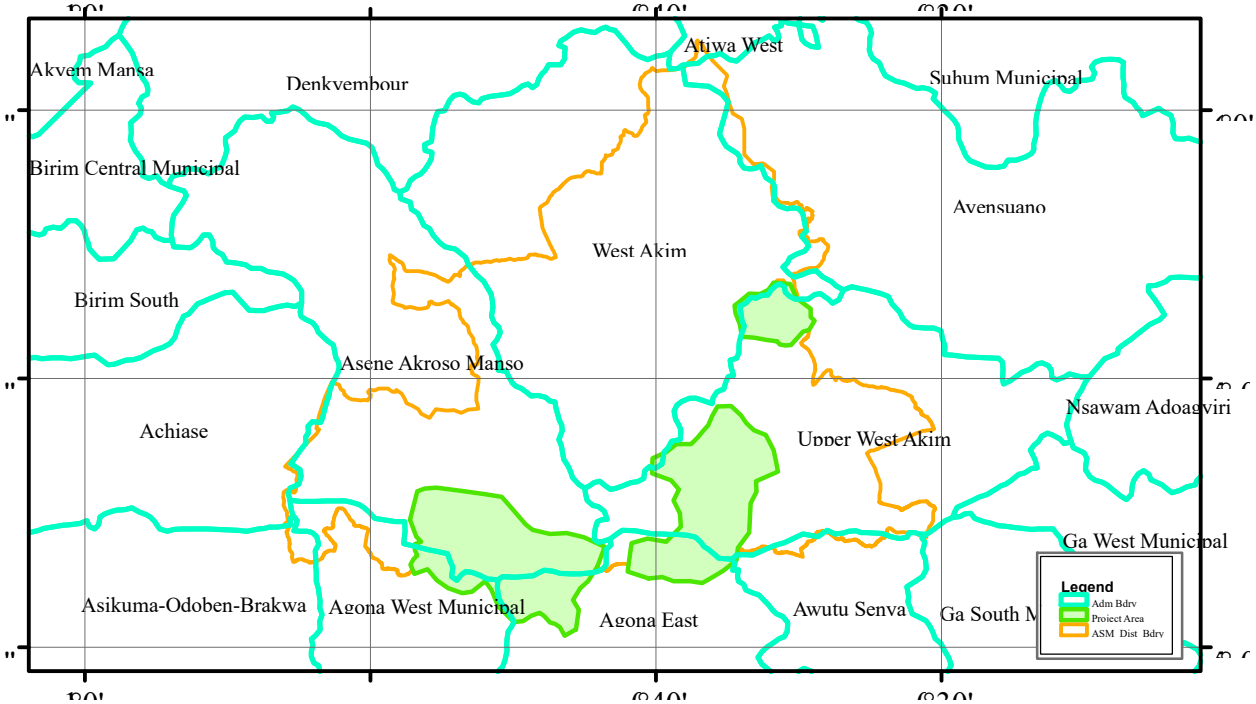


Figure 2.2 – Map of Asamankese Cocoa District in the Context of Local Government Boundaries

2.1 Project Objectives

The primary objective is to restore cocoa production on farms that have been devastated by CSSVD (a viral disease that severely reduces yields and threatens farmer livelihoods) through voluntary farm re-establishment, improved agronomic practices, and the provision of climate-resilient planting materials. These interventions aim to restore productivity, enhance climate resilience, and safeguard farmer livelihoods while contributing to reduced greenhouse gas emissions and improved environmental outcomes. The project also emphasizes strengthening institutional capacity, improving value chain governance, and ensuring compliance with environmental and social safeguards, including child labour prevention, gender inclusion, and community health and safety.

2.2 Project Scope of Works and Phases

The Cocoa Rehabilitation Subproject will rehabilitate approximately 3,401 ha of CSSVD-affected cocoa farms within the Asamankese Cocoa District. The rehabilitation process involves the pre-treatment and treatment activities including the systematic removal and killing of infected cocoa trees within a minimum of 6 months to one year, followed by farm re-establishment and maintenance over a two-year period to restore productivity and improve farm resilience. As stipulated in the Cocoa Rehabilitation Protocol, the rehabilitation activities are undertaken sequentially through the following stages:

Pre-Treatment Activities:

1. Farm Resolution and Verification – Working with competitively-selected service providers, farmer groups, and local leaders to identify and demarcate CSSVD-affected farms. This includes resolution of outbreak farm areas, measurement of resolved farms, confirming land tenure agreements, and documenting farmer consent through signed rehabilitation agreements.

2. Stakeholder Engagement and Community Sensitization – Conducting engagement sessions with farmers, landowners, traditional authorities, and community groups to explain the rehabilitation process, timelines, benefits, and potential risks. Special attention will be given to vulnerable groups, including women, sharecroppers, caretakers and tenant farmers.

On-Farm Rehabilitation Process:

Phase 1:

3. Slashing Before Treatment: Existing undergrowth, weeds, and bushes are cleared to improve access to the affected farms to facilitate the safe and efficient implementation of tree cutting and treatment activities.

4. Tree Cutting – Removing infected cocoa trees, infected contact trees and undesirable trees using mechanized and manual techniques. Tree cutting will be carried out under strict safety procedures, with protective zones established to safeguard nearby farms, water bodies, and community assets.

5. Arboricide Application – Applying approved arboricides to prevent re-sprouting of infected stumps and preparing land for replanting. All chemical handling will follow EPA regulations, the project IPMP and World Bank guidelines, with PPE requirements and spill-prevention measures strictly enforced.

6. **Hacking**: Following tree cutting and arboricide application, the cut tree logs and branches are chopped into smaller pieces to facilitate decomposition and improve site conditions. This activity enhances access for subsequent planting and farm maintenance operations.

Phase 2:

7. Replanting and Agroforestry Establishment – Introducing cocoa seedlings supplied by COCOBOD, intercropped with shade trees and plantain to provide temporary shade for the cocoa. This agroforestry model is designed to improve soil fertility, provide farmers with interim income, and enhance biodiversity. Followed by early maintenance activities.

Phase 3:

8. **Maintenance and Support Services** – Providing ongoing farm management support, including weeding, fertilization and pest and disease management (as required by COCOBOD). Farmer capacity-building, to enhance smooth handover of rehabilitated farms to beneficiary farmers.

2.3 COCOBOD's Cocoa Rehabilitation Protocols

COCOBOD has developed a Cocoa Rehabilitation Protocol to serve as an operational guide for all implementing partners, technical supervisors, and field personnel. It outlines the standard procedures, technical specifications, and compliance measures required to ensure the consistent and effective delivery of cocoa rehabilitation services under the TCDP. The objectives of the protocol are to:

i. Serve as an implementation guide for cocoa rehabilitation under the Ghana Tree Crop Diversification Project (TCDP);
ii. Provide all stakeholders with clear guidance on technical requirements and standard operating procedures (SOPs) for executing on-farm rehabilitation activities, job certification, invoicing, and payment processes under the TCDP;
iii. Promote consistency in the rehabilitation process across all participating project districts; and
iv. Ensure the quality of inputs supplied and services delivered throughout the implementation cycle.

The relevant sections of the Cocoa Rehabilitation Protocols germane to this ESMP have been included as Annex 1.

2.4 Equipment, Materials and Inputs

To execute the works, it is anticipated that the service provider would deploy equipment such as chainsaws, augers, slashers, cutlasses and hand tools. Inputs will include approved arboricides, fertilizers (provided by COCOBOD), PPE for all workers, cocoa and shade tree seedlings provided through the Seed Production Department (SPD) nurseries, and plantain seedlings provided by the selected service provider and/or subcontractor. All materials shall be sourced in compliance with EPA and World Bank standards, and suppliers will be required to demonstrate adherence to environmental and social safeguards.

2.5 Project Beneficiaries and Stakeholders

Direct beneficiaries include interest holders in the farms to be rehabilitated, their families, and associated farm workers. Indirect beneficiaries include local communities that gain from improved employment opportunities, training, and long-term agricultural productivity.

Key stakeholders also include:

- Smallholder cocoa farmers and farmer-based organizations/cooperatives (76 registered cooperatives) (See list in Annex 2a)
- COCOBOD (as project sponsor),
- Environmental Protection Authority (EPA),
- West Akim Municipal Assembly (WAMA), Asene Manso Akroso District (AMAD) and Upper West Akim District (UWAD),
- Asamankese, Adeiso and Akroso Traditional Councils (the traditional authorities/allodial landowners),
- Cocoa-related NGOs & CSOs (See list in Annex 2b),
- Service provider / Contractor, and
- World Bank (the funding agency).

The TCDP employs a private sector–led implementation model in which accredited service providers carry out the on-farm cocoa rehabilitation activities. These firms operate under the technical supervision of COCOBOD's Cocoa Health and Extension Division (CHED) and the strategic oversight of the Project Implementation Unit (PIU) at COCOBOD Head office. This structure ensures quality control, adherence to rehabilitation protocols, and accountability in field operations.

The specific roles and responsibilities of key actors involved in the cocoa rehabilitation process are detailed in Annex 3.

2.6 Workforce and Labour Requirements

Apart from the COCOBOD staff associated with the project, the Cocoa Rehabilitation Activities in the Asamankese Cocoa District is anticipated to employ a core workforce of about 33 service provider staff, including top management, environmental and social leads, a regional manager, project officers and administrative staff. In addition, more than 350 full-time, seasonal and community labourers are anticipated to be engaged during peak clearing and replanting phases. Local recruitment will be prioritized to maximize employment benefits. All workers will be employed under written contracts, with ID verification to prevent child and forced labour, and will be required to sign and comply with the project's Code of Conduct.

Section 3: Applicable GoG Regulations and World Bank Environmental and Social Standards

3.1 Relevant National Regulatory Requirements and Applicable ESSs

This section presents a summary of the key national legal and regulatory requirements applicable to the Cocoa Rehabilitation Subproject and their alignment with the World Bank Environmental and Social Standards (ESSs). As the project is financed under the World Bank Environmental and Social Framework (ESF), emphasis is placed on regulatory requirements that are directly relevant to the management of environmental and social risks and impacts. Table 3.1 summarizes the applicable national regulatory instruments, the corresponding ESSs, and their relevance to the subproject.

Table 3.1: Summary of Relevant National Regulatory Requirements and Applicable ESSs

Law/Policy/Regulation	Key Requirement	Applicable ESS	Relevance to the Cocoa Rehabilitation Subproject
Environmental Protection Act, 2025 (Act 1124)	Provides the legal framework for environmental protection, pollution control, permitting, monitoring, and enforcement.	ESS1, ESS2, ESS3, ESS4, ESS5, ESS6, ESS8, ESS10	Guides environmental compliance, monitoring, and implementation of mitigation measures under the ESMP.
Environmental Protection (Environmental Assessment) Regulations, 2025 (L.I. 2504)	Requires environmental assessment, permitting, and environmental management measures for projects with potential impacts.	ESS1, ESS2, ESS3, ESS4, ESS5, ESS6, ESS8, ESS10	Provides the legal basis for environmental and social screening and preparation of this ESMP.
National Climate Change Policy, 2013	Promotes climate resilience, adaptation, and sustainable natural resource management.	ESS1, ESS3, ESS6	Supports climate-smart cocoa rehabilitation and agroforestry interventions.
Plants and Fertilizer Act, 2010 (Act 803)	Regulates plant protection, pest control, fertilizers, and pesticides.	ESS1, ESS3, ESS4, ESS6	Relevant to pest and disease management and safe agrochemical use.
Environmental Sanitation Policy, 2010	Promotes sound management of solid, liquid, and hazardous waste.	ESS1, ESS3, ESS4	Guides waste management and pollution prevention during project implementation.
Water Resources Commission Act, 1996 (Act 522) and Water Use Regulations, 2001 (L.I. 1692)	Regulate water abstraction and use.	ESS1, ESS3, ESS6	Relevant to nursery operations and protection of water resources.
Riparian Buffer Zone Policy, 2013	Protects rivers, streams, and other water bodies through the establishment of buffer zones.	ESS1, ESS3, ESS6	Requires protection of water bodies and associated ecosystems.

Forest and Wildlife Policy, 2012 and Forestry Commission Act, 1999 (Act 571)	Promote biodiversity conservation and sustainable management of forest resources.	ESS1, ESS6	Supports biodiversity conservation and agroforestry practices.
National Museums Act, 1969 (NLCD 387)	Protects cultural heritage and archaeological resources.	ESS1, ESS8	Requires protection of cultural resources and implementation of chance-find procedures.
Land Act, 2020 (Act 1036)	Provides for land rights, land access, compensation, and protection of interests in land.	ESS1, ESS5	Relevant to temporary livelihood impacts associated with cocoa rehabilitation.
Local Governance Act, 2016 (Act 936)	Promotes stakeholder participation and local governance.	ESS1, ESS10	Supports stakeholder engagement, consultation, and disclosure.
Labour Act, 2003 (Act 651) and Labour Regulations, 2007 (L.I. 1833)	Establish labour rights, working conditions, and occupational health and safety requirements.	ESS1, ESS2	Guides labour management, worker welfare, and occupational health and safety.
Children's Act, 1998 (Act 560) and Hazardous Child Labour Activity Framework, 2016	Prohibit exploitative and hazardous child labour.	ESS1, ESS2, ESS4	Critical for managing child labour risks in cocoa rehabilitation activities.
Ghana Accelerated Action Plan Against Child Labour (2023–2027)	Provides the national framework for preventing and eliminating child labour.	ESS1, ESS2, ESS4	Supports child labour prevention, monitoring, and remediation measures.
National Gender Policy, 2015	Promotes gender equality and inclusion of vulnerable groups.	ESS1, ESS10	Supports equitable participation and benefit-sharing among women and vulnerable groups.
Persons with Disability Act, 2006 (Act 715)	Protects the rights of persons with disabilities and prohibits discrimination.	ESS1, ESS2, ESS10	Promotes inclusion and non-discrimination in project activities and employment.
Public Health Act, 2012 (Act 851)	Protects public health and environmental sanitation.	ESS1, ESS4	Guides management of community health and safety risks.
Factories, Offices and Shops Act, 1970 (Act 328)	Establishes workplace safety and health requirements.	ESS1, ESS2	Supports implementation of occupational health and safety measures.
Ghana National Fire Service Act, 1997 (Act 537) and Control and Prevention of Bushfires Act, 1990 (PNDCL 229)	Provide requirements for fire prevention and management.	ESS1, ESS2, ESS4	Relevant to preventing and managing fire and bushfire risks.

Ghana Standards for Ambient Air Quality, Noise and Effluent Discharge (GS 1236:2019, GS 1222:2018 and GS 1212:2019)	Establish environmental quality standards and pollution control requirements.	ESS1, ESS3, ESS4	Provide benchmarks for environmental monitoring and compliance.

3.2 Gap Analysis Between Ghanaian Regulatory Requirements and the World Bank ESF

This section compares the applicable Ghanaian legal and regulatory requirements with the relevant World Bank Environmental and Social Standards (ESSs) to identify areas of alignment and any gaps in the management of environmental and social risks and impacts. The analysis highlights additional measures required to ensure compliance with the World Bank Environmental and Social Framework (ESF) where national requirements are less comprehensive or do not fully address specific ESS provisions.

The identified gap-filling measures have been integrated into the project's environmental and social risk management instruments, including the Environmental and Social Management Plan (ESMP), Labour Management Procedures (LMP), Stakeholder Engagement Plan (SEP), Livelihood Support Plan (LSP), Integrated Pest Management Plan (IPMP), and other relevant project implementation procedures. Table 3.2 presents a summary of the key gaps and the corresponding measures adopted to address them.

Table 3.2: Gap Analysis Between Ghanaian Regulatory Requirements and the World Bank ESF

ESS	Related Ghanaian Laws, Policies and Regulations	Key Gap in National Framework	Gap-Filling Project Measure
ESS1: Assessment and Management of Environmental and Social Risks and Impacts	Environmental Protection Act, 2025 (Act 1124); Environmental Protection (Environmental Assessment) Regulations, 2025 (L.I. 2504); National Climate Change Policy, 2013; National Gender Policy, 2015; Persons with Disability Act, 2006 (Act 715)	National requirements provide for environmental assessment and permitting but offer limited guidance on integrated E&S risk management, vulnerability assessment, SEA/SH risk management, inclusion of vulnerable groups, and adaptive monitoring.	ESMP Sections 4–7 establish procedures for E&S risk assessment, mitigation, monitoring, and reporting, including measures for vulnerable groups and SEA/SH risk management. These measures are further supported by the project ESMF and SEP.

ESS	Related Ghanaian Laws, Policies and Regulations	Key Gap in National Framework	Gap-Filling Project Measure
ESS2: Labour and Working Conditions	Labour Act, 2003 (Act 651); Labour Regulations, 2007 (L.I. 1833); Factories, Offices and Shops Act, 1970 (Act 328); Children's Act, 1998 (Act 560); Hazardous Child Labour Activity Framework, 2016; Ghana Accelerated Action Plan Against Child Labour (2023–2027); Persons with Disability Act, 2006 (Act 715)	National labour laws provide broad labour and OHS protections but do not require a project-specific Labour Management Procedure, worker grievance mechanism, contractor labour monitoring, or child labour risk management procedures consistent with ESS2.	ESMP Sections 5.3.1–5.3.3, 6.2–6.4, 7.2 and 9.6 establish measures for labour management, occupational health and safety, worker grievance handling, child labour prevention, contractor oversight, and worker training. These measures are further strengthened through the project LMP, contractor OHS Plan, Code of Conduct, and child labour prevention protocol.
ESS3: Resource Efficiency and Pollution Prevention and Management	Environmental Protection Act, 2025; Environmental Assessment Regulations, 2025; National Climate Change Policy, 2013; Plants and Fertilizer Act, 2010 (Act 803); Environmental Sanitation Policy, 2010; Water Resources Commission Act, 1996 (Act 522); Water Use Regulations, 2001 (L.I. 1692); Ghana Standards for Ambient Air Quality, Noise and Effluent Discharge (GS 1236:2019, GS 1222:2018 and GS 1212:2019)	National requirements address pollution control, water use, sanitation and agrochemical regulation but do not require a standalone Integrated Pest Management Plan or detailed project-specific procedures for resource efficiency, agrochemical management, spill prevention, waste management, and environmental monitoring.	ESMP Sections 5.3.4, 5.3.7, 6.5–6.8, 7.3 and Annexes 5a–5c establish measures for resource efficiency, pollution prevention, waste management, water resource protection, and safe agrochemical use. These measures are further strengthened by the project IPMP, which provides detailed guidance on integrated pest management and agrochemical handling.
ESS4: Community Health and Safety	Public Health Act, 2012 (Act 851); Environmental Sanitation Policy, 2010; Children's Act, 1998; Ghana Accelerated Action Plan Against Child Labour; Ghana National Fire Service Act, 1997 (Act 537);	National laws address public health, sanitation, child protection and fire control but provide limited guidance on project-specific community health and safety risks, SEA/SH prevention, vulnerable groups, and emergency preparedness.	ESMP Sections 5.3.8, 5.3.10–5.3.12, 6.9, 6.11–6.13, 7.4, 8 and 9.5 establish measures for community health and safety, SEA/SH prevention, emergency preparedness, stakeholder engagement,

ESS	Related Ghanaian Laws, Policies and Regulations	Key Gap in National Framework	Gap-Filling Project Measure
	Control and Prevention of Bushfires Act, 1990 (PNDCL 229); Ghana Standards on air, noise and effluent		and grievance management.
ESS5: Land Acquisition, Restrictions on Land Use and Involuntary Resettlement	Land Act, 2020 (Act 1036); National Land Policy, 1999; Local Governance Act, 2016 (Act 936)	National laws provide for land rights and compensation but offer limited guidance on livelihood restoration, support for vulnerable affected persons, informal land users, sharecroppers, caretakers, and the provision of assistance before project impacts occur.	ESMP Sections 4.2.2, 5.3.13, 5.3.16, 6.14 and 6.17, together with the project LSP, RF/RPF, farmer agreements and project GRM, establish measures for livelihood restoration, stakeholder consultations, transparent agreements, and grievance resolution.
ESS6: Biodiversity Conservation and Sustainable Management of Living Natural Resources	Forest and Wildlife Policy, 2012; Forestry Commission Act, 1999 (Act 571); National Climate Change Policy, 2013; Riparian Buffer Zone Policy, 2013; Water Resources Commission Act, 1996; Plants and Fertilizer Act, 2010	National frameworks support forest, wildlife, water and natural resource protection but provide limited project-level guidance on biodiversity conservation, agroforestry, buffer zone management, pesticide impacts, and biodiversity monitoring.	ESMP Sections 4.1.2, 5.3.14, 6.15, 6.5, 6.7, 6.8, 7.3 and Annex 9, together with the project ESMF and IPMP, establish measures for biodiversity conservation through agroforestry, protection of sensitive habitats and water bodies, buffer zone management, and sustainable farm rehabilitation practices.
ESS8: Cultural Heritage	National Museums Act, 1969 (NLCD 387); Local Governance Act, 2016; traditional authority and customary land governance arrangements	National legislation protects cultural heritage and archaeological resources but provides limited guidance on cultural heritage risk management throughout the project lifecycle, chance-find procedures, cultural sensitivities, and grievance handling.	ESMP Sections 5.3.15, 6.16, 8 and 9 establish measures for cultural awareness, engagement with traditional authorities, culturally responsive grievance management, worker conduct, and management of chance finds during project implementation.

ESS	Related Ghanaian Laws, Policies and Regulations	Key Gap in National Framework	Gap-Filling Project Measure
ESS10: Stakeholder Engagement and Information Disclosure	Local Governance Act, 2016; Environmental Assessment Regulations, 2025; National Gender Policy, 2015; Persons with Disability Act, 2006	National requirements provide for public consultation but do not require a formal Stakeholder Engagement Plan, structured information disclosure, continuous stakeholder engagement, targeted engagement of vulnerable groups, or a project-level grievance mechanism aligned with ESS10.	ESMP Sections 8 and 9 establish procedures for stakeholder identification, inclusive engagement, information disclosure, grievance management, and monitoring. These measures are further strengthened through implementation of the project SEP.

Section 4: Environmental and Social Baseline Conditions

This section presents the baseline environmental conditions within the project Area of Influence (AoI), which comprises approximately 3,401 hectares of diseased cocoa farms in the Asamankese Cocoa District. It also outlines the social conditions of the project area, including demographic characteristics, livelihood activities, and community structures. This focuses on those aspects that can influence and be impacted by the proposed Cocoa Rehabilitation activities. Understanding the environmental and social baseline is essential to identifying potential risks, developing mitigation measures, and ensuring compliance with both national regulations and World Bank Environmental and Social Standards (ESSs). As indicated in the introduction sections, the cocoa farms earmarked for rehabilitation under this subproject (cocoa rehabilitation at Asamankese) are widespread across the three local government areas – West Akim Municipal Assembly (WAMA), Asene Manso Akroso District (AMAD), and Upper West Akim District (UWAD) – altogether come under the Asamankese Cocoa District. On reasons of pragmatism, the baseline information presented here is largely at the cocoa district level as against site-specific and community level information.

4.1 Environmental Baseline Conditions

4.1.1 Physical Environment

i) Climate

The Asamankese Cocoa District is characterized by a tropical climate with high humidity and distinct wet and dry seasons, which strongly influence cocoa production systems. Average annual rainfall ranges between approximately 1,200 mm and 2,000 mm, with major rainy seasons occurring between April and July and a minor season between September and November. Temperatures typically range from about 22°C to 32°C throughout the year. These climatic conditions are generally favourable for cocoa cultivation. High humidity during the wet season supports cocoa cultivation but also increases the incidence of pests and diseases such as Cocoa Swollen Shoot Virus Disease (CSSVD) and black pod.

The dry season (December – March) is dominated by the Harmattan winds from the Sahara. It is characterized by streams and rivers shrinking, affecting domestic water supply and irrigation. Cocoa and food crops suffer moisture deficits, leading to lower yields. Dry vegetation increases bushfire risks, threatening farms and forest reserves and heightened dust levels. Also, recent shifts in the district's climatic conditions—from a previously short Harmattan period to a prolonged dry season—have had adverse effects on the environment (including increasing the risks of bushfires) and agricultural productivity. Given these conditions, cocoa farmers face challenges with seedling survival and delayed planting schedules.

ii) Topography and Soils

The topography of the Asamankese Cocoa District is predominantly undulating, with elevations between 60 and 460 meters above sea level. The highest point occurs along the Atiwa Range between Pabi and Wawase. This varied terrain creates a mix of uplands and valleys that influence local drainage patterns and microclimatic conditions.

The district falls within the wet semi-equatorial zone and is underlain by ferralitic forest ochrosols and lateritic soils typical of the Eastern Region. These soils are generally deep, moderately fertile,

and well-drained, making them suitable for cocoa production when managed with adequate organic matter inputs.

The undulating landscape supports good natural drainage and minimizes waterlogging risks, while the forest soils provide favourable conditions for cocoa flowering and pod development. However, continuous cultivation without nutrient replenishment can lead to soil fertility decline. Slope areas remain susceptible to erosion if not protected with cover crops or shade trees, and patches of lateritic soils may harden over time, reducing root penetration and limiting crop productivity.

iii) ***Water Resources***

The Asamankese Cocoa District is drained by tributaries of the Birim River. Within the project Area of Influence (AoI), the main water bodies include Asuobena, Mante, Bamtama, Duabone, Abesim, Sukurong, Nyarnoa, Atimatim, and Okotokrom streams, which provide water for domestic use, small-scale agriculture, and nursery activities.

These water bodies are sensitive to seasonal variability, with stream flows declining significantly during the dry season (December to March), leading to water shortages in some communities. Groundwater sources such as boreholes and wells supplement surface water but depend on rainfall for recharge.

Cocoa rehabilitation activities within the AoI could potentially affect these streams through soil disturbance, sediment runoff, and agrochemical contamination if mitigation measures are not properly implemented. These streams are therefore considered environmentally sensitive and will require buffer protection and good land management practices during project implementation.

4.1.2 Biological Environment

The Asamankese Cocoa District lies within the semi-deciduous forest ecological zone and is close to environmentally sensitive areas such as the Atewa Range Extension Forest Reserve and other forest reserves including Esuboni, Esen Epam, and Oboyow. The cocoa rehabilitation sites are located outside these protected areas but are on average about 10 km from these forest reserves. Although no direct impacts on these protected areas are expected, there may be potential indirect impacts if activities are not properly managed. Appropriate mitigation measures are therefore included in this report. The reserve provides important habitat for a wide range of flora and fauna, including several endemic and threatened species.

i) Flora

Vegetation within the district reflects the characteristics of the semi-deciduous forest zone. The natural forest is composed of tall canopy trees with evergreen undergrowth and includes several economically important timber species such as Odum, Wawa, Sapele, Obeche, Onyina, and Emire. Large portions of the Gateway Range Extension Forest Reserve, covering approximately 42 km² remain under protection, although increasing pressure from human activities has contributed to local forest depletion.

Outside the forest reserves, extensive areas have been converted to agriculture, particularly for cocoa, oil palm, and food crops such as cassava, cocoyam, and plantain. Many farms retain scattered shade trees commonly Terminalia, Albizia and Ceiba species to support microclimate regulation and soil health. Secondary regrowth vegetation is present along riverbanks, in fallow areas and on abandoned farmlands.

ii) Fauna

Faunal diversity in the project area has declined over time due to habitat fragmentation, agricultural expansion, and hunting pressure. Nonetheless, the remaining forest patches and fallow areas still support small populations of mammals such as grasscutters (*Thryonomys swinderianus*), small antelope species, and monkeys, although these are increasingly scarce.

The area supports a relatively rich bird community, with species such as hornbills, turacos, and weaver birds commonly observed in forest remnants and shaded cocoa farms. Pollinators (including bees, butterflies, and other insects) play an essential role in cocoa productivity, but their populations are vulnerable to pesticide use and habitat disturbance.

Aquatic ecosystems within the district provide habitat for fish, amphibians, and reptiles. However, water quality in rivers and streams is increasingly threatened by sedimentation, agrochemical runoff, and other farming-related pollution, which may further impact local biodiversity.

To mitigate environmental impacts, the project will minimize unnecessary clearing of healthy trees, protect riparian vegetation, and enforce strict measures to prevent hunting or trapping of wildlife by workers. The project will not support cocoa rehabilitation activities within Protected Forests or designated Conservation Areas. Furthermore, a minimum buffer of 30 to 50 meters will be maintained around environmentally sensitive areas such as rivers, streams, wetlands, and forest reserves, within which no rehabilitation activities, vegetation clearing, or chemical application will be permitted.

4.2 Socio-Economic Environment

4.2.1 Communities and Population

The Asamankese Cocoa District cuts across the West Akim Municipality, Asene Manso Akroso District and Upper West Akim District in the Eastern Region. The Cocoa District has its administrative capital at Asamankese. The district comprises many small and large communities distributed across approximately 760 km² under the authorities of the West Akim Municipal, Upper West Akim District and Asene Manso Akroso District Assemblies. Traditionally, the area forms part of the Asamankese, Adeiso and Akroso traditional divisions. Besides the political administrative divisions, the cocoa district is traditionally governed through sub-divisional and sub-chiefs who oversee major and smaller communities.

The targeted cocoa area to be rehabilitated in Asamankese Cocoa District is 3,401 ha and expected to affect approximately 4,035 farms. Among the targeted farmers, 71% are males and 29% are females. 28% of targeted farmers are above 60 years (of which 70% are males and 30% are females) and fall into the category of elderly vulnerable project affected farmers.

Demographic Characteristics

According to the 2021 Population and Housing Census, the population of the West Akim Municipal, Upper West Akim District and Asene Manso Akroso District stands at approximately 291,034. Females constitute a slight majority (51%), while males account for 49%.

As shown in Table 4.1, the population of the three administrative districts are predominantly youthful and economically active, with the working-age group (15–64 years) accounting for the largest proportion of the population. Upper West Akim District records the highest proportion of

children (40%), while the elderly population (65 years and above) remains relatively low across all three districts, ranging from 3% to 5%.

Table 4.1: Age Distribution within the Administrative Districts

Age Category	West Akim Municipal	Upper West Akim District	Asene Manso Akroso District
Children (0–14 years)	31%	40%	30%
Working Age (15–64 years)	65%	55%	67%
Elderly (65+ years)	4%	5%	3%

Source: 2021 PHC

Household Structure

Household sizes across the districts average 4.2 persons per household, consistent with regional norms. This suggests moderately sized family units, balancing dependency ratios but still reflecting rural-urban differences. Larger households are more common in rural farming communities, while smaller nuclear households dominate in urban centers such as Asamankese.

Literacy and Education

District-level literacy and educational attainment data for the project area were not readily available from the 2021 Population and Housing Census (PHC). Consequently, regional-level data for the Eastern Region, within which West Akim Municipal, Upper West Akim District, and Asene Manso Akroso District are located, are presented to provide context on the literacy and educational characteristics of the project area.

As shown in Table 4.2, literacy levels in the Eastern Region are relatively high, with 82.1% of the population aged 11 years and older being literate. However, a gender gap exists, as the literacy rate among males (86.0%) is higher than that of females (78.5%). In terms of educational attainment, the majority of the population has attained basic education (61.8%), while smaller proportions have attained secondary (15.7%) and tertiary (5.0%) education. Approximately 17.5% of the population have no formal education.

Table 4.2: Literacy Status and Educational Attainment of the Population in the Eastern Region

Literacy Indicator	Percentage (%)	Educational Attainment	Percentage (%)
Literate Population	82.1	No Education	17.5
Non-Literate Population	17.9	Basic Education	61.8
Male Literacy Rate	86	Secondary Education	15.7
Female Literacy Rate	78.5	Tertiary Education	5

Source: 2021 PHC

Economic Activities

The economies of all three districts are agriculture-driven, with cocoa and food crop farming as the backbone:

- Agriculture: ~61–63% of the workforce
- Commerce & services: ~30% (petty trading, transport, education, health)
- Industry: ~7–9% (small-scale manufacturing, construction, artisanal work)

Cocoa cultivation dominates livelihoods, but reliance on a single commodity exposes households to market volatility and climate risks. Non-farm employment opportunities remain limited, though petty trading and transport services are growing in semi-urban centers.

Teenage Pregnancy

Teenage pregnancy is a major public health and social issue across the Cocoa District. It contributes to school dropouts, early marriages, and maternal health risks, undermining human capital development. Interventions are being led by Ghana Health Service, NGOs, and youth groups, but challenges persist due to cultural attitudes, limited access to contraceptives, and weak enforcement of child protection policies. The cocoa rehabilitation activities must incorporate measures to address these risks.

4.2.2 Livelihoods and Land Tenure

Livelihoods in the Asamankese Cocoa District are predominantly agrarian, with limited development of secondary or tertiary economic activities. Agriculture is largely rain-fed, low-mechanized, and based on traditional practices. Cocoa cultivation is the principal livelihood activity. Additional income sources include livestock rearing (cattle, sheep, goats, pigs, and poultry), food crop farming (cassava, maize, plantain), petty trading, small-scale processing, and casual wage labour. Given the strong dependence on cocoa, households are highly vulnerable to temporary income disruptions during rehabilitation activities. Vulnerable groups include female-headed households, elderly farmers, landless sharecroppers, and rural youth with limited access to land. Rehabilitation therefore has significant implications for household income, labour demand, and food security during farm clearing and replanting phases.

The district falls under the jurisdiction of the Akyem Kotoku and Akyem Abuakwa Traditional Councils and spans three traditional divisions: Asamankese (Akyem Abuakwa), and Adeiso and Akroso (Akyem Kotoku). Land tenure is predominantly customary, governed by traditional authorities and family heads, and shaped by inheritance, tenancy, and long-standing sharecropping arrangements. Common systems include *Abunu* (land divided equally after establishment) and *Abusa* (one-third of harvest to the landowner). Migrant farmers often rely on informal tenancy agreements with indigenous landowners. Land fragmentation from inheritance practices further complicates tenure.

These tenure dynamics directly influence rehabilitation planning and implementation. Rehabilitation requires landowner and farmer consent, and successful re-establishment depends on clarity of rights and responsibilities between landowners and farme/tenants. Weak tenure security can reduce farmer willingness to rehabilitate or invest in climate-smart practices. To minimize disputes and strengthen uptake, rehabilitation activities should integrate land-tenure sensitization, promote transparent agreements, and encourage documentation of arrangements. Local NGOs and farmer cooperatives/groups already support tenure awareness and can serve as important partners.

4.2.3 Infrastructure and Services

Settlement patterns in the Asamankese Cocoa District are rural-dominated, dispersed, and agriculture-driven, with semi-urban centers (Asamankese, Adeiso and Akim Manso) serving as administrative and trade hubs. Linear growth along highways contrasts with scattered hamlets in cocoa-growing areas, creating a mixed settlement landscape that influences infrastructure planning, service delivery, and community engagement.

Across the cocoa district, infrastructure is mixed — relatively better in semi-urban centers, but limited in rural farming communities.

i) Roads

Major trunk road (Accra–Kumasi) passes through Asamankese, ensuring good connectivity. However, feeder roads to rural cocoa communities are often poor, especially during rainy seasons. Roads linking Adeiso to surrounding villages are underdeveloped, with many feeder roads in poor condition, affecting farm access. Rural roads are generally poor, limiting access to farms and markets. Infrastructure gaps are highlighted in poverty assessments.

About one-third of the road network in the Eastern Region (covering the Asamankese Cocoa District) is in good condition. The majority is fair or poor, meaning cocoa rehabilitation must factor in road infrastructure gaps as a critical baseline issue.

ii) Markets

Asamankese serves as the primary commercial centre in the district, hosting a major market that supports both local and regional trade. Smaller satellite markets operate in surrounding communities; however, most lack modern infrastructure such as improved stalls, storage facilities, and sanitation services. The Adeiso market functions as an important trading hub but remains constrained by basic facilities. Markets in Akim Manso and Akroso are key outlets for cocoa and food crops, yet limited storage and handling infrastructure contribute to post-harvest losses and reduce marketing efficiency.

iii) Education

Across the three local government areas, the cocoa district has a combined total of 590 public and private basic schools (kindergarten, primary, and junior high) and 11 senior high schools.[1] These institutions provide the foundation for inclusive and equitable access to education. However, the current distribution of schools is inadequate, particularly in rural communities where long travel distances and limited facilities undermine access and retention.

Vulnerable groups continue to face barriers to educational attainment. Infrastructure deficits—such as inadequate classroom furniture and overcrowding—are common, with reports of pupils sitting on the floor due to insufficient desks. Educational outcomes remain comparatively low in rural settlements, reflecting the combined effects of poverty, limited facilities, and uneven service delivery.

iv) Health

[1] Education Directorates of the constituent local government areas.

Health facilities in the Asamankese Cocoa District organized by the three local government districts — West Akim, Upper West Akim, and Asene Manso Akroso — is as follows.

Table 4.3 - Health Facilities by District

District	Hospitals	Health Centres	CHPS Compounds	Clinics/ Maternity Homes	Notes
West Akim	1 (Asamankese Government Hospital)	3 (Asamankese, Adeiso, Osenase)	Several (e.g., Anoma Kojo, Ekoso)	Multiple private/ mission clinics (St. Luke's Medical Centre, St. Patrick-Solo Clinic, Edith's Maternity Home, etc.)	Well-established network with both government and mission/private facilities.
Upper West Akim	1 Polyclinic (Adeiso)	1 Health Centre (Odumkyere Darmang)	Several CHPS compounds (e.g., Essaso, others across communities)	Limited private clinics	Relies heavily on CHPS compounds and the Adeiso Polyclinic.
Asene Manso Akroso	No district hospital yet	At least 1 Health Centre (Akroso)	Several CHPS compounds serving Akim Manso and surrounding areas	Small clinics and maternity homes	Newly created district (2017), infrastructure still expanding.

Geographical access to health facilities is constrained across the cocoa district due to dispersed settlements, poor road conditions, and limited transport, which also restrict outreach activities by health workers. West Akim has the most developed health service network, comprising a government hospital and several mission and private clinics. Upper West Akim relies primarily on a single polyclinic supported by widely distributed CHPS compounds. Asene Manso Akroso remains underserved, with health centres and CHPS facilities forming the core of service delivery.

Income variability among farming households, especially during the cocoa off-season, further limits the ability of many residents to afford health services.

Some aspects of health service delivery have been challenged with inadequate staffing, lack of specialized healthcare workers, insufficient accommodation for staff, and limited IT infrastructure and equipment. The rest are frequent drug shortages, delays in NHIS reimbursements, poor telecommunication networks, poor road networks, and stalled CHPS projects further constrain healthcare service access and delivery.

4.3 Socio-Cultural and Child Protection Context

The socio-cultural environment of the Asamankese Cocoa District is shaped by predominantly Akan (Akyem) communities, complemented by migrant populations drawn to cocoa farming. Traditional governance structures including chiefs, queen mothers, and elders remain central to

local decision-making, dispute resolution, and community mobilization. Religious institutions exert strong influence on social norms and child upbringing. Seasonal labour migration increases cultural diversity but also heightens vulnerabilities, particularly for women and children.

Cocoa farming is the dominant livelihood and shapes household labour systems. Family-based production often involves children in farm tasks that may constitute child labour or hazardous work. National evidence indicates that 45% of children in cocoa-growing households across Ghana and Côte d'Ivoire engage in child labour. Although localized data for the Asamankese district is limited, the area's inclusion in programmes such as the ACCEL Africa Project signals a recognized risk profile.

Children are commonly exposed to hazardous tasks carrying loads, using sharp tools, and handling agrochemicals—which contribute to school absenteeism, especially during peak farming periods. Risks are amplified for adolescent girls and unaccompanied children, who face increased vulnerability to gender-based violence (GBV) and sexual exploitation and abuse/sexual harassment (SEA/SH), particularly where external labourers are present.

Several institutional actors support child protection and risk mitigation in the district, including the International Cocoa Initiative (ICI), the International Labour Organization (ILO), UNICEF, and the Department of Social Welfare. Local structures such as district child protection committees and school-based GBV clubs (notably in Asene Manso Akroso) provide additional community-level prevention and response mechanisms.

Cocoa farming is also embedded in the district's cultural heritage and land tenure systems. Most cocoa farms are situated on customary lands under the custodianship of the Akyem Abuakwa and Akyem Kotoku traditional authorities. Sacred groves, heritage trees, ancestral burial grounds, and community shrines are culturally protected areas that must be excluded from rehabilitation activities. Migrant groups (e.g., Ewe, Krobo, and northern ethnic groups) have contributed to communal labour systems and farming traditions, which form part of the district's intangible heritage.

Although no major cultural heritage sites have been identified within the immediate project footprint, the potential for chance finds during slashing and tree cutting is possible. Appropriate management measures are therefore required to safeguard cultural heritage resources. Rehabilitation interventions must therefore respect customary institutions, safeguard cultural heritage resources, and integrate child protection considerations throughout implementation.

Overall, the socio-cultural and child protection context is characterized by strong traditional authority, high dependence on cocoa-based livelihoods, and potential child labour and GBV/SEA/SH risks. These dynamics require proactive safeguards, continuous community sensitization, and a robust monitoring and response framework to protect vulnerable groups.

4.4 Vulnerabilities and Risks

Cocoa rehabilitation in the Asamankese Cocoa District of Eastern Region is essential for sustaining productivity and livelihoods. However, the process exposes farmers, communities, and ecosystems to several vulnerabilities and risks that must be anticipated and managed.

4.4.1 Main Vulnerabilities and Risks

i) Agricultural and Production Risks

- **Crop Failure and Pest/Disease Outbreaks:** Newly rehabilitated farms are vulnerable to black pod disease, capsid infestations, and swollen shoot virus, which can undermine productivity.
- **Climate Variability:** Erratic rainfall and prolonged dry spells increase risks of seedling mortality and reduced yields.
- **Loss of Old Shade Trees:** Rehabilitation may involve the removal of diseased cocoa trees and some associated shade trees, which may temporarily affect on-farm biodiversity and microclimate. However, only undesirable or unsuitable trees will be selectively removed and replaced with desirable shade tree species in larger quantities to improve agroforestry, biodiversity, and farm microclimate conditions.

ii) Economic and Livelihood Risks

- **Income Loss During Transition:** Farmers may face temporary income reduction during the rehabilitation period. This risk will be mitigated through the Livelihood Support Package (LSP); however, the effectiveness of this mitigation depends on timely and proper implementation of the LSP.
- **Market Volatility:** Cocoa price fluctuations can undermine the economic viability of rehabilitation investments.

iii) Social and Cultural Risks

- **Land Tenure Disputes:** Rehabilitation may trigger disputes between landowners, caretakers, and migrant farmers over rights to rehabilitated farms. This risk will be mitigated through land ownership and user-right verification, signed agreements between parties, and use of the project grievance redress mechanism. Further details are provided in the E&S Risk Mitigation section.
- **Marginalization of Migrant Farmers:** Migrant groups (Ewe, Krobo, Northerners) risk exclusion from rehabilitation support, leading to social tension.
- **Cultural Heritage Disturbance:** Clearing may inadvertently affect sacred groves, shrines, or ancestral burial grounds, undermining community trust. There are no cultural heritage site within or near the rehabilitation farms.

iv) Institutional and Governance Risks

- **Weak Extension Support:** Limited capacity of extension officers may reduce adoption of best practices.
- **Coordination Gaps:** Poor alignment between the Asamankese Cocoa District, the district assemblies, traditional councils, and farmer cooperatives can delay implementation.

v) Environmental Risks

- **Deforestation and Habitat Loss:** Rehabilitation will involve clearing diseased farms, which may temporarily disturb on-farm biodiversity. However, farms will be replanted with cocoa and shade trees under an improved agroforestry system, and biodiversity is expected to recover and improve after rehabilitation.

- **Soil Degradation:** Continuous cocoa farming without proper soil fertility management may reduce soil quality and long-term productivity. This will be mitigated through the promotion of good agronomic practices, including mulching, organic matter management, and appropriate fertilizer application.
- **Water Resource Pressure:** Project activities may increase pressure on local water resources, particularly streams and wetlands used for domestic and cultural purposes such as Asuobena, Mante, Bamtama, Duabone, Abesim, Sukurong, Nyarnoa, Atimatim, and Okotokrom streams.

Table 4.4 Risk Matrix

Risk Category	Specific Risk	Vulnerability	Potential Impact	Likelihood
Agricultural	Pest/disease outbreaks	Weak farm resilience	Reduced yields, crop loss	Substantial
Economic	Income loss during transition	Dependence on cocoa income	Household poverty, food insecurity	moderate
Social	Land tenure disputes	Customary land systems	Conflict, project delays	low
Institutional	Weak extension support	Limited staff/resources	Poor adoption of rehabilitation practices	low
Environmental	Deforestation, soil degradation	Clearing without shade trees	Ecosystem decline, reduced farm sustainability	Low

The combined vulnerabilities and risks in the cocoa district span agricultural, economic, social, cultural, institutional, and environmental dimensions. Addressing them requires integrated mitigation measures, such as participatory cultural mapping, livelihood support during transition, inclusive stakeholder engagement, and strong extension services—to ensure rehabilitation is both sustainable and culturally acceptable.

Section 5: Potential Environmental and Social Risks and Impacts

Cocoa rehabilitation activities under the project have the potential to generate environmental and social risks due to the scale of farm clearance, use of chemicals, engagement of a workforce, and interaction with vulnerable communities. This section assesses the potential risks and impacts associated with project activities. The potential impacts and risks assessed were based on the Environmental and Social Management Framework (ESMF) prepared for the project, site-specific E&S screening results, baseline conditions and the predicted change in the environmental and social variables with implementation of the cocoa rehabilitation activities; various stakeholder inputs on perceived impacts. The evaluation identifies the main social and environmental hazards associated with cocoa rehabilitation. Occupational health and safety, labor rights violations, the effects on water resources, inappropriate waste disposal, community health and safety, the spread of sexually transmitted infections, farm loss, and stakeholder disputes are examples of moderate hazards. Due to the severe legal, environmental, and health repercussions, child labor and inappropriate handling of agrochemicals are scored highly. Because of mitigation strategies and reversibility, pest infestation, biodiversity impacts, and sociocultural conflicts are seen as minimal. Although the chance of teenage pregnancy is low, the total risk is moderate because of the serious implications. In order to properly manage and lower risks, the results highlight the necessity of strict enforcement, training, and stakeholder engagement.

5.1 Methodology for Assessing and Ranking Impacts

The assessment applied a structured methodology to evaluate the likelihood and significance of potential environmental and social risks associated with the project. Four-tier E&S classification ratings – **Low**, **Moderate**, **Substantial**, and **High** – of the World Bank were adopted based on the combined probability of occurrence and the severity of potential consequences. The analysis was complemented by adopting a modified impact assessment framework from the *ISO 14001 Environmental Systems Handbook* (Whitelaw, 2004). Eight evaluation criteria guided the analysis:

a. Knowledge of Comparable Projects or Project Environment

Experience with similar interventions and past issues in the project area informed the significance rating. Aspects with a history of environmental or social challenges were assigned higher priority.

b. Likelihood and Severity of Impacts

The probability of occurrence and magnitude of potential consequences, including residual risks after mitigation, were assessed.

c. Potential Nuisance Effects

The extent to which project activities may cause disturbance or harm to nearby communities, sensitive receptors, or the environment was evaluated, considering direct, indirect, reversible, and irreversible effects.

d. Spatial Extent

Impacts were rated based on whether they are localized or extended to broader community, district, or regional scales.

e. Temporal Scale

Impacts were classified based on duration and frequency as short-term (less than 1 year), intermittent (occurring periodically during project activities), long-term (1–5 years), and chronic (more than 5 years or throughout the project life).

f. Induced or Cumulative Impacts

The potential for the project to trigger additional activities, cumulative effects, or incompatible land uses was examined.

g. Legislative and Regulatory Context

Applicable legal and policy requirements were reviewed. Clear regulatory thresholds lowered impact significance, while gaps or absence of standards increased it.

h. Data Availability and Certainty

Where information gaps or uncertainties existed, higher significance ratings were applied to avoid underestimating risks.

5.2 Beneficial Impacts

The cocoa rehabilitation programme is expected to generate several positive environmental, social, and economic outcomes:

a. Employment Generation

Rehabilitation activities are labor-intensive and will create jobs for more than 350 unskilled, semi-skilled, and technical workers across nursery establishment, farm clearing, replanting, and maintenance. Local recruitment will be prioritized, increasing household incomes and stimulating district-level economic activity.

b. Increased Farm Productivity

Adoption of improved agronomic practices and climate-resilient cocoa varieties will enhance farm productivity, improve crop quality, and promote environmentally sound production systems.

c. Higher Incomes and Economic Growth

Improved yields and produce quality will increase farmer earnings. Additional income will come from short-term employment and the sale of plantain.

d. Climate Change Mitigation and Adaptation

Rehabilitation will increase tree cover and support carbon sequestration through agroforestry. Climate-resilient varieties will enhance drought tolerance and soil health, strengthen adaptive capacity and reducing greenhouse gas emissions.

e. Enhanced Biodiversity

Rehabilitated farms with diverse shade trees will improve habitat quality for birds, insects (including pollinators), and small mammals. Strengthening ecological connectivity will support pollination, pest regulation, and overall ecosystem integrity across the landscape.

5.3 Risks and Adverse Impacts

The potential risks and adverse impacts assessed were grouped under the applicable ESSs and include the following:

ESS 1: 1) Inefficient ESMP implementation
ESS 2: 2) Occupational health and safety
3) Infringement of labour rights
4) Child labour
ESS 3: 5) Impact on water resources
6) Improper waste handling and disposal
7) Pest infestation and diseases
8) Inappropriate handling, usage and disposal of agrochemicals
9) Resource efficiency and GHGs
ESS 4: 10) Community health and safety
11) Loss of cocoa farmlands to illegal mining
12) Gender-based violence, Sexual Exploitation and Abuse, Sexual Harassment and disparity
13) Increased rate of teenage pregnancy
14) Spread of HIV and STIs
ESS 5: 15) Farm loss
ESS 6: 16) Deforestation and forest degradation
17) Biodiversity loss
ESS 8: 18) Socio-cultural conflict
ESS 10: 19) Stakeholder management

5.3.1 Occupational Health and Safety

Rehabilitation of CSSVD-affected farms and the establishment and operation of commercial nurseries present several occupational health and safety (OHS) risks. Key hazards include farm and nursery-related accidents, snakebites, injuries during rehabilitation, exposure to noise, vibration, dust, emissions, and risks from agrochemicals.

i) Farm Accidents and Snakebites

Chainsaw use during removal of infected trees poses risks such as kickback, falling trees, flying debris, and repetitive strain injuries. Manual land-clearing with cutlasses and machetes may result in musculoskeletal strain. Improper handling or application of pesticides and arboricides can lead to inhalation, dermal exposure, and potential poisoning. Workers are also exposed to wildlife hazards, particularly snakes, scorpions, bees, and wasps, which may cause bites, stings, allergic reactions, or other health complications. These risks require strict adherence to OHS procedures, PPE use, and trained supervision.

ii) Injuries from Nursery Operations

Nursery activities involve intensive manual labour such as digging, bed preparation, planting, weeding, and pruning. These tasks require repetitive movements and prolonged bending, increasing the risk of lower-back and repetitive strain injuries.

iii) Construction of Nursery Structures and Related Workplace Accidents

Construction of nursery structures introduces additional hazards, including slips, trips, falls from poor housekeeping, and musculoskeletal strain from manual lifting. Movement of haulage trucks during delivery of materials poses collision and knockdown risks, especially where visibility is poor, or traffic control is inadequate. Such incidents could result in severe injuries, including fractures or fatalities.

iv) Noise and Vibration

Chainsaw operations also expose workers to hand-arm vibration, potentially leading to joint and muscle strain or Hand–Arm Vibration Syndrome (HAVS).

v) Exposure to Dust and Emissions

Dust emissions from machinery exhaust contributes to air quality risks. Without adequate controls, workers may experience respiratory effects including coughing, bronchitis, asthma exacerbation, and long-term lung damage.

vi) Agrochemical Exposure and Poisoning

Inadequate storage, handling, or transportation of fertilizers, pesticides, and arboricides may result in spills or leaks. Workers without proper PPE are at risk of inhalation, dermal contact, and chemical poisoning, leading to acute or chronic health complications.

Impact Significance: the overall impact significance is Moderate.

5.3.2 Infringement of Labor Rights

Cocoa rehabilitation activities will engage both formal and informal workers, including labourers recruited through farmer-based organizations (FBOs). Informal workers typically lack written employment agreements and social protection, increasing their vulnerability to labour rights infringements. The main risks include absence of contracts, unfair compensation, restricted freedom of association, and discrimination against women and persons with disabilities (PWD).

i) Non-Issuance of Employment Contracts

Informal and temporary workers are often not provided with written contracts specifying terms of engagement, working hours, entitlements, and grievance procedures. This increases exposure to arbitrary dismissal, unclear job roles, and unsafe working conditions. Lack of documentation also limits accountability and restricts workers' ability to seek redress.

ii) Unfair or Delayed Compensation

Informal workers may be paid below the national minimum wage, face delayed payments, or work overtime without appropriate remuneration. Gender pay gaps may occur, with women receiving lower wages than men for comparable work. Limited access to social protection (e.g., pensions, insurance) further undermines worker welfare and economic security.

iii) Restrictions on Freedom of Association

Although Ghana's Labour Act guarantees the right to organize, enforcement in the agricultural sector is limited. Informal and temporary workers may lack opportunities to form or join unions or may face implicit restrictions from employers. This weakens collective bargaining power and limits workers' ability to negotiate fair conditions.

iv) Marginalization of Women and Persons with Disabilities (PWD)

Gender norms in the agriculture sector can result in preferential recruitment of men and discriminatory wage practices against women. PWD may face stigma, limited recruitment opportunities, or inadequate workplace adjustments (e.g., accessible facilities, appropriate PPE). These barriers restrict participation and exacerbate vulnerability.

***Impact Significance*:** Informal workers face a high likelihood of labour rights infringements due to the absence of formal contracts, weak enforcement of labour standards, and industry-wide gender and disability biases. The impact significance is assessed as **moderate**.

5.3.3 Child Labour Risks

Child labour remains a significant risk in cocoa-growing districts, including Asamankese, where children frequently engage in hazardous agricultural tasks such as carrying heavy loads, using sharp tools, and handling agrochemicals. These activities expose children to injuries, psychosocial harm, and long-term developmental impacts. Child participation in farming also contributes to school absenteeism and low educational attainment.

Risk factors contributing to child labour include:

- High informality in agricultural labour systems
- Limited structured training for farmers and contractors on child labour prevention
- Weak understanding of reporting and case management procedures, particularly distinctions between criminal and non-criminal cases; and
- Absence of temporary care systems for rescued or trafficked children.

Seasonal labour shortages and demand for low-cost labour further increase the likelihood of child labour during peak farming periods. Although awareness programmes by CHED, Cocoa Life Ghana, and District Education Directorates have improved knowledge of child labour risks, enforcement remains weak and sanctions rarely act as effective deterrents.

COCOBOD is implementing reforms to strengthen oversight, including the Cocoa Management System (CMS) and Ghana Cocoa Traceability System to support traceability and compliance with emerging international due diligence requirements, including EU regulations. COCOBOD's Environmental and Social Management System (ESMS) is aligned with ILO Convention 182 and supports monitoring of the worst forms of child labour.

Impact Significance: Given persistent risk drivers, weak enforcement capacity, and the implications for COCOBOD's international obligations and market access, the significance of child labour risk is assessed as **high**, notwithstanding ongoing mitigation initiatives.

5.3.4 Impacts on Water Resources

Project activities may affect surface and groundwater through agrochemical use, and machinery operation. Water bodies that may be at risk include Asuobena, Mante, Bamtama, Duabone, Abesim, Sukurong, Nyarnoa, Atimatim, and Okotokrom streams, which are located near the main clusters of rehabilitation farms, in some cases within a few hundred meters to about one kilometre from project sites. These water bodies may be exposed to agrochemical contamination, and machinery-related pollution if mitigation measures are not properly implemented.

i) Contamination from Agrochemicals

Rehabilitation activities will involve the use of pesticides, fertilizers, and arboricides. Improper handling, application, or disposal may introduce contaminants into waterbodies such as Asuobena, Mante, Bamtama, Duabone, Abesim, Sukurong, Nyarnoa, Atimatim, and Okotokrom through runoff or infiltration, causing:

- Increased nutrient loading (N, P, K), elevating Biochemical Oxygen Demand (BOD) and Chemical Oxygen Demand (COD)
- Reduced dissolved oxygen and loss of sensitive aquatic species
- Groundwater contamination, especially in porous soils; and
- Health risks to downstream users dependent on surface water.

Arboricides used for destroying diseased cocoa stumps may leach into soil and water systems, posing additional ecological and public health concerns.

ii) Machinery Use and Waste Oil Management

Operation and maintenance of chainsaws and related equipment generate waste oils, lubricants, and fuel residues. Poor handling or disposal may lead to soil contamination.

Risks increase when maintenance activities occur near watercourses or where buffer distances are not enforced.

***Impact Significance*:** Given the sensitivity of local water resources and the cumulative effects of erosion, agrochemical inputs, and machinery-related contamination, the potential impacts on water quality, availability, and aquatic ecosystems are assessed as moderate

5.3.5 Improper Waste Handling and Disposal

Implementation of cocoa rehabilitation activities will generate multiple waste streams, each with distinct environmental, health, and safety implications if not properly managed. The principal waste categories include:

- Construction and operational waste from nursery establishment.
- Domestic solid waste from workers (plastics, paper, food waste, packaging)
- Agrochemical waste (empty pesticide containers, fertilizer bags)
- Spent oils and lubricants from machinery and equipment maintenance

ii) Domestic Waste

Workers and farmers will generate domestic refuse, including plastics, paper, and food scraps. Without structured collection and disposal systems, indiscriminate dumping may occur, leading to littering, odor nuisance, pest attraction, and public health risks in farm and community areas.

iii) Agrochemical Waste

Empty pesticide containers and fertilizer bags pose contamination risks if improperly handled. Unsafe disposal can result in soil and water pollution, chemical exposure to workers, and harm to non-target organisms.

iv) Spent Oils and Lubricants

Chainsaw operation may produce waste oils and lubricants containing hazardous constituents. Spills or uncontrolled disposal can contaminate soils and waterbodies, with adverse ecological and human health consequences.

***Impact Significance*:** Considering the likelihood of improper handling and the hazardous nature of agrochemical residues and spent oils, the overall impact significance is assessed as **moderate**.

5.3.6 Pest Infestation and Diseases

Pests and diseases remain a major constraint to cocoa productivity in Ghana, accounting for losses in national yield. Without effective control, infestations can spread rapidly, undermining rehabilitation efforts and climate resilience.

Key contributing factors include:

- Limited extension support for pest/disease identification and IPM adoption
- High costs and restricted access to approved agrochemicals
- Inadequate spraying equipment
- Vulnerability of overaged cocoa trees, which act as reservoirs for pests and pathogens.

The rehabilitation programme incorporates targeted measures to mitigate these risks, including:

- Strengthening research and laboratory capacity for early detection and varietal development
- Supplying improved planting materials with enhanced genetic resistance
- Promoting Integrated Soil Fertility Management (ISFM) and Integrated Pest Management (IPM)
- Expanding extension services for dissemination of best practices.

Impact Significance: The significance of this risk is assessed to be **Substantial**. However, with the implementation of the planned interventions, the likelihood and severity of pest and disease impacts during project implementation will be **Low**.

5.3.7 Inappropriate Handling, Usage, and Disposal of Agrochemicals

Agrochemicals, including insecticides fungicides, and fertilizers, are integral to cocoa production but pose significant risks when mismanaged. Key sources of impact include:

- Improper storage, handling, and use
- Circulation of sub-standard or unlicensed products
- Indiscriminate disposal of containers and packaging.

i) Improper Storage, Handling, and Use

Storing pesticides in living spaces exposes households to prolonged inhalation risks, particularly children. Unsafe handling practices (e.g., spraying without PPE) can cause acute health effects such as nausea, vomiting, eye irritation, and chemical poisoning. Environmentally, misuse or overuse harms non-target organisms, degrades soil quality, and contaminates water bodies through runoff and leaching.

ii) Sub-standard or Unlicensed Agrochemicals

Weak regulation and limited access to approved inputs encourage use of unlicensed products. These often lack labeling, contain hazardous substances, and are applied incorrectly, leading to health risks (respiratory infections, diarrhea, skin diseases) and undermining IPM strategies.

iii) Indiscriminate Disposal of Containers

Improper disposal of empty containers and fertilizer bags creates severe hazards. Reuse for domestic purposes exposes users to toxic residues, while runoff can transport containers into rivers, contaminating water sources and harming aquatic life. Scavengers at disposal sites face direct exposure due to lack of awareness and rinsing practices.

***Impact Significance*:** Although impacts are localized, the severity of environmental degradation and human health risks is considerable. The impact significance is therefore assessed as substantial.

5.3.8 Community Health and Safety

Cocoa rehabilitation activities may generate community health and safety risks for settlements located near farm sites, access routes, and nursery construction areas. Key hazards include noise, pesticide drift, traffic and air quality impacts from dust and vehicular emissions.

i) Noise from Machinery Use

Chainsaws, and other equipment used during CSSVD tree removal and nursery construction will generate intermittent noise. Although these activities are short-term and generally distant from residential areas, elevated noise levels may still cause stress, irritation, and sleep disturbance for sensitive receptors such as children, the elderly, and infirm persons. Noise impacts are expected to be moderate and temporary.

ii) Pesticide Spray Drift

Agrochemical application during rehabilitation poses risks of off-target spray drift, especially under windy or unsuitable weather conditions. Drift may expose nearby residents, farmers on adjacent plots, or passers-by to chemical residues. Acute exposure can result in eye and skin irritation, respiratory discomfort, or temporary vision impairment. Repeated exposure may increase long-term risks, including carcinogenic, reproductive, or neurodevelopmental effects. Improper application techniques, inadequate PPE use, and failure to follow weather thresholds increase the likelihood of drift.

iii) Dust and Vehicular Emissions

Movement of haulage trucks on community roads particularly unpaved sections will generate dust plumes affecting roadside residents, pedestrians, traders, and vulnerable groups. Uncovered trucks may also release particulate matter. Vehicle emissions (CO, NOx, SOx) may degrade air quality along transport routes.

Associated health risks include respiratory infections (e.g., asthma, bronchitis), eye irritation, reduced visibility for road users, and general discomfort.

Impact Significance*:** Given the proximity of communities to access roads and farm sites, and the potential for chemical exposure and air quality deterioration, overall community health and safety risks are assessed as ***moderate.

5.3.9 Loss of Cocoa Farmlands to Small Scale Illegal Mining

Illegal mining presents a significant threat to the sustainability of cocoa rehabilitation investments. An estimated 36.5 hectares of rehabilitated farms were destroyed by galamsey in 2023 (COCOBOD, 2023). Conversion of cocoa farms to illegal mining is driven by economic stress, delayed income recovery, and perceived higher returns from mining.

i) Economic Vulnerability of Farmers and Landowners

CSSVD infestation eliminates farm income and rehabilitation requires removal of diseased cocoa trees, with farms typically regaining full productivity from the fifth year. This income gap is expected to be mitigated through the Livelihood Support Package (LSP). However, delays in LSP payments or perceived inadequacy of support may still create financial pressure on farmers and increase the risk of land conversion to illegal small-scale mining, making timely implementation of the LSP critical.

ii) Labour Intensity and Perceived Profitability

Cocoa production is labor-intensive and does not provide immediate financial returns to the farmer, while small scale illegal mining provides immediate and comparatively higher earnings. This may encourage farmers to cede their lands to mining operators.

Impact Significance*:** Given farmer vulnerability, strong economic incentives for illegal mining, and potential losses, the significance of this impact is assessed as ***High.

5.3.10 Gender-Based Violence and Gender Disparity

Gender-based violence (GBV) and inequalities remain critical risks within informal and male-dominated agricultural value chains. Women and girls are disproportionately affected and face vulnerability where labour protections, oversight, and survivor support systems are weak.

i) Gender-Based Discrimination and Disparity

Structural inequalities in access to land, resources, extension services, and livelihood support limit women's participation and benefits from rehabilitation activities. Although women constitute a large proportion of crop producers, their land rights are often mediated through male relatives, reducing their participation in livelihood support payment and decision-making processes.

ii) Sexual Exploitation, Abuse, and Sexual Harassment (SEA/SH)

Agricultural rehabilitation activities involving temporary and migrant labour increase SEA/SH risks due to power imbalances and weak accountability systems. Risks include:

- Solicitation of sexual favours in exchange for employment
- Harassment or coercion by supervisors, co-workers, or contractors
- Exploitation of adolescent girls and vulnerable women in nearby communities.

Under-reporting is common due to fear of retaliation, stigma, and limited access to survivor support services.

Impact Significance: The significance of gender discrimination is assessed as **Moderate**, reflecting structural inequalities and reduced women's participation. SEA/SH risks are also assessed as **Moderate**

5.3.11 Increased Risk of Teenage Pregnancy

Teenage pregnancy remains a concern in rural districts. National data (GDHS 2022) indicate that 15% of girls aged 15–19 have ever been pregnant. Although local cases in the Asamankese area declined between 2021–2022, risk factors persist.

Project activities may elevate risks due to interactions between adolescent girls and higher-earning workers. Economic vulnerability, school dropouts, and limited parental supervision increase susceptibility to transactional relationships or exploitation.

Potential impacts include SEA, disruption of schooling, health complications, and long-term socio-economic vulnerability.

Impact Significance: Likelihood is **Low** due to existing sensitization programmes, but consequences are severe. Overall impact significance is **Moderate**.

5.3.12 Spread of HIV and Other Sexually Transmitted Infections (STIs)

Adult HIV prevalence in the three administrative districts are as follows: West Akim Municipal (1.43%), Upper West Akim District (0.23%) and Asene Manso Akroso District (1.32%). These are below the regional (2.08%) and national (1.49%) averages.[2]

Project-related influx of temporary or migrant workers could increase vulnerability to HIV/STI transmission through:

- Casual or unprotected sexual relationships
- Transactional sex driven by income disparities
- Influx of commercial sex workers
- Concealment of HIV status due to stigma.

Impact Significance: Given the potential behavioral risks of migrant workers, overall significance is assessed as **moderate**.

5.3.13 Farm Loss

Farm loss occurs when annual farm expenses exceed income. Risks arise from poor agronomic practices, inadequate inputs, fire, and limited extension support.

i) Unimproved Seedlings

Use of unimproved seedlings results in lower yields, pest and disease vulnerability, and reduced farm profitability.

ii) Fire Risk

Bushfires during the dry season—triggered by hunting, burning, or cooking—pose significant threats. Cocoa trees cannot regenerate after fire damage, resulting in total farm loss and costly replanting.

iii) Inadequate Extension Services

[2] National HIV and sub-national estimates released by the Ghana AIDS Commission for 2024

Weak or inconsistent extension support reduces farmers' capacity to adopt good agricultural practices, leading to lower yields and poor-quality beans.

Impact Significance: Overall impact significance of this risk is assessed as moderate.

5.3.14 Threat to Biodiversity

The Asamankese Cocoa District lies within the semi-deciduous forest ecological zone and supports a variety of flora and fauna, including bird species such as hornbills, turacos and weaver birds, as well as pollinators such as bees, butterflies and other beneficial insects that contribute to cocoa productivity (Appendix 14). Although the rehabilitation activities will be undertaken within existing cocoa farms and outside protected areas, the removal of diseased cocoa trees, increased human activity, and use of agrochemicals may cause temporary disturbances to habitats and ecosystem functions. Potential impacts include habitat fragmentation, disruption of feeding and nesting sites, reduced pollinator activity, disturbance to wildlife movement, and temporary reduction in carbon sequestration capacity. If not properly managed, these impacts could contribute to localized biodiversity loss and ecosystem degradation.

i) Effects on Flora and Fauna

The cutting and treatment of diseased cocoa trees will temporarily alter habitat conditions within rehabilitated farms through tree cutting, increased human activity, noise generation and movement of equipment and workers. These activities may disturb birds and other wildlife by reducing nesting, feeding and resting opportunities and may disrupt movement between adjacent habitat patches. Pollinators and other beneficial insects may also be affected through the temporary reduction of flowering vegetation and inappropriate use of agrochemicals.

However, the rehabilitation activities will be confined to already modified agricultural landscapes and will not involve clearing of natural forests or protected areas. In addition, the re-establishment of cocoa farms under an agroforestry system with cocoa, plantain and permanent shade trees is expected to restore habitat functions, improve ecological connectivity and provide feeding and shelter opportunities for birds, pollinators and other wildlife over the medium to long term.

Impact Significance: Moderate prior to mitigation and Low after implementation of mitigation measures.

ii. Effects on Carbon Sequestration

The removal of diseased cocoa trees will temporarily reduce vegetation cover and carbon sequestration capacity within the rehabilitated farms. Newly planted cocoa and shade trees require several years to mature and restore the carbon storage functions previously provided by the affected farms. Delays in replanting, poor seedling survival rates, or inadequate shade tree establishment may prolong the period of reduced carbon capture and ecosystem recovery.

Nevertheless, the rehabilitation programme incorporates agroforestry principles that promote the planting and maintenance of permanent shade trees alongside cocoa. Over time, these measures will restore vegetation cover, improve carbon sequestration, enhance soil quality and increase the overall climate resilience of rehabilitated farms.

Impact Significance: Low. The impact is temporary, localized and reversible, and is expected to be offset through timely replanting and establishment of agroforestry systems.

5.3.15 Socio-Cultural Conflict

The Asamankese Cocoa District comprises diverse ethnic groups with long-standing cultural traditions and heritage resources, including sacred groves, shrines, cemeteries, totems, taboos, and other culturally significant sites. These cultural assets are central to social identity and community cohesion. Cocoa farms in Asamankese are mostly not close to these cultural and heritage sites.

Where such cultural and heritage sites exist, the introduction of external workers unfamiliar with local customs may result in unintentional disrespect of cultural norms or sacred sites. Such incidents can generate community resentment, trigger socio-cultural tensions, and, if unmitigated, escalate into conflicts that disrupt project implementation and damage community–project relations.

***Impact Significance*:** the significance of this impact is assessed as low.

5.3.16 Potential Disagreements Among Farm Interest Holders

Cocoa farms in the Asamankese District often involve multiple interest holders, including landowners, farm owners, and farmers (caretakers, sharecroppers). While rehabilitation does not require land acquisition, temporary livelihood disruptions occur during cutting-out and re-establishment, affecting farm owners and farmers.

A key risk arises from practices observed in some communities where land reverts to the landowner once cocoa trees are removed. This creates disincentives for full participation in rehabilitation and may lead landowners to withhold consent, or prompt farm owners and farmers to resist interventions due to concerns about losing long-term access and benefits. Unclear roles, rights, and benefit-sharing arrangements may further contribute to disputes when rehabilitated farms are handed over.

***Impact Significance*:** COCOBOD's rehabilitation protocol and the Farmers' Agreement significantly reduces this risk by requiring early identification and engagement of all interest holders and by establishing transparent, mutually agreed benefit-sharing arrangements. The livelihood support planning process further strengthens clarity and compliance. Accordingly, the residual impact significance is assessed as moderate.

Section 6: Environmental and Social Mitigation Measures and Standard Operating Procedures (SOPs)

This section outlines the mitigation measures and operational procedures required to avoid, minimize, or manage the environmental and social risks associated with cocoa rehabilitation in the Asamankese Cocoa District. Measures are aligned with national legislation, EPA requirements, COCOBOD's ESMS, and the World Bank Environmental and Social Standards (ESS1–ESS10, except for ESS 9).

Mitigation measures aim to:

- Prevent or minimize adverse environmental and social risks and impacts.
- Enhance positive outcomes related to productivity, resilience, and livelihood recovery.
- Clarify implementation responsibilities for COCOBOD/CHED, PIU, contractors, and farmer groups.
- Provide measurable indicators for monitoring, reporting, and compliance.
- Reduce residual impacts to acceptable levels consistent with good international industry practice (GIIP).

6.1 ESMP Implementation

The objective is to ensure the ESMP is effectively implemented at all operational levels. The following measures shall be implemented:

i. Strengthen Institutional E&S Framework

COCOBOD will implement this ESMP together with the ESMF, RF, SEP, LMP, and IPMP prepared for the project to guide environmental and social risk management and compliance during project implementation.

ii. Establish Dedicated E&S Structures

COCOBOD has designated dedicated Environmental and Social Risk Management Officers at national, regional, and cocoa-district levels with clear reporting lines and defined responsibilities for ESMP implementation, monitoring, and oversight. The E&S officers at the district and regional levels report to the E&S Specialists at the PIU.

iii. Recruit Qualified E&S Personnel

COCOBOD has seconded one Environmental Specialist and one Social Specialist within the PIU to support the dedicated COCOBOD staff implementing the Project activities. In addition, COCOBOD shall require the contractor/service provider to mobilize qualified on-site E&S personnel (Environmental Officer and Social/Gender/GRM Officer) prior to commencement of activities.

iv. Designate Local E&S Focal Points

COCOBOD has appointed and trained E&S focal points within CHED at the Eastern region and Asamankese District to support day-to-day monitoring, stakeholder engagement, and incident reporting.

v. Capacity Building and Training

COCOBOD shall implement targeted training programmes on ESMP requirements, ESF standards, monitoring protocols, GRM operation, OHS, and reporting obligations for PIU, Eastern regional staff, Asamankese district-level CHED personnel, and contractor staff. In addition, the project shall conduct periodic refresher trainings and on-the-job coaching to strengthen continuous compliance.

vi. Strengthening ESMS and Monitoring Processes

COCOBOD has integrated the ESMP requirements into COCOBOD's existing ESMS, including standardized monitoring templates, checklists, and reporting formats. In addition, the project shall establish a structured supervision and reporting schedule (weekly, monthly, quarterly) with accompanying field verification by PIU and regional E&S staff.

vii. Allocate Adequate Resources

The project shall ensure adequate budget provisions for E&S implementation (training, logistics, transport, monitoring equipment, GRM materials) are allocated and disbursed on time to enable effective ESMP execution.

viii. Performance Management and Compliance Assurance

COCOBOD shall incorporate E&S performance indicators into contractor contracts and PIU staff responsibilities. The PIU shall use compliance audits, corrective action plans, and management reviews to maintain consistent implementation.

ix. Provisions to be Reflected in Bidding Documents

COCOBOD shall ensure that service providers are procured using the World Bank's Standard Procurement Document (SPD), where E&S requirements (e.g., C-ESMP preparation, contractual penalties for non-compliance, E&S staffing to be engaged by the service providers, and payments towards E&S requirements) are explicitly referenced. These provisions shall be clearly reflected in the bidding documents, be evaluated during bid assessment, and be implemented.

For the **TCDP**, COCOBOD shall ensure that all procurement documents require service providers and contractors to:

1. Prepare and implement an approved Contractor's ESMP (C-ESMP).
2. Employ qualified Environmental, Social, OHS, and GBV/SEA/SH personnel as appropriate to the risk level.
3. Cost all ESHS obligations in their financial proposals.
4. Sign and enforce worker Codes of Conduct.
5. Implement Labour Management Procedures and worker grievance mechanisms.
6. Comply with all Occupational Health and Safety requirements.

7. Implement GBV/SEA/SH Prevention and Response Measures.
8. Maintain community grievance mechanisms and stakeholder engagement activities.
9. Submit monthly ESHS performance reports.
10. Immediately notify and investigate serious incidents.
11. Comply with national environmental permits and the project's ESMF, ESMP, ESCP, LMP, SEP, and other applicable instruments.
12. Accept contractual remedies, including corrective actions, payment consequences where applicable, suspension, or termination, for significant or persistent ESHS non-compliance.

Including these requirements in procurement documents ensures that environmental and social obligations are legally binding, adequately resourced, measurable, and enforceable throughout contract implementation.

***Residual Impact Significance*:** With full implementation of these mitigation measures, the risk of inefficient ESMP implementation is expected to be **low**.

6.2 Occupational Health and Safety

The objective is to protect workers from accidents, occupational exposure, and health risks.

6.2.1 General OHS Management Measures (Applicable to All Activities)

The project shall employ the following measures:

i. **Occupational Health and Safety (OHS) Management:** Occupational Health and Safety measures have been incorporated into this ESMP and detailed OHS procedures shall be included in the Contractor's ESMP (C-ESMP). These shall be aligned with the World Bank Environmental, Health and Safety (EHS) Guidelines and COCOBOD's Environmental and Social Management System (ESMS), and shall cover hazard identification, safe work procedures, use of PPE, emergency response, incident reporting, and toolbox meetings.

ii. ***Deploy qualified OHS personnel*** *at farm and nursery sites to supervise daily activities, enforce safety protocols, and maintain incident logs.*

iii. **The Contractor shall provide appropriate PPE** to all workers free of charge and ensure proper issuance, replacement, and enforcement of PPE use. See Annex 7 for the list of required PPEs for rehabilitation works.

iv. **Provide continuous OHS training** for all workers on machine operation, chemical safety, manual handling, first aid, wildlife hazards, noise/vibration risks, and safe cocoa rehabilitation practices.

v. **Establish a medical and First-Aid system**, including trained first-aiders, stocked first-aid kits, emergency contact procedures, and arrangements with the nearest health facility including the Asamankese Government Hospital in the West Akim district, the Adeiso Polyclinic in the Upper West Akim and a number of CHPS compounds within the affected communities including Anoma Kojo, Ekoso, Essaso, etc.

6.2.2 Farm Accidents, Chainsaw Risks, Manual Handling Hazards, and Snakebites

The project shall employ the following measures:

i. Implement Chainsaw Safety Protocols:
   - Enforce chainsaw operator training and certification.
   - Enforce exclusion zones and spotter systems during cutting and delimbed operations.
   - Use signage and adopt clear communication procedures.

ii. Promote Safe Manual Handling:
   - Train workers on proper lifting, bending, and cutting techniques.
   - Rotate tasks to minimize repetitive strain.
   - Only use fit-for-purpose and healthy workers for manual handling tasks

iii. Control Chemical Exposure:
   - Store agrochemicals in secure, ventilated facilities with clear labeling.
   - Train workers in proper mixing, application, and disposal.
   - Enforce use of appropriate PPE (chemical-resistant gloves, masks, goggles etc.).

iv. Wildlife and Snakebite Prevention:
   - Conduct pre-clearing site inspections and vegetation checks.
   - Provide protective boots and gaiters.
   - Train workers on snake awareness and first-aid response (pressure immobilization, transport protocols).

6.2.3 Nursery-Related Injuries

The project shall employ the following measures:

i. Ergonomic Risk Reduction:
   - Introduce job rotation and rest breaks during intensive bending and repetitive tasks.
   - Provide ergonomic tools (long-handled hoes, lightweight grafting knives).

ii. Safe Use of Sharp Tools:
   - Train workers on proper cutting and grafting techniques.
   - Maintain sharp tools to reduce force and improve control.
   - Assign personal tools to minimize infection transfer; disinfect shared tools regularly.

6.2.4 Nursery Construction Accidents

The project shall employ the following measures:

i. Construction Site Safety Management:
   - Implement housekeeping protocols to remove debris, trailing cables, and uneven surfaces.
   - Clearly demarcate construction zones and pedestrian walkways.

ii. Material Handling Safety:
   - Train workers on safe lifting and manual handling procedures.
   - Use mechanical lifting aids where feasible.

iii. Vehicle and Haulage Safety:
   - Require trained drivers and enforce speed limits.

- Assign banksmen to supervise reversing, and offloading.
- Use high-visibility PPE and maintain clear truck movement paths.

6.2.5 Noise and Vibration

The project shall employ the following measures:

i. Minimize Worker Exposure:
   - Schedule noisy activities during daytime only to reduce prolonged exposure.
   - Implement mandatory hearing protection (earmuffs/plugs) for workers near chainsaws.

ii. Manage Vibration Risks:
   - Limit continuous chainsaw operation durations through job rotation.
   - Require use of anti-vibration gloves for chainsaw operators.
   - Maintain equipment to reduce unnecessary vibration.

6.2.6 Exposure to Dust and Other Emissions

The project shall employ the following measures:

i. Dust Control Measures:
   - Use dust masks during tree cutting activities.

ii. Control Machinery Emissions:
   - Use well-maintained equipment to reduce exhaust emissions.

6.2.7 Agrochemical Poisoning

The project shall employ the following measures:

i. Safe Storage and Handling:
   - Establish designated, locked, and ventilated chemical storage sheds.
   - Maintain a chemical register and Safety Data Sheets (SDS).

ii. Controlled Use and Application:
   - Train workers in proper dosage, mixing, spraying techniques, and spill response.
   - Prohibit eating, drinking, or smoking during chemical handling.

iii. Emergency Response for Chemical Exposure:
   - Install eye-wash stations near mixing areas.
   - Provide first-aid kits with materials for chemical burns and inhalation incidents.

Residual Impact Significance: With full application of the above mitigation measures, the occupational health and safety risk—although inherently significant—can be substantially reduced, and residual impact significance is expected to be moderate to low depending on strict adherence to controls.

6.3. Labour Rights Risks

6.3.1 General Labour and Working Conditions Measures

The project shall employ the following measures:

i. Implement the Project Labour Management Procedure (LMP) consistent with the Ghana Labour Act and World Bank ESS2, covering recruitment, terms of engagement, no use of child or forced labor, working conditions, nondiscrimination, and grievance redress.
ii. Designate the Social Specialists as Labour Focal Points within the PIU, Asamankese CHED office and contractor teams to oversee compliance, monitor labour conditions, and maintain labour-related records.
iii. Ensure access to a Worker Grievance Mechanism (WGM) that is confidential, accessible in local languages, and capable of resolving concerns related to wages, unfair treatment, discrimination, and unsafe working conditions.

6.3.2 Non-Issuance of Employment Contracts

The project shall employ the following measures:

i. Require employment agreements for all workers including informal, temporary, and FBO-based labour specifying job roles, duration, responsibilities, remuneration, OHS requirements, and grievance channels.
ii. Use standardized contract templates to ensure consistency and compliance with national labour laws and ESS2.
iii. Conduct pre-engagement orientation for workers explaining their contractual rights, obligations, and available recourse mechanisms.

6.3.3 Unfair or Delayed Compensation

The project shall employ the following measures:

i. Enforce payment of wages at or above the national minimum wage, with transparency in wage-setting and communication of payment schedules.
ii. Monitor overtime and ensure fair compensation, including written approval and proper recordkeeping.
iii. Ensure equal pay for equal work, with periodic audits to detect and address gender-based pay disparities.
iv. Promote social protection measures, including voluntary enrolment in pension schemes where feasible, and encourage contractors to comply with statutory deductions.
v. Conduct regular payroll reviews by the PIU to confirm timely and accurate wage payments.

6.3.4 Restrictions on Freedom of Association

The project shall employ the following measures:

i. Communicate and uphold workers' rights to freely form or join unions or worker associations without fear of reprisal, in line with national legislation.
ii. Prohibit interference by supervisors or contractors in workers' decisions to organize or participate in labour-related discussions.
iii. Enable worker representation structures, including worker committees or elected representatives, where formal union presence is limited.

iv. Train supervisors and contractors on legal obligations regarding freedom of association and collective bargaining rights.

6.3.5 Marginalization of Women and Persons with Disabilities (PWD)

The project shall employ the following measures:

i. Promote inclusive recruitment practices with explicit encouragement for women and PWD to apply for suitable roles in farm and nursery operations.
ii. Enforce non-discrimination in hiring and compensation, supported by periodic audits to identify gender or disability-based disparities.
iii. Provide reasonable accommodation for PWD, including adapted tools, accessible workspaces, and tailored PPE.
iv. Ensure safe and respectful working environments through training on gender sensitivity, disability inclusion, and prevention of harassment or stigmatization.
v. Prioritize women for appropriate roles, including nursery work, seedlings handling, grafting, or administrative support, to promote equitable participation.

Residual Impact Significance: With implementation of the above mitigation measures, including formalization of work arrangements, strengthened oversight, equitable hiring, and enforcement of labour rights, the likelihood and significance of labour rights infringement is expected to reduce from **moderate to low**.

6.4 Child Labour Risks

6.4.1 Strengthening Child Labour Prevention and Compliance Framework

The project shall employ the following measures:

i. Implement the Child Labour Prevention Protocol developed for the project as part of the Labour Management Procedures (LMP) consistent with Ghana's legal framework, ILO Conventions 138 and 182, and COCOBOD's ESMS. The protocol is included in the annex.
ii. Integrate nonuse of child labour requirements into all contracts, including clauses prohibiting the engagement of anyone below 18 years for hazardous work and below 14 years for light work.
iii. Designate District-Level child labour focal points within CHED and Service Provider/contractor teams to oversee compliance, reporting, and coordination with statutory bodies.

6.4.2 Enhance Awareness, Training, and behavioral Change

The project shall employ the following measures:

i. Conduct mandatory training for workers, farmers, FBOs, and contractors on:
    - definitions of child labour and hazardous work
    - age-verification procedures
    - safe alternatives to child labour
    - responsibilities for reporting and referral.

ii. Deliver community sensitization programmes using local-language materials (IEC tools, radio, durbars) to address cultural norms that support child participation in hazardous farm work.
iii. Include school-based outreach in collaboration with district education authorities to reinforce the importance of school attendance and clarify reporting pathways for suspected cases.

6.4.3 Strengthening Monitoring, Verification, and Reporting

The project shall employ the following measures:

i. Operationalize the Cocoa Management System (CMS) to track labour engagement, monitor household-level risks, and flag potential child labour indicators during rehabilitation activities.
ii. Undertake routine field monitoring (spot checks, interviews, and household visits) by PIU and CHED officers, prioritizing peak labour periods.
iii. Establish a child labour reporting mechanism linked to the Worker and Community GRM, with confidential channels for anonymous reporting.
iv. Coordinate with statutory agencies (Labour Department, Social Welfare, and the Anti-Human Trafficking Unit) for verification, enforcement, and follow-up.

6.4.4 Address Labour Supply and Workload Pressures

The project shall employ the following measures:

i. Promote use of trained adult labour groups or FBOs during peak seasons to reduce reliance on children for labor-intensive tasks.
ii. Encourage adoption of labor-saving practices and tools, particularly for weeding, carrying loads, and agrochemical application.
iii. Include work scheduling measures to avoid tasks that create pressure for families to involve children (e.g., aligning operations with school hours, avoiding child-intensive activities during examination periods).

6.4.5 Protect and Support Affected Children

The project shall employ the following measures:

i. Establish referral pathways for identified child labour Cases, linking project structures with district Social Welfare services, schools, and child protection NGOs.
ii. Ensure immediate removal of children from hazardous conditions, with appropriate documentation and follow-up.
iii. Provide temporary care and support, including child-appropriate shelters or safe resting points where feasible, in collaboration with district authorities.
iv. Collaborate with appropriate authorities on reintegration measures, such as school re-enrolment facilitation or community-based child protection committees.

6.4.6 Strengthening Accountability and Enforcement

The project shall employ the following measures:

i. Apply contractual sanctions (warnings, suspension, or termination) against contractors, FBOs, or farmer groups found using child labour.

ii. Document all violations and corrective actions within the CMS and PIU monitoring system and report to the World Bank within 48 hours of child labour incidence.
iii. Collaborate with law enforcement to ensure appropriate penalties for criminal child labour or trafficking cases.
iv. Publish compliance findings (as feasible) to reinforce transparency with international buyers and meet emerging EU due diligence requirements.

Residual Impact Significance: If the above mitigation measures, especially community sensitization, strict contract enforcement, monitoring via CMS, and effective referral systems, are fully implemented, the residual child labour risk can be reduced from High to Moderate, although continuous monitoring remains essential due to persistent structural drivers.

6.5 Impacts on Water Resources

6.5.1 Agrochemical Management to Prevent Water Contamination

The project shall employ the following measures:

i. Implement the project's Integrated Pest Management (IPM) approach to minimize agrochemical use, prioritize non-chemical alternatives, and restrict hazardous substances.
ii. Provide safe storage and handling facilities for all agrochemicals, including:
    - lockable ventilated stores
    - impermeable flooring
    - secondary containment to prevent leaks.
iii. Train all workers and farmers on safe pesticide handling, environmentally safe application methods, mixture preparation, and appropriate disposal of containers.
iv. Restrict application near watercourses, enforcing no-spray buffer zones of 30-50m depending on topography and proximity to wells or streams.
v. Ensure proper disposal of agrochemical waste, including triple-rinsing containers, puncturing them, keeping them under lock, and returning to approved disposal facilities.

6.5.2 Sustainable Water Abstraction for Nursery Operations

The project shall employ the following measures:

i. Water for nursery operations shall, where available, be sourced from existing boreholes, hand-dug wells, harvested rainwater, or permitted surface water sources. New abstraction points shall only be developed where necessary and in compliance with regulatory requirements.
ii. Prior to abstraction, CHED and the Service Provider shall assess the water source to ensure withdrawals do not adversely affect downstream users, aquatic ecosystems, or community water supplies.
iii. Water shall be used efficiently through scheduled watering, mulching, and routine maintenance of water storage and distribution systems.
iv. Abstraction from streams and rivers shall not be undertaken during periods of very low flow or where it may adversely affect downstream users or aquatic ecosystems. Alternative water sources shall be used where necessary.
v. Where applicable, water abstraction permits shall be obtained from the Water Resources Commission before commencement of abstraction.

vi. CHED and the Service Provider shall maintain records of water sources, estimated abstraction volumes, and water-related complaints as part of the monthly Environmental and Social monitoring reports.

6.5.3 Machinery Operation, Fuel Handling, and Waste Oil Management

The project shall employ the following measures:

i. Designate controlled refueling and maintenance areas located at least 50 m from any waterbody, equipped with concrete pads and oil-water separators.
ii. Store oils, lubricants, and fuels in bunded facilities with adequate containment capacity.
iii. Implement spill prevention and response plans, including:
    - spill kits at all operational sites
    - trained personnel
    - immediate containment and clean-up procedures.
iv. Prohibit disposal of used oils and filters on site, ensuring collection by EPA-licensed waste handlers.
v. Inspect machinery regularly for leaks, worn hoses, and faulty gaskets, with documented maintenance logs.
vi. Prohibit washing or servicing machinery in or near watercourses and maintain buffer distances for equipment storage and laydown areas.

6.5.4 Monitoring and Compliance Assurance

The project shall employ the following measures:

i. Include water resource indicators in ESMP monitoring, including sediment levels, nutrient concentrations, hydrocarbons.
ii. Maintain records of agrochemical use, fuel storage, and machine servicing for review by EPA, PIU, and World Bank supervision teams.
iii. Conduct monthly inspections of erosion control structures, agrochemical storage sites, and machinery maintenance areas.
iv. Apply corrective actions and sanctions where non-compliance with water protection procedures is detected, including retraining, suspension of activities, or contract penalties.

Residual Impact Significance: With full application of erosion control measures, strict agrochemical management, and robust spill prevention and monitoring, the potential impacts on water resources are expected to reduce from **Substantial** to **Moderate**.

6.6 Improper Waste Handling and Disposal

6.6.1 General Waste Management

A waste segregation system will be established, with separate bins for organic, recyclable, and hazardous waste. All chemical containers will be triple-rinsed, punctured, and returned to EPA approved disposal facilities. Burning or re-use of containers for domestic purposes will be strictly prohibited. Organic farm residues (felled cocoa biomass) will be composted or mulched to improve soil fertility.

Trainings shall be conducted for nursery staff, contractors, and farmers on waste segregation, safe handling, and disposal procedures.

6.6.2 Domestic Waste

The project shall employ the following measures:

- Install clearly marked covered bins at nurseries, work camps, and field activity zones.
- Ensure daily collection and weekly off-site disposal through approved waste management services.
- Enforce a strict no-littering policy for all workers; include provisions in contractor codes of conduct.
- Conduct periodic site inspections to ensure compliance with domestic waste handling protocols.

6.6.3 Agrochemical Waste

The project shall employ the following measures:

- Establish designated hazardous waste storage areas for empty pesticide containers and fertilizer bags, with impermeable flooring and weather protection.
- Triple-rinse pesticide containers on-site and store them securely pending collection by an EPA-licensed hazardous waste handler.
- Prohibit reuse of agrochemical containers under all circumstances.
- Provide PPE (gloves, masks, boots) and train workers on safe chemical handling and emergency spill response.

6.6.4 Spent Oils and Lubricants

The project shall employ the following measures:

- Conduct machinery and equipment servicing only at designated maintenance points fitted with oil-trap systems or spill containment trays.
- Store waste oils and lubricants in clearly labelled, sealed containers placed on bunded, impermeable surfaces.
- Engage EPA-licensed firms for transport, recycling, or disposal of used oils.

6.6.5 Monitoring Requirements

The project shall employ the following measures:

- Weekly inspection of waste collection points and hazardous waste storage areas.
- Monthly reporting on waste volumes generated, stored, and disposed of.
- Verification of disposal records from licensed waste contractors.
- Compliance audits as part of routine ESMP monitoring.

6.7 Pest Infestation and Diseases

6.7.1 Integrated Pest and Disease Management (IPDM)

The project shall employ the following measures:

- Implement the project-wide Integrated Pest Management (IPM) protocol consistent with COCOBOD and EPA guidelines.
- Promote biological and cultural control measures (sanitation, pruning, shade management, removal of infected pods/chupons) to reduce reliance on chemicals.

- Ensure all introduced planting materials are certified, disease-free, and true-to-type to minimize initial infection risks.

6.7.2 Strengthened Surveillance and Early Detection

The project shall employ the following measures:

- Establish a routine farm surveillance schedule jointly implemented by CHED staff and farmer groups for early identification of black pod, mirids, CSSVD, and other priority pests/diseases.
- Train farmers, caretakers, and sharecroppers to recognize early symptoms and immediately report suspicious signs to local CHED officers.
- Maintain updated records of pest/disease incidence and response actions as part of ESMP monitoring.

6.7.3 Capacity Building and Extension Support

The project shall employ the following measures:

- Provide training on IPM, safe agrochemical use, farm sanitation, and early detection techniques.
- Deploy CHED Extension Agents to offer on-site coaching during land preparation, planting, and early establishment phases.
- Disseminate simple, farmer-friendly guidance materials (leaflets, visuals) on recommended pest and disease management practices.

6.7.4 Agrochemical Management

The project shall employ the following measures:

- Ensure farmers have access to CRIG approved pesticides and appropriate personal protective equipment (PPE).
- Strengthen distribution mechanisms for subsidized agrochemicals under the project to prevent use of expired or unapproved products.
- Promote safe, efficient spraying practices and periodic maintenance of spraying equipment.

6.7.5 Farm Rehabilitation and Sanitation

The project shall employ the following measures:

- Enforce the timely removal and treatment of diseased cocoa trees to prevent spreading to adjacent farms.
- Require strict sanitation practices in nurseries and newly established farms, including regular weed control.
- Avoid replanting unapproved cocoa varieties in treated farms.

6.7.6 Monitoring and Reporting

The project shall employ the following measures:

- Conduct quarterly IPM compliance assessment across nurseries and beneficiary farms.
- Maintain pest and disease monitoring logs and integrate findings into adaptive management measures.

- Require contractors, farmer groups, and CHED extension agents to report all outbreaks and control actions taken.

6.8 Inappropriate Handling, Usage and Disposal of Agrochemicals

6.8.1 Agrochemical Procurement and Quality Control

The project shall employ the following measures:

- Require that all agrochemicals procured under the project are CRIG approved and sourced from COCOBOD registered suppliers.
- Prohibit the purchase, distribution, or use of unapproved expired, or sub-standard products through contractor and farmer compliance checks.
- Maintain records of agrochemical types, quantities, suppliers, and batch numbers for traceability.

6.8.2 Safe Storage and Inventory Management

The project shall employ the following measures:

- Provide designated, lockable agrochemical storage facilities at nurseries and central farm hubs, equipped with ventilation, spill trays, and warning signage.
- Prohibit storage of agrochemicals in residential spaces, including bedrooms, kitchens, or children's play areas.
- Implement a stock register and controlled access system to prevent misuse, theft, or uncontrolled distribution.

6.8.3 Safe Handling and Application

The project shall employ the following measures:

- Train farmers, caretakers, and nursery workers in safe handling, mixing, and application procedures, aligned with COCOBOD and EPA guidelines.
- Ensure availability and mandatory use of appropriate PPEs (gloves, masks, goggles, boots, coveralls) during all agrochemical handling operations.
- Enforce adherence to recommended application rates, timing, and weather conditions to minimize drift, runoff, and non-target exposure.
- Require calibration of sprayers and regular maintenance of spraying equipment to ensure correct dosing.

6.8.4 Environmental Protection Measures-

The project shall employ the following measures:

- Establish 30-50m buffer zones around watercourses where agrochemical application is strictly prohibited.
- Promote integrated pest management (IPM) and non-chemical alternatives (biopesticides, sanitation, pruning) to reduce overall chemical load.
- Avoid agrochemical application before or during heavy rainfall to prevent leaching and surface runoff.
- Implement soil health monitoring to detect potential chemical accumulation or degradation of soil quality.

6.8.5 Emergency Preparedness and Spill Response

The project shall employ the following measures:

- Equip nurseries and central storage areas with spill kits, absorbent materials, and first-aid supplies.
- Train workers on emergency response procedures for spills, accidental poisoning, and exposure incidents.
- Require immediate reporting and cleanup of spills using approved methods; prohibit washing contaminated equipment near waterbodies.

6.8.6 Container Management and Safe Disposal

The project shall employ the following measures:

- Establish a triple-rinsing protocol for empty pesticide containers before storage and disposal.
- Prohibit reuse of agrochemical containers for domestic or farm purposes under any circumstances.
- Provide on-site collection points for empty containers, sachets, and fertilizer bags and transport them to designated EPA-approved disposal facilities.
- Conduct periodic clean-ups of farms and nursery sites to ensure removal of all contaminated packaging materials.

6.8.7 Awareness Raising and Behavioral Change

The project shall employ the following measures:

- Conduct community sensitisation campaigns on the health risks of improper storage, handling, and container reuse.
- Display pictorial safety instructions at nurseries and aggregation centres for easy comprehension by non-literate farmers.

5.8.8 Monitoring and Compliance

The project shall employ the following measures:

- Include agrochemical management compliance in routine ESMP monitoring, extension supervision visits, and contractor audits.
- Track and report all incidents of exposure, improper use, or unsafe disposal, with corrective actions implemented immediately.
- Maintain a record of all training courses, PPE distributions, and container disposal quantities.

6.9 Community Health and Safety

6.9.1 General Community Safety Measures

The project shall employ the following measures:

- COCOBOD shall require the Service Provider to conduct pre-activity community notifications (meetings, public announcements, signposting) to inform residents of upcoming high-risk activities.

- COCOBOD shall require the Service Provider to maintain clear exclusion zones around work areas and restrict public access using signage, flagging tape, and barriers where necessary.
- COCOBOD/CHED shall establish an accessible grievance redress channel to receive and resolve community health and safety concerns promptly.

6.9.2 Noise from Machinery Use

The project shall employ the following measures:

- Restrict operation of chainsaws, power tools, and machinery to daytime hours (e.g., 08:00–17:00) to minimize disturbance to nearby households and sensitive receptors.
- Maintain equipment regularly to ensure optimal functionality and reduce unnecessary noise generation.
- Establish buffer distances between noise-generating activities and the nearest residences; where proximity is unavoidable, implement temporary noise dampening (e.g., locating machinery behind natural vegetation screens).
- Provide advance notification to affected communities before initiating high-noise activities such as tree cutting.
- Prioritize low-noise technologies or manual methods where feasible for operations close to settlements.

6.9.3 Pesticide Spray Drift and Chemical Exposure

The project shall employ the following measures:

- Enforce strict adherence to weather thresholds: prohibit pesticide spraying during windy conditions, immediately before rainfall, or during periods of high temperature that increase volatilization.
- Establish buffer zones (minimum 30m) between spraying areas and homes, schools, community roads, markets, and water sources.
- Require all applicators to be trained in safe application techniques, including nozzle calibration, spray height control, and drift minimization.
- Promote Integrated Pest Management (IPM) to reduce reliance on chemical-based control methods and lower community exposure risk.
- Maintain an emergency response procedure for chemical incidents, including first-aid measures and communication protocols with community health facilities.

6.9.4 Monitoring and Compliance

The project shall employ the following measures:

- Document and report all incidents/accidents, near misses, community complaints, and corrective measures undertaken in accordance with World Bank's incident and accident reporting protocols. See Annex 8 for Incidents and Accidents Log Form.
- Conduct periodic refresher training for workers and contractors on community interaction protocols and emergency response.

6.10 Loss of Cocoa farmlands to Small Scale Illegal Mining (Galamsey)

6.10.1 Economic Vulnerability of Farmers and Landowners

The project shall employ the following measures:

- Establish timely and adequate livelihood support payment to reduce financial stress during the rehabilitation.
- Introduce additional livelihood programs (e.g., food crop intercropping, poultry, beekeeping) to provide interim income while rehabilitated cocoa trees mature.

6.10.2 Labour Intensity and Perceived Profitability

The project shall employ the following measures:

- Promote mechanization and labor-saving technologies (e.g., motorized sprayers, pruning tools) to reduce the drudgery of cocoa cultivation.
- Provide performance-based incentives (cash or input subsidies) for farmers who adhere to recommended replanting schedules and complete rehabilitation cycles.
- Expand extension services and farmer field schools to demonstrate long-term profitability of rehabilitated cocoa compared to short-term gains from galamsey.
- Encourage interim income strategies such as provision of labour for cash during rehabilitation and planting fast-maturing food crops alongside young cocoa trees to offset income delays.

Residual Impact: With effective implementation of compensation, livelihood diversification, mechanization support, and regulatory enforcement, the residual risk of cocoa farmland loss to illegal mining can be reduced from High to Moderate. However, sustained socio-economic pressures and the attractiveness of galamsey profits mean that continuous monitoring and adaptive livelihood support remain critical.

6.11 Gender-Based Violence and Disparity

6.11.1 Gender-Based Discrimination and Disparity

The project shall employ the following measures:

- Establish targeted outreach and flexible training schedules (e.g., community-based, shorter sessions, childcare support) to increase women's participation in extension services.
- Integrate gender quotas or affirmative measures in farmer training, leadership roles, and benefit-sharing committees to guarantee equitable representation.
- Strengthen capacity-building for farmer cooperative/ groups on gender mainstreaming, ensuring that extension officers and project staff actively promote women's inclusion.
- Facilitate legal literacy and rights awareness campaigns for women farmers

6.11.2 Sexual Exploitation, Abuse, and Sexual Harassment (SEA/SH)

The project shall employ the following measures:

- Develop and enforce a project-specific Code of Conduct for all workers, contractors, and supervisors, with clear sanctions for SEA/SH violations. Annex 9 depicts a sample code of conduct for all workers.
- Establish confidential grievance redress mechanisms accessible to women and vulnerable groups, ensuring anonymity and protection against retaliation.

- Provide mandatory SEA/SH training for project staff, contractors, and farmer cooperatives, focusing on prevention, reporting, and survivor-centered response.
- Strengthen coordination with existing GBV service providers (DOVVSU, Social Welfare, health facilities, NGOs) to improve referral pathways and survivor support.
- Conduct community sensitization campaigns to challenge harmful norms, raise awareness of rights, and promote accountability in cocoa rehabilitation activities.
- Ensure safe recruitment practices by prohibiting solicitation of sexual favors for employment and monitoring hiring processes through independent oversight.

Residual Impact: With effective implementation of gender-sensitive compensation, inclusive training, strict SEA/SH codes of conduct, and strengthened survivor support systems, the residual risk of gender-based discrimination and SEA/SH can be reduced from Moderate to Low

Continuous monitoring, institutional strengthening, and community engagement remain essential to sustain progress and prevent recurrence.

6.12 Increased Teenage Pregnancy

6.12.1 Exposure of Adolescent Girls to SEA and Early Sexual Debut

The project shall employ the following measures:

- Implement strict Codes of Conduct for all project workers and contractors, explicitly prohibiting sexual exploitation and relationships with minors.
- Establish confidential grievance redress mechanisms accessible to adolescents, with referral pathways to Social Welfare, health facilities, and NGOs.
- Conduct community sensitization campaigns targeting parents, guardians, and adolescents on the risks of teenage pregnancy and the importance of education retention.
- Strengthen school-based awareness programs in collaboration with District Education Directorates to promote reproductive health knowledge and discourage early sexual debut.

6.12.2 Health Risks and Interruption of Schooling

The project shall employ the following measures:

- Facilitate linkages with local health facilities to provide adolescent-friendly reproductive health services, including counseling and STI prevention.
- Support school retention initiatives (scholarships, mentorship, flexible schedules) to reduce dropout rates among adolescent girls.
- Integrate life skills and reproductive health education into project-related training and community engagement activities.

6.12.3 Long-Term Socio-Economic Consequences

The project shall employ the following measures:

- Promote alternative livelihood opportunities for adolescent girls (vocational training, apprenticeships) to reduce economic vulnerability and reliance on transactional relationships.
- Strengthen coordination with District Social Welfare and NGOs to provide psychosocial support and reintegration services for affected adolescents.

- Establish community monitoring committees to oversee worker–community interactions and report risks of exploitation.

Residual Impact: With effective enforcement of Codes of Conduct, strengthened grievance mechanisms, adolescent-focused sensitization, and improved access to health and education services, the residual risk of teenage pregnancy during project implementation can be reduced from **Moderate** to **Low**. Sustained collaboration with district institutions and community structures remains critical to maintaining preventive measures.

6.13 Spread of HIV and Other Sexually Transmitted Infections (STIs)

6.13.1 General Prevention and Awareness Measures

The project shall employ the following measures:

- COCOBOD shall require the Service Provider/Contractor to develop and implement an HIV/STI Prevention and Sexual Health Management Plan aligned with national health guidelines.
- COCOBOD shall require the Service Provider/Contractor to conduct regular sensitisation and behavior-change communication (BCC) sessions for workers and community members on HIV/STI risks, safe sexual practices, and prevention methods.
- COCOBOD shall require the Service Provider/Contractor to promote anti-stigma messaging to reduce discrimination and encourage voluntary disclosure and health-seeking behavior.

6.13.2 Worker Management and Code of Conduct

The project shall employ the following measures:

- COCOBOD shall require the Service Provider/contractor and subcontractors to adopt and enforce a Worker Code of Conduct (see Annex 9 for sample code of conduct) that prohibits sexual exploitation, abuse, harassment (SEA/SH), transactional sex, and sexual relations with minors.
- COCOBOD shall require the Service Provider/contractor and subcontractors to incorporate HIV/STI awareness and SEA/SH provisions into worker induction and ongoing toolbox talks.
- COCOBOD shall require the Service Provider/contractor and subcontractors to ensure all workers sign and receive training on the Code of Conduct, with penalties for violations, including removal from site.
- COCOBOD shall require the Service Provider/contractor and subcontractors to maintain clear separation between worker accommodation (if provided) and community areas to minimize inappropriate interactions.

6.13.3 Access to Preventive and Health Services

The project shall employ the following measures:

- COCOBOD shall require the Service Provider/contractor and subcontractors to facilitate access to voluntary HIV testing and counselling (VCT) for workers through collaboration with GHS and certified local service providers.

- COCOBOD shall require the Service Provider/contractor and subcontractors to ensure availability of free or low-cost condoms at worksites and designated community health centres.
- COCOBOD shall require the Service Provider/contractor and subcontractors to encourage workers to register with the National Health Insurance Scheme (NHIS) to access broader healthcare services.

6.13.4 Community-Focused Risk Reduction

The project shall employ the following measures:

- COCOBOD through the contractor shall support community sensitisation campaigns to address HIV/STI risks associated with migrant labour influx, including radio announcements, durbars, and youth outreach.
- COCOBOD through the contractor shall work with traditional leaders, women's groups, youth associations, and schools to disseminate culturally appropriate sexual health messages.
- COCOBOD shall integrate HIV/STI awareness into community entry processes, farmer training programmes, and livelihood support activities.
- COCOBOD shall promote empowerment initiatives for women and girls (e.g., life skills training, community watch groups) to reduce vulnerability to transactional sex.

6.13.5 Monitoring, Reporting and Enforcement

The project shall employ the following measures:

- COCOBOD shall require the Service Provider/contractor and subcontractors to include HIV/STI awareness, SEA/SH prevention, and Code of Conduct compliance in routine ESMP monitoring reports.
- COCOBOD shall maintain a confidential reporting mechanism for SEA/SH and sexual misconduct incidents, with clear response and referral pathways.
- COCOBOD shall track distribution of condoms, participation in sensitisation events, and uptake of VCT services as part of monitoring indicators.
- COCOBOD shall enforce consequences for non-compliance contractors, including sanctions, suspension, or contract termination.

6.13.6 Coordination and Institutional Strengthening

The project shall employ the following measures:

- COCOBOD shall establish partnerships with GHS, National AIDS Commission, NGOs, and community health facilities for implementation support.
- COCOBOD shall require the Service Provider/contractor and subcontractors to train supervisors, community facilitators, and field staff on HIV/STI risks, SEA/SH prevention, and safe community engagement practices.

6.14 Farm Loss

6.14.1 Use of Unimproved or Non–True-to-Type Seedlings

The project shall employ the following measures:

- COCOBOD shall require the Service Provider/contractor and subcontractors to ensure that all seedlings supplied for rehabilitation originate from COCOBOD-certified seed gardens and nurseries with documented genetic purity.
- COCOBOD shall require the Service Provider/contractor and subcontractors to implement strict seedling quality assurance protocols, including tagging, inspection, and verification prior to distribution.
- COCOBOD shall prohibit the use of unauthorized planting materials through contractual requirements, supervision, and field monitoring.
- COCOBOD, through CHED, shall train farmers on the economic and yield benefits of improved varieties, focusing on disease resistance, early bearing, and climate resilience.
- COCOBOD shall integrate seedling quality checks into routine CHED extension visits and ESMP monitoring schedules.

6.14.2 Cross-Cutting Livelihood and Farm Resilience Measures

The project shall employ the following measures:

- COCOBOD, through CHED, shall implement a balanced input support system (seedlings, fertilizers, agrochemicals) to reduce financial pressure on farmers
- COCOBOD, through CHED, shall strengthen farmers' capacity for record keeping and farm business management to improve decision-making and cost–income planning.
- COCOBOD, through CHED, shall promote climate-smart practices () to enhance productivity.
- COCOBOD, through CHED, shall monitor farm performance annually and provide targeted support to farmers at risk of economic loss.

Impact Reduction Summary: Implementation of the above measures will reduce the likelihood of farm loss by ensuring access to quality planting materials and improving farmer resilience. Residual impact significance is expected to be Moderate to low with effective implementation.

6.15 Threat to Biodiversity

6.15.1 Effects on Flora and Fauna

To minimize temporary impacts on birds, pollinators and other wildlife during cocoa rehabilitation, the project shall implement the following measures:

- COCOBOD shall require the Service Provider/Contractor and subcontractors to implement selective tree removal protocols, ensuring that only diseased cocoa trees, infected contact trees and unsafe trees are removed while retaining healthy shade trees and other non-target vegetation where feasible.
- COCOBOD shall require the Service Provider/Contractor and subcontractors to retain desirable shade tree species and other non-host trees, wherever practicable, while limiting tree cutting to diseased cocoa trees and infected contact trees. This will maintain habitat connectivity and support birds, pollinators and other beneficial fauna.
- Where operationally feasible, COCOBOD shall require the Service Provider/Contractor and subcontractors to schedule large-scale tree cutting outside peak bird nesting and breeding periods to minimize disturbance to resident bird populations.

- COCOBOD shall require the Service Provider/Contractor and subcontractors to prohibit hunting, trapping, collection or deliberate disturbance of wildlife by workers. These requirements shall be incorporated into worker induction programmes and the Code of Conduct.
- Agrochemical use shall comply with the Project Integrated Pest Management Plan (IPMP). Preference shall be given to integrated pest management approaches, with pesticide use limited to approved products and applied strictly in accordance with recommended application rates and safety procedures.
- Pesticides shall not be applied during periods of peak pollinator activity, particularly during cocoa flowering, during strong winds, or within designated buffer zones around streams, wetlands and other ecologically sensitive areas to minimize impacts on bees, butterflies and other beneficial insects.
- COCOBOD shall require the Service Provider/Contractor and subcontractors to maintain a minimum 30 to 50-metre buffer around rivers, streams, wetlands and other environmentally sensitive areas where agrochemical application and other rehabilitation activities shall not be undertaken.
- COCOBOD shall promote the establishment of diverse agroforestry systems by integrating approved native and economic shade tree species that provide food sources, nesting sites and habitat for birds, pollinators and other beneficial fauna (see Annex 11).
- COCOBOD shall provide periodic awareness training for workers and beneficiary farmers on biodiversity conservation, pollinator protection, sustainable agroforestry practices and responsible agrochemical use.
- COCOBOD shall incorporate biodiversity monitoring into routine field inspections, including monitoring of shade tree establishment, compliance with ecological buffer zones, evidence of pollinator activity, presence of key bird species, and any biodiversity-related incidents. Corrective actions shall be implemented where significant adverse trends are identified.

Impact Reduction Summary: These measures will minimize habitat disturbance, protect birds and pollinators, maintain ecological connectivity, and promote recovery of biodiversity within rehabilitated cocoa landscapes.

6.15.2 Effects on Carbon Sequestration

To restore adequate tree stock and enhance long-term carbon sequestration, the project shall implement the following measures:

- COCOBOD shall require the Service Provider/Contractor and subcontractors to commence replanting immediately after completion of rehabilitation activities using improved cocoa seedlings together with approved permanent shade tree species to minimize the period of reduced carbon sequestration.
- COCOBOD shall require the Service Provider/Contractor and subcontractors to integrate agroforestry systems comprising cocoa, plantain and approved shade trees into all rehabilitated farms to restore canopy cover, improve soil quality and enhance long-term carbon storage (see Annex 11).

- COCOBOD shall establish minimum shade tree density requirements in accordance with CRIG technical recommendations and monitor compliance throughout nursery establishment and field planting.
- COCOBOD shall require the Service Provider/Contractor and subcontractors to prohibit vegetation clearance within riparian buffers, wetlands and other ecologically sensitive areas to maintain natural carbon stocks and ecosystem functions.
- COCOBOD shall monitor seedling survival, shade tree establishment and canopy recovery as part of routine project monitoring. Where poor survival or delayed replanting is observed, corrective actions such as gap filling and supplementary planting shall be implemented promptly.

Impact Reduction Summary: These measures will accelerate restoration of adequate tree stock, improve carbon sequestration, strengthen climate resilience and ensure that the residual impact on carbon storage remains **Low** following implementation of the rehabilitation programme.

6.16 Climate-Responsive Implementation Measures

To minimize environmental risks associated with seasonal weather conditions, the project shall:

- Schedule major tree cutting activities, as far as practicable, outside the peak rainfall months of June and July to minimize soil erosion and sediment transport.
- Suspend arboricide application during June and July, or during periods of heavy rainfall, to prevent chemical runoff and ensure effective stump treatment.
- Suspend rehabilitation activities during extreme weather conditions where worker safety or environmental protection may be compromised.

6.17 Socio-Cultural Conflicts

The project shall implement the following measures:

6.17.1 Implement a Cultural Awareness and Induction Programme

COCOBOD shall require the Service Provider/contractor and subcontractors to require all project workers (particularly those from outside the host communities) to undergo cultural orientation covering local customs, taboos, traditional authority structures, and prohibited behaviors prior to deployment.

6.17.2 Develop and Enforce a Worker Code of Conduct

COCOBOD shall require the Service Provider/contractor and subcontractors to establish a clear, culturally appropriate code of conduct outlining acceptable behavior, respect for cultural resources, and sanctions for misconduct. Ensure all workers sign and adhere to this code.

6.17.3 Strengthening Community Engagement Mechanisms

COCOBOD/CHED shall maintain continuous engagement with traditional authorities, community leaders, and cultural custodians to identify cultural sensitivities and ensure project activities do not interfere with sacred sites or cultural practices.

6.17.4 Integrate Local Labour Where Feasible

COCOBOD shall require the Service Provider/contractor and subcontractors to prioritize recruitment of local workers to reduce the influx of external labour and promote peaceful co-

existence. COCOBOD shall require the Service Provider/contractor and subcontractors to provide role-specific training to enhance local participation without compromising project standards.

6.17.5 Establish a Culturally Responsive Grievance Mechanism

COCOBOD/CHED shall operationalize a grievance redress system that allows community members to report cultural offences or tensions confidentially. COCOBOD/CHED ensure grievances are addressed promptly in collaboration with traditional authorities.

6.17.6 Monitor Worker–Community Interactions

COCOBOD/CHED shall deploy community liaison officers to monitor compliance with cultural protocols, mediate emerging tensions, and report incidents to project management for corrective action.

6.17.7 Limit Worker Movements in Community Spaces

COCOBOD shall require the Service Provider/contractor and subcontractors to regulate non-work movement of workers, especially near sacred or restricted areas, through supervision, signposting, and communication of no-access zones.

6.17.8 Support Cultural Preservation Initiatives

COCOBOD/CHED shall where project activities are located near heritage resources, collaborate with community custodians to support preservation measures, including documentation and maintenance.

6.18 Potential Disagreements Among Farm Interest Holders

The project shall implement the following measures:

6.18.1 Undertake Comprehensive Stakeholder Identification and Verification

COCOBOD/CHED shall verify and onboard all interest holders; landowners, farm owners, caretakers, and sharecroppers—before rehabilitation commences to ensure accurate recognition of rights and responsibilities.

6.18.2 Facilitate Early and Inclusive Consultations

COCOBOD/CHED shall conduct engagements to sensitize and educate interest holders on the rehabilitation requirements, expected livelihood disruptions, and benefit-sharing arrangements prior to consent signing.

6.18.3 Formalize Agreements Through Written Consent

COCOBOD/CHED shall prepare clear, jointly endorsed agreements detailing roles, land access rights, post-rehabilitation benefit sharing, responsibilities during the gestation period, and dispute resolution procedures. COCOBOD/CHED shall ensure all parties sign before cutting begins.

6.18.4 Apply COCOBOD's Standard Rehabilitation Protocol Consistently

COCOBOD/CHED shall ensure project teams adhere strictly to established protocols that preserve pre-existing tenure rights and prevent land reversion practices that undermine participation.

6.18.5 Implement a Livelihood Support Plan for Affected Farmers

COCOBOD/CHED shall provide transitional livelihood assistance, including interim income support and alternative livelihood options, to reduce tensions that may arise due to temporary loss of production during cutting-out and treatment of diseased farms.

6.18.6 Enable Transparent Communication of Entitlements and Obligations

COCOBOD/CHED shall use structured community meetings, community information centers (CICS), radio announcements, and farm-level engagements to explain rehabilitation timelines, farmer responsibilities, and expected benefits, reducing misinformation and suspicion.

6.18.7 Strengthen Grievance Redress Mechanisms (GRM)

COCOBOD/CHED shall operationalize a GRM that allows any interest holder to raise concerns related to land rights, benefit sharing, or participation. COCOBOD/CHED shall ensure timely resolution in collaboration with traditional authorities.

6.18.8 Monitor Agreement Compliance Throughout the Rehabilitation Cycle

COCOBOD/CHED shall assign COCOBOD extension staff to periodically verify adherence to agreed roles and to flag emerging disputes early for mediation.

6.18.9 Promote Conflict-Sensitive Mediation

COCOBOD/CHED shall engage neutral facilitators or community reconciliation committees to mediate disagreements, particularly in cases involving contested land reversion.

Section 7: Core Components and Implementation Framework of Environmental and Social Management Plan

This section outlines the core components and implementation framework of the Project ESMP, including the systems for environmental and social monitoring, compliance documentation, performance reporting, and the procedures for identifying, defining, and implementing corrective actions to ensure the effectiveness of mitigation and enhancement measures.

7.1 Institutional Arrangements

Effective implementation of the Environmental and Social Management Plan (ESMP) requires a coordinated, multi-tier institutional structure involving COCOBOD, the Project Implementation Unit (PIU), Service Providers/contractors, district authorities, regulatory agencies, and community stakeholders. The framework below defines the institutional hierarchy and delineates responsibilities to ensure compliance with national legislation, World Bank Environmental and Social Standards (ESS), and project-specific environmental and social commitments.

7.1.1 COCOBOD (Project Executing Agency)

COCOBOD, as the executing agency for the cocoa rehabilitation activities, shall:

- Provide overall strategic oversight and ensure ESMP integration into project planning and implementation.
- Approve budgets and allocate resources for environmental and social management.
- Facilitate coordination with relevant government agencies and external partners.
- Ensure high-level compliance with Ghanaian regulatory requirements and ESS obligations.
- Review periodic environmental and social performance reports submitted by the PIU.

7.1.2 Project Implementation Unit (PIU)

As the primary implementation unit within COCOBOD, the PIU shall:

- Lead day-to-day supervision and coordination of ESMP implementation of the cocoa rehabilitation activities.
- Facilitate coordination among COCOBOD departments (CHED, CRIG, SPD) and other stakeholders.
- Ensure integration of ESMP requirements into bidding documents, Service Provider contracts, work plans, and supervision protocols.
- Ensure adequate allocation of financial, human, and logistical resources for ESMP implementation.
- Review and approve site-specific contractor's ESMPs and related safeguard instruments prior to commencement of works.
- Consolidate and submit quarterly Environmental and Social (E&S) performance reports to COCOBOD and the World Bank. See Annex 12 for outline of content of Monitoring Report.
- Coordinate environmental and social audits, quarterly field monitoring activities (including joint inspections with the Service Provider) and ensure corrective actions are implemented and applying contractual remedies where non-compliance occurs.
- Manage the project Grievance Redress Mechanism and ensure timely resolution of complaints.
- Facilitate stakeholder engagement activities at district and community levels.

7.1.3 PIU Environmental and Social Safeguard Specialists

As the primary specialists responsible for environmental and social due diligence on the cocoa rehabilitation activities, the E&S specialists shall:

Environmental Specialist

- Oversee implementation of environmental mitigation measures, including pollution control, waste management, biodiversity protection, and OHS compliance.
- Conduct periodic field inspections and ensure corrective actions are implemented.
- Maintain environmental monitoring records (e.g., noise, water quality, air quality).
- Prepare environmental monitoring reports, including incident tracking and corrective actions.
- Support planning and delivery of training and capacity-building on environmental management and awareness.
- Ensure training content aligns with ESMP requirements and project risks.
- Evaluate training effectiveness and maintain attendance and feedback records.

With respect to environmental safeguards M&E, be responsible for:

- Conducting compliance verification audits
- Maintaining environmental and social monitoring databases
- Preparing all regulatory and donor reports
- Issuing Corrective Action Requests (CARs)

Social Specialist

- Manage social risks and compliance activities.
- Coordinate community engagement and consultation activities.
- Oversee the Grievance Redress Mechanism (GRM) and ensure timely resolution of complaints.
- Oversee implementation of social inclusion, mitigation and enhancement measures, including livelihood and equity in benefit distribution, labour management, community health and safety, and child labour and GBV/SEA/SH prevention.
- Support planning and delivery of training on capacity-building initiatives for farmers, workers, and local stakeholders.
- Ensure training content aligns with ESMP requirements and project risks.
- Evaluate training effectiveness and maintain attendance and feedback records.

With respect to social safeguards M&E, be responsible for:

- Conducting compliance verification audits
- Maintaining environmental and social monitoring databases
- Preparing all regulatory and donor reports
- Issuing Corrective Action Requests (CARs)

7.1.4 Monitoring and Evaluation (M&E) Specialists

The PIU M&E Specialists support evidence-based oversight by:

- Collecting and consolidating environmental and social monitoring data from field activities.
- Tracking ESMP-related indicators and compliance with KPIs.

- Supporting quarterly and annual performance reviews.
- Identifying emerging risks, trends, and implementation gaps.
- Supporting adaptive management and continuous improvement.

7.1.5 Service Providers and Contractors

Service Providers engaged in cocoa rehabilitation are responsible for implementing ESMP measures at site level. Their responsibilities include:

- Ensuring compliance with approved ESMPs, Codes of Conduct, and contractual safeguard clauses.
- Integrating ESMP requirements into Contractor ESMPs (C-ESMPs) and operational procedures.
- Implementing all assigned mitigation measures, including OHS protocols, waste management, traffic safety, and chemical handling procedures.
- Providing adequate Personal Protective Equipment (PPEs), training, and supervision for all workers.
- Maintaining records of training, incidents, grievances, and monitoring activities.
- Monthly reporting environmental and social performance to the PIU through agreed reporting channels. Refer to Annex 12 for outline of content of Monitoring Report.
- Ensuring subcontractors comply with the same or better environmental and social requirements.

7.1.6 Service Provider/Contractor Field Supervisors, Health and Safety Officer and Site Officers

Field Supervisors, Health and Safety Officers and Site Officers play a frontline role by:

- Enforcing ESMP measures during daily field operations.
- Implementing and monitoring health and safety practices, PPE use, and labour compliance.
- Recording and promptly reporting incidents, and grievances.
- Supporting farmer sensitization, training, and awareness activities.
- Implementing emergency preparedness measures.
- Conducting safety inspections, drills, and toolbox talks.
- Investigating accidents and incidents and documenting corrective actions.
- Ensuring availability of first aid kits and emergency equipment at work sites.
- Coordinating with CHED officers on CSSVD control and rehabilitation activities.

7.1.7 Cocoa Health and Extension Division (CHED)

CHED is responsible for the technical integrity of cocoa rehabilitation activities. Their responsibilities include:

- Supervising CSSVD eradication, and disease surveillance.
- Providing guidance on integrated pest and disease management (IPDM).
- Ensuring correct application of agrochemicals and adherence to safety standards.
- Supporting farmers with agronomic advice during treatment, reestablishment, and maintenance of infested cocoa farms.
- Reporting disease trends and field challenges to the PIU.

7.1.8 West Akim Municipal, Upper West Akim District and Asene Manso Akroso District Assemblies (Municipal/District Planning and Environmental Management Units)

As the local government entities, the relevant units in the assemblies shall:

- Support local-level supervision of environmental and social impacts mitigation.
- Ensure alignment with district development plans and by-laws.
- Participate in monitoring activities, especially related to waste management, community safety, and public health.

7.1.9 Environmental Protection Authority (EPA)

As the statutory environmental assessment regulator and enforcement authority, EPA (Eastern Regional office) shall:

- Provide regulatory oversight and ensure compliance with national environmental regulations.
- Conduct compliance monitoring and environmental inspections as required.
- Review and approve project environmental documentation (as applicable).
- Enforce environmental permitting requirements, corrective measures and sanctions where violations occur.

7.1.10 Asamankese, Akroso and Adeiso Traditional Divisional Authorities and Community Leaders

Local traditional authorities and community leaders shall:

- Support community-level sensitization on cocoa rehabilitation activities and safeguards.
- Facilitate access to farms, cultural protocols, and community structures.
- Participate in grievance resolution at the community level.
- Support enforcement of community norms and conflict mitigation.

7.1.11 Farm Interest Holders / Farmer Groups / Project-Affected Communities

As the directly impacted and beneficiary stakeholders, farm interest holders, farmer groups and project affected communities participate in ESMP implementation by:

- Participating in consultations, training, awareness and rehabilitation activities.
- Complying with recommended cocoa farming practices and provisions of the ESMP.
- Reporting grievances, incidents, or environmental concerns through established mechanisms.
- Cooperating with monitoring teams during field assessments.

7.1.12 Civil Society Organizations (CSOs) / Non-Governmental Organizations (NGOs) (as applicable)

As important stakeholders, CSOs and NGOs shall:

- Support community engagement, awareness creation, and grievance management.
- Provide third-party monitoring on sensitive issues such as GBV/SEA, child labour, and vulnerable groups.
- Contribute to capacity building and social risk mitigation, where engaged.

7.2 ESMP Implementation Capacity

Effective implementation of the ESMP depends on the availability of personnel with adequate technical, environmental, and social safeguards capacity. Successful delivery of the required mitigation, monitoring, and supervisory functions is contingent on ensuring that all implementing actors—particularly COCOBOD, the PIU, and the Service Provider—possess the competencies needed to meet Environmental, Social, Health and Safety (ESHS) obligations.

Capacity-building will ensure that all cocoa rehabilitation personnel understand and can operationalize ESMP requirements. Training will strengthen staff knowledge of:

- Applicable ESHS standards and on-site implementation procedures for rehabilitation activities.
- Key provisions of the ESMP and associated management plans.
- Local ESHS risk factors and sensitivities within the rehabilitation area.
- Procedures for identifying, reporting, and addressing non-compliance.
- Protocols for managing community interactions, public enquiries, and media engagements.
- Emergency response procedures for unforeseen ESHS incidents.
- Specific roles and responsibilities in meeting ESMP and regulatory obligations.

The PIU Environmental and Social Safeguards Team will verify that all personnel involved in ESMP implementation possess appropriate qualifications, training, and experience. The Service Provider will deliver mandatory ESHS induction training for all workers and targeted, job-specific training for staff whose duties may significantly influence community safety and environmental performance. These measures will ensure that workers fully understand ESMP requirements and can effectively discharge their responsibilities.

7.2.1 Project Training Programme

A structured and continuous training programme is essential for strengthening environmental and social performance throughout rehabilitation. Training will cover:

- Induction training for COCOBOD and Service Provider field staff on ESHS requirements, worker codes of conduct, accommodation rules, stakeholder engagement, cultural heritage, grievance redress, and health and safety.
- Task- and role-specific toolbox training for personnel with defined ESHS responsibilities.
- Periodic refresher training to reinforce good practices and ensure continuous improvement.

Training will commence during the pre-treatment phase and continue through rehabilitation and maintenance. The PIU and Service Provider will maintain auditable training records, and training effectiveness will be assessed through internal ESHS audits.

Priority training areas include:

- Occupational health and safety (including safe handling of tools, machinery, and agrochemicals)
- Waste management

- Noise awareness
- HIV/AIDS and STI prevention
- Child labour prevention and response
- Gender awareness and sensitivity in the workplace
- GBV/SEA/SH prevention and response
- Grievance redress mechanism procedures
- Basic site security
- Site monitoring, emergency preparedness, and incident reporting and response

To further strengthen institutional capacity for ESMP implementation, two broad capacity-building components are recommended. Detailed training modules, target groups, and delivery approaches are presented in **Table 7.1**.

Table 7.1 - Proposed Training Program for the Implementation of the ESMP

Capacity Building Activity	Proposed Topics	Objectives	Target Audience	Duration
Module 1: Training on ESMP implementation	▪ Summary of potential risks and impacts of the project ▪ Environmental and Social Performance Monitoring – Monitoring Mitigation Measures ▪ Environmental and Social Reporting	To increase competence in Environmental and Social Safeguards sustainability and best practice.	Environmental and Social Safeguards Team of COCOBOD PIU, CHED, Service Provider's Team,	1 day
Module 2: Training on Cocoa Rehabilitation ESHS	▪ Introduction to Cocoa Rehabilitation ESHS ▪ Summary of Health and Safety Hazards in Cocoa Rehabilitation ▪ Incidents Causation, Investigation and Reporting ▪ Site Specific OHS ▪ Cocoa Rehabilitation Site Inspection ▪ Personal Protective Equipment	To guarantee conclusion of project with zero loss of life, zero Lost Time Injuries (LTI) or occupational illness by means of promoting safe and healthy working conditions as well as the health of workers, community members and those that will be engaged in monitoring.	Environmental and Social Safeguards Team of COCOBOD PIU, CHED, Service Provider's Team,	1 day

7.2.2 Service Provider / Contractor Training Program

The Service Provider/Contractor shall ensure that all workers understand and comply with their Environmental, Social, Health and Safety (ESHS) responsibilities. To achieve this, the Contractor shall develop and implement a structured training program aligned with the requirements of the TCDP ESMF and this ESMP.

Training shall include:

- Pre-site induction training covering occupational health and safety, environmental awareness, worker code of conduct, accommodation rules, stakeholder engagement protocols, grievance redress procedures, and cultural awareness.
- Task-specific toolbox training tailored to defined operational activities.
- Role-specific training for personnel with assigned ESHS responsibilities, including supervisors, machine operators, and field technicians.
- Any additional training required by the Project Sponsor or Client to address emerging risks or project-specific needs.

A provisional contractor training schedule and associated content are presented in **Table 7.2**.

Table 7.2 - Training Program for Service Provider / Contractor

Training Program	Courses
General Awareness, Health, Safety and Environment	HSE Induction/Orientation Course (site safety rules, PPE requirements, Emergency Preparedness and Response); Daily toolbox talk for workers at the start of each day's job; Refresher HSE Courses as at when required
Project Specific OHS	Manual Handling Techniques; First Aid Training (for Site First Aiders); Safe Driving Techniques (for drivers)
Code of Conduct	Sensitization and awareness raising on HIV/AIDs, STIs, Child labour prevention and response, harassment, sexual behaviour, Gender Based Violence, etc.

The Service Provider/Contractor shall submit its internal ESHS training programs and procedures to the PIU Environmental and Social Safeguards Team for review and approval prior to commencement of rehabilitation activities. The Contractor shall maintain auditable training records. ESMP Mitigation and Monitoring Plan

A comprehensive ESMP mitigation and monitoring plan is presented in Table 7.3. It covers mitigation measures, responsibilities, monitoring indicators, methods, frequency, and reporting channels for cocoa rehabilitation activities in the Asamankese Cocoa District.

Table 7.3 - Environmental and Social Management Plan (ESMP) – Mitigation and Monitoring Plan

S/N	Project Activity / Impact	Key Mitigation Measures	Responsible Party	Monitoring Indicators	Monitoring Method / Tool	Frequency	Reporting Requirement
1	Occupational Health and Safety (tree cutting, chainsaw operation, nursery activities, manual handling, dust, noise, heat stress, agrochemical exposure)	• Implement OHS Plan • Provide appropriate PPE • Conduct induction and daily toolbox meetings • Maintain first aid kits • Implement emergency preparedness procedures • Inspect equipment regularly • Enforce safe work procedures.	• Service Provider (E&S Officer, Safety Officer, Supervisors) • PIU	• PPE compliance • Number of toolbox meetings • Number of incidents/ near misses • First aid availability • Emergency drills conducted.	• Site inspections • Incident register • Training records • Interviews	Monthly	Report within 24 hours for cases of fatality and SEA/SH. Consolidated Monthly Environmental, Social, Health and Safety (ESHS) Report
2	Labour and Working Conditions (including child labour)	• Implement Labour Management Procedures • Issue employment contracts • Prohibit child and forced labour • Verify worker age • Enforce Code of Conduct • Provide worker welfare facilities • Maintain Worker GRM • Promote equal opportunity and timely payment.	• Service Provider • PIU • CHED	• Workers with contracts • Age verification completed for all workers • Worker grievances resolved • Welfare facilities available • Child labour incidents reported & Social Welfare Child Labor Remediation	• Contract review • Worker interviews • Site inspections • Grievance records	Child Labor incident to be reported to the Bank within 48 hours and contract reviewing, site inspections and grievances reported Monthly	Consolidated Monthly ESHS Report

				Standard Operating Procedure (SOP) followed.			
3	Water Resources and Pollution Prevention	• Protect water bodies with buffer zones • Obtain water from approved sources • Use water efficiently • Prohibit arboricide application during heavy rainfall • Maintain equipment to prevent leaks • Implement spill response procedures.	• Service Provider • CHED	• Water abstraction records • Buffer zone compliance • Spills recorded • Complaints from water users	• Site inspections • Water source records • Incident reports.	Monthly	Consolidated Monthly ESHS Report
4	Waste and Biomass Management	• Implement Biomass Waste Management Plan • Segregate waste • Retain leaves and twigs for decomposition • Stack chopped logs for community firewood collection • Safely manage agrochemical containers and waste oil • Prohibit open burning	Service Provider	• Biomass properly managed per Biomass Waste Management plan • Waste segregation compliance • Containers safely disposed • No open burning observed	• Waste inspections • Biomass records • Disposal receipts	Monthly	Consolidated Monthly ESHS Report
5	Pest, Disease and Agrochemical Management	• Implement IPMP • Use approved agrochemicals • Maintain secure storage • Calibrate equipment	• Service Provider • CHED	• Safe chemical storage	• Field inspections • Inventory records	Monthly	Consolidated Monthly ESHS Report

		• Train workers • Monitor pest outbreaks • Implement spill response measures		• Workers trained • Pest surveillance conducted • Spill incidents.	• Training records		
6	Biodiversity Conservation and Climate Resilience	• Retain desirable shade trees • Establish agroforestry systems • Maintain riparian buffers • Avoid works during peak bird nesting where feasible • Avoid tree cutting and arboricide application in June–July • Monitor shade tree establishment and biodiversity recovery	• Service Provider • CHED • PIU	• Shade tree survival • Buffer compliance • Bird and pollinator habitats maintained • Replanting completed	• Field inspections • monitoring reports	Monthly / Quarterly	Consolidated Monthly ESHS Report
7	Community Health and Safety	• Control public access to work areas • Install warning signs • Minimize noise and dust • Manage traffic where required • Implement GBV/SEA/SH prevention measures • Conduct HIV/STI and community awareness programmes • Maintain emergency response arrangements	• Service Provider • PIU • CHED	• Community complaints • Awareness programmes conducted • Incidents involving communities • GBV referrals managed confidentially	• Community consultations • incident records • GRM database	Monthly	Cases of SEA/SH to be reported within 24 hours. Consolidated Monthly ESHS Report

8	Livelihood Restoration and Farm Sustainability	• Implement Livelihood Support Plan in line with the Farmers' Agreement Document. • Provide improved cocoa seedlings, shade trees and plantain • Monitor seedling survival • Discourage conversion of rehabilitated farms to illegal mining • Support climate-smart agriculture practices	• PIU • CHED	• Livelihood support delivered • seedling survival rate • farm rehabilitation progress • illegal mining incidents	• Field verification • farmer interviews • monitoring reports	Monthly	Consolidated Monthly ESHS Report
9	Stakeholder Engagement, Cultural Heritage and Conflict Management	• Implement SEP • Undertake regular consultations • Protect cultural sites • Obtain community consent where required • Resolve disputes through the GRM • Maintain communication with farmers and traditional authorities	• PIU • CHED • Service Provider	• Stakeholder meetings conducted • Grievances resolved • Agreements signed • Community satisfaction	• Meeting records • GRM database • Interviews.	Monthly	Consolidated Monthly ESHS Report
10	ESMP Compliance, Monitoring and Reporting	• Implement approved C-ESMP • Conduct routine inspections • Implement corrective actions • Maintain environmental and social records • Undertake internal audits • Monitor ESMP performance indicators.	• Service Provider • PIU Environmental & Social Specialists	• ESMP compliance level • Corrective actions closed • Inspections completed • Reports submitted on schedule	• Compliance audits • Inspection reports • Document review	Monthly	Consolidated Monthly ESHS Report, covering all ESMP requirements

7.3 Monitoring and Evaluation (M&E) Framework

The Monitoring and Evaluation (M&E) Framework provides a structured system for tracking the implementation, performance, and effectiveness of all Environmental and Social Management Plan (ESMP) measures associated with the Cocoa Rehabilitation Activities at Asamankese Cocoa District. The framework outlines monitoring indicators, data sources, responsibilities, reporting pathways, verification processes, and adaptive management procedures to ensure continuous improvement and compliance with national legislation and World Bank Environmental and Social Standards (ESS).

7.3.1 Monitoring Framework

a) Objectives of the M&E Framework

The key objectives of the M&E system are to:

- Verify compliance with ESMP mitigation and enhancement measures during all project phases.
- Measure performance against defined environmental and social indicators.
- Detect deviations, risks, or emerging impacts early to facilitate timely corrective action.
- Ensure transparency and accountability between COCOBOD, PIU, contractors, local authorities, and communities.
- Support adaptive management by integrating lessons learned and improving the ESMP throughout implementation.
- Provide evidence-based information for reporting to EPA and other regulators, the World Bank, and other stakeholders.

b) Monitoring Types and Scope

i) Compliance Monitoring

This assesses whether the project meets legal, regulatory, and ESMP obligations. Compliance monitoring will cover, among others, the following:

- *Contractor adherence to OHS standards*
- *Proper waste storage and disposal*
- *Adherence to labour management procedures*
- *Implementation of livelihood support plan*
- *Implementation of GBV/SEA/SH Codes of Conduct*
- *Functionality of GRM mechanisms*

ii) Environmental Monitoring

Environmental monitoring will track the condition of environmental receptors. Typical areas to be covered in Asamankese include:

- *Soil erosion and land degradation*
- *Water quality and sediment load*
- *Vegetation cover and biodiversity*
- *Agrochemical handling and disposal practices*

iii) Social Monitoring

This evaluates socio-economic and community-related impacts. In Asamankese, this will cover the following, among others:

- *Labour conditions and worker welfare*
- *Community engagement processes*
- *Vulnerable group inclusion*
- *Livelihood changes*
- *GRM performance metrics*
- *Child labour Awareness and prevention*
- *GBV/SEA/SH awareness and prevention*

iv) Performance Monitoring

Performance monitoring will measure the effectiveness and outcomes of mitigation measures, not only their implementation. This will cover, among others, the following:

- *Reduction in OHS incidents after training*
- *Compliance with agrochemical safety protocols*
- *Compliance with livelihood support plan*
- *Community satisfaction trends*
- *Contractor performance ratings*

v) Impact Monitoring

This will assess long-term impacts of rehabilitation activities on ecosystems and communities. It will cover, among others, the following aspects:

- *Productivity improvement trends*
- *Long-term soil fertility recovery*
- *Natural regeneration of native species*

c) Monitoring Indicators and Data Requirements

The M&E framework includes measurable, achievable, and time-bound indicators across environmental, social, and OHS domains. The indicators are quantifiable, verifiable, and aligned with ESMP commitments. Table 7.3 presents the indicators.

Table 7.3 - E&S Monitoring Indicators

Parameter	Indicator	Method	Frequency
Soil erosion	Evidence of gully formation, exposed soils	Field inspection, photos	Monthly
Vegetation cover	% of vegetation retained	Transect surveys	Quarterly
Water pollution	Presence of contaminants, sediment load	Visual inspection; sampling (as needed)	Quarterly

Waste management	Compliance with segregation/disposal procedures	Waste logbooks; inspection	Monthly
GRM performance	Number of grievances, resolution rate	GRM database review	Monthly
Labour conditions	PPE usage, contract compliance	OHS audits, worker interviews	Monthly
Child Labour	Sensitizations held with Farmers, communities and linkages made with government and non-governmental Child Protection agencies	Stakeholder logs, visual inspections of contractors' logs, reports, interviews with local schools	Monthly
Community engagement	Meetings held, attendance records	Stakeholder logs	Quarterly
GBV/SEA/SH risks	Reported cases, training attendance	Reports, interviews	Monthly
Worker safety	Number and type of incidents	Incident register	Monthly
Training outcomes	% workers trained	Training database	Quarterly
Emergency preparedness	Drill completion, response time	Observation	Bi-annual

d) Monitoring Tools and Methods

The ESMP M&E system shall employ standardized tools and templates including the following:

- *Compliance checklists (daily, weekly, monthly)*
- *Field inspection forms*
- *OHS incident and near-miss forms*
- *Grievance forms and tracking sheets*
- *Community consultation forms*
- *Photo-monitoring protocols*
- *Waste tracking forms*
- *Training attendance sheets*
- *Environmental sampling logs*

Digital recordkeeping (Microsoft Excel or a cloud-based system) is recommended for consistency and auditability.

e) Reporting Framework

The timeframe for reporting will vary depending on the indicator or intervention being tracked, and by the stakeholder type. The expected timeframes for reporting on ESMP implementation by the different categories of stakeholders are outlined below.

i) Service Provider / Contractor Reporting

- *Daily logs: Site activities, PPE checks, safety issues*
- *Weekly reports: Environmental and social performance updates*
- *Monthly reports: Summary of monitoring indicators, incidents, grievances*

ii) PIU Reporting

- *Monthly internal performance summaries*
- *Quarterly Environmental & Social Performance Reports (Q-ESPR)*
- *Semi-annual external reports to COCOBOD*
- *Annual environmental and social audit report*

iii) Community Feedback Reporting

- *Monthly GRM dashboard*
- *Quarterly community engagement summaries*

All reports shall document mitigation implementation, monitoring results, incidents, corrective actions, and follow-up outcomes. See Annex 12 for outline of content of Monitoring Reports.

7.3.2 Evaluation Framework

The Evaluation Framework establishes a structured approach for assessing the effectiveness, efficiency, and compliance of ESMP implementation. It provides the basis for continuous improvement, corrective action, and adaptive management throughout the cocoa rehabilitation cycle.

a. Evaluation Objectives

The evaluation process seeks to:

- Determine whether mitigation measures are implemented as planned and achieving intended outcomes.
- Assess compliance with the World Bank ESF, national regulatory requirements, and COCOBOD's ESMS.
- Identify gaps, emerging risks, and opportunities for performance improvement.
- Verify the adequacy of resources, capacity, and institutional arrangements supporting ESMP implementation.
- Strengthen accountability among implementing entities, contractors, and project stakeholders.

b. Evaluation Components

i. Implementation Performance

Assesses whether prescribed ESMP measures are executed on schedule and according to required standards.

Indicators:

- Percentage of mitigation measures implemented.
- Timeliness of contractor ESHS plan submissions.
- Availability and deployment of qualified ESHS personnel.

- Frequency and quality of site inspections and supervision.

i. Compliance Monitoring

Evaluates adherence to statutory, contractual, and safeguard requirements.

Indicators:

- Compliance with environmental permits and legal obligations.
- Conformity with ESHS standards (waste management, OHS, PPE use, spill prevention, agrochemical handling).
- Contractor compliance with Codes of Conduct and labour standards.
- Number and type of non-compliance findings and closure rates.

iii. Effectiveness of Mitigation Measures

Determines whether mitigation actions reduce the severity or likelihood of adverse impacts.

Indicators:

- Reduction in noise, dust, runoff, and chemical exposure.
- Effectiveness of stakeholder engagement, information disclosure, and grievance resolution.
- Reduction in community complaints or incidents.
- Progress in replanting, soil conservation, and biodiversity protection.

iv. Institutional and Capacity Performance

Assesses the functionality and adequacy of institutional arrangements.

Indicators:

- Staff trained against planned training targets.
- Effectiveness of PIU and CHED E&S coordination.
- Contractor responsiveness to E&S directives.
- Resource adequacy (budget, logistics, supervision tools).

v. Community Health, Safety, and Social Outcomes

Evaluates whether project activities protect community welfare and uphold social standards.

Indicators:

- Number and severity of community health and safety incidents.
- Cases related to child labour, SEA/SH, GBV, and vulnerable group exclusion.
- Trends in teenage pregnancy, HIV/STI vulnerability, and worker–community interactions.
- Community feedback from engagement sessions.

vi. Grievance Redress System Performance

Assesses how grievances are managed, resolved, and used to improve implementation.

Indicators:

- Number of beneficiaries and stakeholders that are aware of the GRM.
- Number of grievances received, resolved, and pending.
- Average resolution time.
- Stakeholder satisfaction with grievance outcomes.
- Corrective actions triggered by grievance trends.

c. Evaluation Methods and Frequency

The methods to be employed during evaluations include the following:

- Field inspections and compliance audits (monthly/quarterly).
- Document reviews: ESHS reports, incident logs, permits, contractor records.
- Stakeholder consultations with communities, workers, and authorities.
- Performance scoring against ESMP indicators.
- Data analysis and trend assessment to identify patterns of risk or improvement.

The implementation of the Asamankese cocoa rehabilitation ESMP shall be evaluated at two stages:

i. Mid-Term Evaluation

This will be conducted halfway through the rehabilitation cycle to:

- *Review indicator trends*
- *Assess ESMP effectiveness*
- *Identify emerging risks*
- *Recommend adjustments*

ii. Final Evaluation

This will be conducted at the end of implementation, assessing:

- *Achievement of ESMP objectives*
- *Effectiveness of mitigation measures*
- *Sustainability of project outcomes*
- *Lessons learned*

All evaluations shall involve site visits, stakeholder consultations, and review of monitoring datasets. See Annex 13 for outline of midterm and final Evaluation reports.

d. Reporting and Review

Reporting and review of ESMP implementation shall occur as follows:

- Monthly ESHS Reports from contractors and CHED district officers to the PIU.
- Quarterly Safeguards Performance Reviews by the PIU Environmental and Social Safeguards Team.
- Annual ESMP Evaluation Report summarizing compliance status, effectiveness, capacity gaps, and corrective actions.

- Management Review Meetings to assess performance and authorize adaptive actions.

e. Corrective Actions and Adaptive Management

Evaluation findings shall be used to:

- Update mitigation measures where performance is inadequate.
- Strengthen risk mitigation procedures, contractor management and supervision.
- Adjust contractor obligations, training programs and resource allocation.
- Improve community engagement strategies and coordination among project actors.
- Enhance stakeholder engagement and communication approaches.

f. Triggering Corrective Actions

Corrective actions shall be initiated when:

- Indicators exceed thresholds
- Incidents occur (OHS, environmental, social)
- Mitigation measures are not implemented
- Community grievances escalate

g. Corrective Action Procedure

When corrective action is triggered, the following procedures shall be followed:

- Identification: Issue logged by service provider / contractor or PIU.
- Classification: Risk level defined (low, moderate, substantial, high).
- Corrective Action Request (CAR): Issued by PIU to responsible party.
- Action Plan: Service Provider / Contractor prepares timeline, resources, and responsible persons.
- Implementation: Actions carried out within agreed timeframe.
- Verification: PIU confirms completion and effectiveness.
- Close-out: Documented in Corrective Action Register.

7.4 Emergency Preparedness and Response (EPR)

This section outlines the measures and procedures to ensure timely, coordinated, and effective response to emergencies that may arise during the cocoa rehabilitation activities implemented by COCOBOD under the Project, consistent with requirements of the World Bank Environmental and Social Standards (ESS2 and ESS4) and relevant national regulations.

a. Objective of the EPR System

The Emergency Preparedness and Response (EPR) system aims to:

- Prevent, detect, and respond effectively to emergency events that could pose harm to workers, project-affected communities, or the environment.
- Establish clear response procedures and command structures for anticipated emergencies.
- Coordinate with statutory emergency services in Ghana for rapid intervention when required.
- Reduce the severity, duration, and recurrence of emergency incidents through corrective and preventive actions.

b. Anticipated Emergency Scenarios

Based on the nature of rehabilitation activities in Asamankese, the following emergency scenarios are anticipated:

- Occupational Accidents and Injuries – Cuts, falls, tool-related incidents, chainsaw injuries, snakebites.
- Fire Outbreaks - Fuel storage fires, equipment fires, bushfires triggered unintentionally.
- Chemical Spills or Exposure - Pesticide spills, contamination during handling, unsafe storage.
- Transportation and Traffic Accidents - Collisions involving project vehicles, motorbikes, trucks transporting seedlings or materials.
- Extreme Weather Events – Heavy rainfall, flooding, fallen trees affecting worker or community safety.
- Community Safety Incidents – Accidental damage to community property, blocked access routes, or safety hazards created by project operations.
- Sensitive Social Incidents – Child labour detection, SEA/SH incidents, or threats to vulnerable persons requiring immediate response.

c. Emergency Response Structure

An EPR command structure shall be established and integrated into the ESMP operational arrangements as follows:

i. Site-Level Emergency Response Team (ERT)

- ERT Leader: Contractor Site Manager
- Deputy Leader: Health & Safety Officer
- Members: First Aiders, Machine Operators, Community Liaison Officer, Fire Wardens

ii. Roles

- ERT Leader: – Activates emergency procedures, coordinates response, communicates with PIU.
- H&S Officer: – Manages first aid, incident scene safety, and documentation.
- CEA/CLO: – Alerts community leaders, ensures safe community evacuation where needed.
- Fire Wardens: – Manage fire extinguishers, isolate fuel sources, ensure safe assembly.

d. External Agencies

Where incident exceeds on-site capacity, the ERT shall immediately contact:

- Ghana National Fire Service - 192
- Ghana Police Service – 191
- National Ambulance Service - 112
- Ghana Health Service / nearest health facility including Asamankese Government Hospital and the Adeiso Policlinic.
- District Assembly emergency desk
- Social Welfare / Child Protection officers (Helpline of Hope for child-related emergencies) – **0800900900 / 0800800800**

Notes

- These numbers are toll-free and can be dialed even without airtime.
- The Helpline of Hope serves both social welfare and child protection cases, making it the main contact for reporting abuse, neglect, or social protection concerns.

e. Communication and Reporting Protocols

i. Internal Communication

- All workers must immediately notify the Supervisor or H&S Officer of any emergency.
- The ERT activates the emergency plan within **5 minutes** of notification.
- Assembly points and evacuation routes must be pre-identified and marked.

ii. External Notification

- Severe incidents (fatalities, lost-time incidents, serious pollution events, child labour, forced labour, SEA/SH, or major community hazards) must be reported to the PIU within 24 hours.
- Notifications to World Bank within 24–48 hours for serious incidents**.**
- Community leadership and West Akim Municipal, Upper West Akim District and Asene Manso Akroso District authorities must be notified of any incident affecting the public.

f. Emergency Response Procedures

i. Initial Response

- Ensure immediate safety of workers and community by clearing the area.
- Isolate the hazard (shut down equipment, remove ignition sources, cordon off area).
- Provide first aid while awaiting medical or emergency services.
- Activate evacuation procedures where required.

ii. Incident Containment

- Spill kits shall be deployed for chemical or fuel spills.
- Fire extinguishers shall be used for small fires; larger fires require immediate call to the Ghana National Fire Service.
- Damaged infrastructure or hazardous conditions shall be barricaded.

iii. Referral for Sensitive Cases

- SEA/SH, child labour, or other vulnerable-person-related incidents shall be handled following survivor-centred protocols and referred to the appropriate specialized service providers within 24–48 hours.

g. Emergency Preparedness Measures

i, Equipment and Materials

The Contractor shall maintain:

- First aid kits at all work zones
- Fire extinguishers (ABC type) at fuel storage points and equipment sheds

- Spill containment kits
- Protective clothing and PPE
- Clearly marked assembly and evacuation points

ii. Training

All workers shall receive training on:

- Emergency procedures
- Fire response and extinguisher use
- First aid basics
- Chemical safety and spill response
- *Procedures for reporting incidents and accidents*

iii. Drills and Simulations

- Fire drill: Every 6 months
- Spill response drill: Annually
- Evacuation drill: Every 6 months
- Record of drills shall be kept in the EPR logbook and evaluated for improvement.

h. Post-Incident Investigation and Corrective Actions

Following an emergency event:

- The site is secured and made safe.
- The H&S Officer conducts an initial assessment within 24 hours.
- A full investigation report is completed within 5–10 days, detailing:
  - Root causes
  - Contributing factors
  - Lessons learned
  - Required corrective actions
- Implementation of corrective actions is monitored by the PIU Safeguards Team.
- The incident is closed only when all corrective actions are verified as complete.

i. Documentation and Record Keeping

The Contractor and PIU shall maintain:

- Emergency incident reports
- First aid and medical logs
- Drill records and attendance sheets
- Equipment inspection logs
- Communications and notifications to authorities or the World Bank

All records shall be stored securely and made available for audit and supervision missions.

j. ***Continuous Improvement***

The EPR Plan will be reviewed annually or after any major emergency. Adjustments will be made to:

- Address new risks
- Incorporate lessons learned
- Align with updated national and World Bank requirements

Section 8: Stakeholder Engagement

This section outlines the stakeholder engagement approach for the Asamankese Cocoa Rehabilitation Programme and defines the framework for inclusive, transparent, and participatory communication throughout ESMP implementation. Effective engagement is essential for strengthening trust, improving environmental and social (E&S) performance, and ensuring that project activities reflect community priorities and regulatory requirements.

Stakeholder engagement is aligned with Ghana's Environmental Protection Act, 2025 (Act 1124), the Environmental Protection (Environmental Assessment) Regulations, 2025 (L.I. 2504), and the World Bank Environmental and Social Standard 10 (ESS10) on information disclosure, participation, and grievance management.

8.1 Objectives and Purpose of Stakeholder Engagement

Stakeholder engagement under the ESMP aims to:

- Ensure stakeholders receive timely and accessible information on project activities, risks, mitigation measures, and implementation schedules.
- Facilitate two-way communication that allows stakeholder inputs to shape ESMP implementation.
- Strengthen social acceptance of the rehabilitation programme and minimize E&S risks.
- Promote transparency, accountability, and early identification of community concerns.
- Enhance coordination among institutions, project personnel, and community leaders.

Engagement activities follow good environmental and social assessment practice, supporting validation of baseline information, early risk identification, and community ownership. Effective engagement enhances the overall environmental and social sustainability of the programme.

8.2 Identification and Categorization of Stakeholders

Stakeholders were identified through the impact assessment process and validated during district-level consultations. They include all individuals, groups, and institutions that may be affected by, influence, or have an interest in the cocoa rehabilitation activities. Stakeholders relevant to ESMP implementation fall into three broad categories:

i) Primary Stakeholders

Stakeholders directly affected by project activities, including:

- Cocoa farmers, farm owners, and landowners affected by CSSVD in the Asamankese District.
- Farm workers, caretakers, and sharecroppers.
- Women, youth, and vulnerable groups engaged in cocoa labour.
- Households located near rehabilitation sites across the communities within the Asamankese Cocoa District.

ii) Secondary Stakeholders

Secondary stakeholders include institutions and entities supporting, regulating, or enabling project implementation:

- PIU, COCOBOD divisions: CHED, SPD, CRIG
- Asamankese, Adeiso and Akroso Traditional Councils and many sub-divisional traditional authorities.
- Service Provider/Contractor.
- 76 Farmer cooperatives and recognized farmer-based organizations (Annex 2a).
- West Akim Municipal Assembly (WAMA), Upper West Akim District Assembly (UWADA), and Asene Manso Akroso District Assembly (AMADA).
- Eastern Regional EPA.
- WAMA, UWADA and AMADA District offices of Agriculture, Forestry, Health, and NADMO.
- Relevant CSOs and NGOs operating in the district (Annex 2c).
- Security services (Police, Fire Service).
- World Bank Task Team.

iii) External Stakeholders

These are actors not directly involved in implementation but with influence or interest in the project environment and include:

- Agricultural input suppliers (seedlings, fertilizers, agrochemicals, tools).
- Sub-contractors and ancillary service providers (transport, spraying gangs, nursery operators, labour services).
- Local media outlets (radio stations, community information centres, print/online media) supporting public disclosure and awareness.

These stakeholder groups play varying roles in land governance, environmental oversight, supply chains, labour management, local coordination, and conflict resolution. Continuous engagement is required throughout the project lifecycle.

8.3 Engagement Methods and Tools

Engagement will be conducted using culturally appropriate and accessible methods tailored to local conditions. Key approaches include:

- Community meetings and durbars.
- Focus group discussions with women, youth, migrant farmers, and vulnerable groups.
- Key informant interviews with chiefs, district officials, and technical personnel.
- Distribution of information materials (posters, flyers, radio announcements).
- On-site engagement during surveys, cutting of cocoa trees, nursery establishment, and replanting.
- Use of local languages (Twi) to facilitate understanding.
- Documentation of all consultations through minutes, attendance records, and photo logs.

These tools promote inclusiveness and ensure the participation of both literate and non-literate community members. A detailed Stakeholder Engagement Matrix is presented in **Table 8.1**.

Table 8.1 - Stakeholder Engagement Matrix

Stakeholder Type	Stakeholder Groups	Key Information Needs	Engagement Methods/Tools
Primary Stakeholders	• Cocoa farmers, farm owners, landowners affected by CSSVD • Farm workers, caretakers, sharecroppers • Women, youth, vulnerable groups in cocoa labour • Households near rehabilitation sites	• Project scope, timelines, rehabilitation procedures • Livelihood support eligibility and processes • Roles during cutting of cocoa trees- and replanting • Health, safety, environmental risks • Labour management, child labour prevention • GRM procedures	• Community meetings/durbars • Focus group discussions • Household sensitization • On-site engagement during farm activities • Radio announcements & translation • GRM channels
Secondary Stakeholders	• PIU COCOBOD (CHED, SPD, CRIG • Traditional Council, divisional & sub-chiefs • Service Provider / Contractor • Farmer cooperatives • West Akim, Upper West Akim, Asene Manso Akroso District Assemblies • EPA (Eastern Region) • District offices: Agriculture, Forestry, Health, NADMO • NGOs/CSOs • Police, Fire Service • World Bank task team	• Project plans & implementation schedules • Coordination roles and responsibilities • ESMP compliance obligations • Contractor performance requirements • Monitoring & reporting expectations • Emergency response protocols	• Technical meetings/workshops • District/regional review sessions • Key informant interviews • Official correspondence & briefings • Joint monitoring missions • ESMP review meetings
External Stakeholders	• Agricultural input suppliers • Sub-contractors & service providers • Research institutions (• Local media organizations	• Procurement requirements • Technical guidelines and standards • Safety & environmental compliance • Public information updates	• Supplier/contractor briefings • Technical consultations • Media briefings/press releases • Information material distribution

8.4 Previous Stakeholder Engagement Activities

Stakeholder engagements have been carried out in project communities within the Asamankese Cocoa District in the months of October 2024 and March 2026, involving 38 CHED officials and 500 cocoa farmers, comprising 442 males and 96 females. The engagement utilized several methods and channels including organized meeting sessions and farmer durbars in cocoa communities. Find pictures of stakeholder engagement in the district in Annex 21. Key issues of concern and how they have been addressed or will be addressed during rehabilitation activities are summarized in Table 8.2 below:

Table 8.2: Summary of Stakeholder Concerns and How Have Been Addressed

Stakeholder Group	Issues / Concerns Raised	How the Issues Have Been Addressed in the ESMP
Cocoa Farmers / Affected Farmers	Provision of improved planting materials and shade trees and Survival of replanted cocoa seedlings.	Addressed through Sections 2.2, 5.3.13, 6.14.1 and 6.14.2 of the ESMP, which provide for the use of improved planting materials, timely replanting, agroforestry establishment, and post-planting maintenance, complemented by the project Livelihood Support Plan (LSP) and Cocoa Rehabilitation Protocol.
Cocoa Farmers / Affected Farmers	Maintenance of rehabilitated farms before handover to farmers.	Addressed through Sections 2.2, 6.14.2 and 7.1, which define maintenance activities, contractor responsibilities, CHED supervision, and handover arrangements. Cocoa Rehabilitation Protocol provides procedures for maintaining the reestablished farms
Cocoa Farmers / Community Members	Utilization of cut cocoa trees and biomass generated during rehabilitation.	This issue is addressed in Section 6.6 and the Biomass Waste Management Plan (Annex) of the ESMP, which provide procedures for chopping, stacking, community firewood collection, housekeeping, and prohibition of open burning.
CHED Officials	Clear roles and responsibilities for contractors and effective environmental and social compliance monitoring.	Sections 7.1, 7.2 and 7.3 of the ESMP defines institutional responsibilities, contractor obligations, monitoring arrangements, reporting requirements, and corrective actions.
CHED Officials	Occupational health and safety risks associated with tree cutting, chainsaw operation and agrochemical application.	Sections 5.3.1, 6.2, 7.2, 7.4 and Annexes 7, 8 and 19 of the ESMP establishes OHS procedures, PPE requirements, worker training, emergency preparedness and safe work practices.
Traditional Authorities and Community Leaders	Continuous stakeholder engagement, timely information sharing and effective grievance resolution.	This is addressed in sections 8 and 9 of the ESMP by establishing stakeholder engagement procedures, information disclosure, the project GRM, and monitoring of stakeholder engagement.
Community Members	Potential disputes among landowners, caretakers, sharecroppers and other farm interest holders regarding rehabilitation activities and benefit sharing.	Sections 4.2.2, 5.3.16, 6.17 and 9 of the ESMP makes provision for stakeholder identification, consultations, signed agreements, grievance resolution and implementation of the Livelihood Support Plan (LSP).

Engagement activities will continue throughout all stages of ESMP implementation, as outlined below:

Pre-Implementation Phase

- Notification of communities ahead of survey, demarcation, and rehabilitation activities.
- Engagement with traditional authorities to confirm access, resolve boundary issues, and clarify roles.
- Sensitization on project processes, risks, livelihood support procedures, and GRM.

Implementation Phase

- Routine meetings with farmers and affected persons during cutting of cocoa trees and replanting.
- Awareness creation on environmental, health, and safety issues (agrochemical use, labour influx, OHS, child safeguarding).
- Engagement during monitoring visits and field inspections.

Post-Implementation Phase

- Consultation on replanting success, livelihood restoration outcomes, and sustainability measures.
- Final validation of ESMP performance and documentation of lessons learnt.

Table 8.3, Stakeholder Engagement Activity Matrix, provides details of the respective planned engagement activities, targeted stakeholder group(s), purpose of engagement, responsible party(ies), and the timing and frequency of engagement.

Table 8.3 - Stakeholder Engagement Activity Matrix

Activity	Stakeholder Group	Purpose of Engagement	Responsible Party	Frequency / Timing
Notification of communities ahead of survey, demarcation, and rehabilitation works	Local communities, farmers, opinion leaders	Provide advance notice; ensure awareness and readiness; avoid disputes or safety issues	PIU/Environmental & Social Safeguards Team; Contractor	Prior to commencement of field activities
Sensitization on project scope, risks, livelihood support and GRM	Farmers, PAPs, community members, district authorities	Ensure stakeholders understand project processes, expected impacts, GRM channels, and responsibilities	Safeguards Team; CHED officers; Contractor	Before ESMP implementation and as required
Routine meetings with farmers during cutting of cocoa trees and replanting	Farmers, PAPs, cooperative leaders	Coordinate activities; address emerging issues; communicate timelines	Contractor; CHED officers; Field Supervisors	Weekly or bi-weekly during active works
Awareness creation on EHS issues (agrochemical use, OHS, labour influx, child protection)	Farmers, workers, community members	Promote safe practices; prevent accidents; mitigate social risks	Contractor EHS Officer; CHED officers, PIU Safeguards Team	Monthly or tied to work stages
Engagement during monitoring visits and field inspections	PIU, district authorities, farmers, contractor	Track compliance with ESMP; review performance; correct deficiencies	PIU/Monitoring Team; Contractor	Monthly and ad hoc during critical activities
Consultation on replanting success and livelihood restoration	Farmers, PAPs, community representatives	Assess farm rejuvenation status; review livelihood outcomes; identify gaps	PIU; CHED District Office	Quarterly after completion of works
Consultation on sustainability measures (maintenance, agroforestry, climate-smart practices)	Farmers, cooperatives, extension officers	Strengthen long-term sustainability and productivity; reinforce good practices	PIU; CHED Extension Officers	At completion and semi-annually
Final validation of ESMP performance and lessons learnt	PIU, district authorities, community representatives, contractor	Review overall ESMP implementation; document lessons; guide future interventions	PIU/Safeguards Team	End of project cycle

8.5 Stakeholder Engagement Information Disclosure

The project will ensure timely and accessible disclosure of relevant information. Key information to be shared includes:

- Planned activities and implementation schedules
- Eligibility criteria and timelines for compensation
- Environmental and social risk mitigation measures
- Worker and community health and safety protocols
- Monitoring findings and progress updates
- GRM procedures and reporting channels

Disclosure will occur through:

- Public meetings and community forums.
- COCOBOD and District Assembly notice boards.
- Radio announcements in local languages.
- Project brochures, flyers, and posters.
- COCOBOD website and digital platforms.
- World Bank external website for ESMP documents.

8.6 Roles and Responsibilities for Stakeholder Engagement

Stakeholder engagement will be coordinated by:

i) Project Implementation Unit (Safeguards Team)
- *Lead stakeholder engagement planning and oversight*
- *Ensure compliance with ESF/ESS10 and regulatory requirements*
- *Maintain engagement records and prepare reports*

ii) CHED - Asamankese Cocoa District Office
- *Facilitate field-level engagement with farmers and community leaders*
- *Provide technical inputs during consultations*
- *Support grievance resolution*

iii) West Akim Municipality/Upper West Akim District/Asene Manso Akroso District
- *Provide community mobilization support.*
- *Participate in monitoring, land use discussions, and local conflict resolution.*

iv) Asamankese/Adeiso/Akroso Traditional Authorities / sub-Divisional councils
- *Facilitate community access and participation.*
- *Provide leadership for dispute resolution on land and farm boundaries.*
- *Support grievance resolution generally.*

v) Contractors/Service Providers
- *Conduct task-specific engagement related to field operations*
- *Maintain auditable records of engagements and grievances*

8.7 Engagement of Vulnerable Groups

Special measures will be implemented to ensure meaningful participation of vulnerable stakeholders, including:

- Targeted FGDs for women, youth, and migrant farmers
- Adjusting meeting times and venues to accommodate participation

- Use of accessible formats and translation
- Privacy safeguards for sensitive or gender-related discussions

8.8 Grievance Redress Mechanism (GRM) Linkages

Stakeholder engagement is closely integrated with the GRM. All stakeholders will be informed about:

- How to submit grievances
- Available channels (phone, community leaders, district office, field teams)
- Expected timelines for acknowledgment, investigation, and resolution
- Rights to confidentiality and non-retaliation

Feedback from engagement activities will be used to identify recurrent issues requiring corrective action.

8.9 Monitoring and Reporting of Stakeholder Engagement

Monitoring and reporting of Stakeholder Engagement refers to the systematic process of tracking, documenting, assessing, and communicating how effectively the project is engaging its stakeholders throughout the project lifecycle. In the context of the Asamankese cocoa rehabilitation ESMP, it ensures that engagement activities are planned, executed, and evaluated in a transparent and accountable manner.

i) Tracking Implementation of Planned Engagement Activities

This involves monitoring whether all planned engagement activities—community meetings, sensitisation sessions, consultations with farmers, engagements with traditional authorities, grievance redress meetings—are carried out as scheduled.

Key elements:

- Activities completed vs. activities planned
- Attendance and participation levels
- Stakeholder categories reached (women, youth, vulnerable groups, farmers, authorities)
- Use of culturally appropriate communication tools

ii) Assessing Stakeholder Feedback and Concerns

Monitoring will involve collecting and analyzing stakeholder inputs received during engagements:

- Concerns, issues, and expectations raised
- Feedback on project activities, impacts, and mitigation measures
- Suggestions for improvements
- Perceptions of transparency, fairness, and responsiveness

This will help identify whether concerns are being addressed effectively.

iii) Monitoring the Functioning of the Grievance Redress Mechanism (GRM)

Critical components will include:

- Number and types of grievances received
- Timeliness of grievance resolution

- Satisfaction levels of complainants
- Recurring issues indicating systemic problems
- Record-keeping integrity

This will help evaluate responsiveness and social risk management effectiveness.

iv) Measuring the Effectiveness of Engagement

Monitoring will determine whether engagement is achieving its objectives:

- Are stakeholders well-informed?
- Are project impacts being mitigated through dialogue?
- Are vulnerable groups participating effectively?
- Is trust being built?
- Are conflicts reduced or resolved promptly?

Monitoring and effectiveness indicators will include:

- *Number and type of consultations held*
- *Gender- and age-disaggregated participation*
- *Types of issues raised and resolution rates*
- *Stakeholder satisfaction with engagement processes*
- *Number of grievances received and resolved*
- *Reduced complaints*
- *Positive stakeholder sentiment*
- *Increased cooperation during field activities*

v) Documentation and Record-Keeping

Accurate and complete records are essential for accountability and auditability and will be kept throughout the implementation of the ESMP.

Typical records to be kept include:

- *Attendance sheets*
- *Meeting minutes*
- *Photos, audio/video records*
- *Consultation reports*
- *Field visit documentation*
- *GRM logs and incident reports*
- *Disclosure materials distributed*

These records will form the evidence base for reporting and compliance verification.

vi) Periodic Reporting (Monthly, Quarterly, Annual)

Engagement performance will be incorporated into monthly field reports, quarterly ESMP performance reports, and annual environmental and social monitoring submissions.

Stakeholder Engagement reporting for ESPM implementation will include:

- *Summary of engagement activities conducted*
- *Stakeholder groups reached and participation statistics*
- *Key concerns raised and how they were addressed*
- *GRM performance data*

- *Outstanding issues requiring management attention*
- *Recommendations for improving engagement*
- *Compliance with ESMP and ESS10 requirements*

Reports would be submitted to:

- PIU leadership (from the Service Provider and CHED Asamankese District office)
- West Akim Municipality/Upper West Akim District/Asene Manso Akroso District (as relevant and required)
- EPA, Water Resources Commission and other regulatory agencies (as relevant and required)
- The World Bank team

8.10 Budget for Stakeholder Engagement

Costs for stakeholder engagement (meetings, materials, logistics, transport, facilitation, translation, and reporting) have been integrated into the ESMP budget and would be updated annually based on implementation experience.

Section 9: Grievance Redress Mechanism (GRM)

The GRM is a key component of the Environmental and Social Management Plan (ESMP) designed to provide a transparent, accessible, and culturally appropriate system for receiving, assessing, resolving, and documenting complaints related to the Asamankese Cocoa Rehabilitation Project. The GRM supports effective stakeholder engagement, reduces conflict, enhances accountability, and strengthens compliance with Ghanaian regulatory requirements and the World Bank's Environmental and Social Standard 10 (ESS10).

The mechanism applies throughout the entire project lifecycle and covers grievances linked to environmental, social, labour, health and safety, land access, compensation, contractor performance, and community relations.

9.1 Objectives of Grievance Redress Mechanism (GRM)

The GRM aims to:

1. Provide an accessible and safe platform for all stakeholders, including vulnerable persons, to raise concerns without fear of retaliation.
2. Ensure early identification and resolution of project-related issues at the lowest possible level.
3. Promote transparency and accountability in the rehabilitation process.
4. Strengthen the environmental and social performance of ESMP implementation through responsive corrective action.
5. Maintain a complete, auditable record of grievances, resolutions, timelines, and follow-up actions.
6. Support continuous improvement by analyzing patterns of grievances and implementing preventive measures.

The GRM applies to all project stakeholders, including farmers, farm workers, community members, traditional authorities, project staff, and vulnerable groups. It covers environmental, social, labour, land and livelihood, occupational health and safety, and GBV/SEA/SH-related grievances.

9.2 Scope and Types of Grievances

The GRM will accept all complaints related to project activities, including:

- *Environmental issues: dust, noise, chemi*cals, waste, water contamination etc.
- Health and safety concerns: accidents, unsafe practices, lack of PPE etc.
- Labour and employment issues: unfair treatment, child labour concerns, labour influx risks
- Land and crop impacts: boundary issues, cut-out disputes, access restrictions
- Compensation and livelihood issues: payment delays, livelihood support disagreements
- Conduct of workers: misconduct, disrespect, harassment
- Community disruptions: traffic, noise, damage to community infrastructure
- Gender-based violence (GBV) and Sexual Exploitation and Abuse (SEA): handled through a confidential and survivor-centred pathway
- Any emerging social or cultural concerns

9.3 Guiding Principles

The GRM will operate based on the following principles:

- Accessibility: Multiple, free channels (phone, verbal, written, suggestion boxes, WhatsApp, community meetings) available to all stakeholders, including vulnerable and marginalized groups.
- Transparency: Clear procedures, timelines, and responsibilities communicated openly.
- Confidentiality: Protection of complainants, sensitive complaints, particularly GBV/SEA/SH cases, handled with strict confidentiality.
- Non-retaliation: Complainants will not face intimidation, discrimination, or sanctions for raising concerns.
- Fairness and Impartiality: Objective, respectful, and timely handling of all complaints.
- Survivor-centred Approach: GBV/SEA/SH cases managed with dignity, safety, and informed consent.
- Cultural appropriateness: Use of local language (Twi) and integration with community structures

9.4 GRM Institutional Structure, Process and Roles

The Grievance Redress Mechanism (GRM) for the Asamankese Cocoa Rehabilitation Project provides a transparent, accessible, and accountable process for receiving, assessing, resolving, and documenting complaints arising from ESMP implementation.

9.4.1 Overall GRM Structure and Process

a) Process

Complaints may be lodged verbally, in writing, by phone, SMS, WhatsApp, email, or through complaint boxes at CHED Asamankese Cocoa District Offices. Anonymous complaints are accepted.

The GRM process covers all stages from the receipt and logging of a grievance through verification, resolution, referral, closure, and feedback to the complainant. The process will follow these core steps:

1. Receipt of complaint (via any preferred channel) (see combined Grievance Registration and Redress Form in Annex 10)
2. Registration in GRM Logbook (see sample template in Annex 14) and assignment of unique ID
3. Acknowledgement to complainant (same day to max 48 hours)
4. Assessment and investigation (including categorization and assignment of resolution officer)
5. Resolution or referral to the next level (See combined Grievance Registration and Redress Form in Annex 10 and grievance referral template in Annex 15)
6. Implementation of corrective action
7. Closure and documentation
8. Quarterly reporting to COCOBOD PIU at all levels

b) Structure

The GRM consists of four sequential levels of resolution:

i. Community Level Committee (CLC) – first point of contact
ii. District Level Committee (DLC) – for unresolved or escalated complaints
iii. Regional Level Committee (RLC) – for further escalation
iv. National/Project Level Committee (NLC) – final administrative review

i. Community Level Committee (CLC)

The **Community Level Committee (CLC)** is the first point of contact for project-affected persons (PAPs). The membership of the CLC shall be as follows:

- *CHED Community Extension Agent (CEA) –* ***Chairperson/Secretary***
- *Community Chief or representative*
- *Chief Farmer*
- *Representative of Cocoa Farmers' Cooperative*
- *Representatives of Women's and Youth Groups*

The procedures for receipt and management of complaints will be as follows:

1. Complaints may be submitted verbally or in writing, or through:
    - Phone, SMS, WhatsApp (toll free number - 0800111123)
    - Suggestion/complaint box at CHED District Office
    - Email or written letters (Email address – treecropdiversificationproject@gmail.com)
2. Any CLC member receiving the complaint must:
    - Capture relevant details on the Standardized Grievance Form (Annex 6a)
    - Log the grievance in the GRM Logbook (Annex 6b)
    - Allow anonymous reporting
    - Must notify the CEA of the complaint and forward all details and particulars to the CEA.
3. The CEA notifies the PIU Safeguards team and seek their help in categorizing the grievance and assigning a resolution officer to lead resolution of the complaint.
4. The CEA issues an Acknowledgement Receipt (Annex 9) containing:
    - Unique grievance ID
    - Name of complainant (if not anonymous)
    - Name of assigned grievance resolution officer
    - Date of receipt
5. The CEA convenes a meeting between CLC members, the assigned grievance officer, the complainant (if not anonymous), and the party complained against.
6. The CLC deliberates and records proceedings using the Meeting Record Template (Annex 10).
7. Resolution timeframe: within 14 days of receipt.
8. Grievances resolved are marked "solved" in the database.
9. Unresolved or disputed grievances are marked "unsolved and referred" and forwarded to the District Level Committee using the Referral Form (Annex 8).

The CEA/CLC shall submit monthly reports to the CHED Asamankese District Office. The CHED Asamankese District Office shall compile reports from CLCs and submit quarterly reports to the COCOBOD PIU.

ii) District Level GRM Committee (DLC)

The **DLC** addresses cases referred from the CLC or lodged directly at the Asamankese Cocoa District office. It provides additional investigation and mediation where community-level resolution was not successful or satisfactory.

The membership of the DLC shall be as follows:

- *Asamankese District Cocoa Officer –* ***Chairperson***
- *CHED Asamankese District Safeguards Officer -* ***Secretary***
- *Service Provider / Contractor's EHS/Community Relations Officer*
- *District Assemblies Representative*
- *Traditional Authorities Representative*
- *Farmer Cooperative Representative*
- *Women/Youth Representative*
- *District NADMO/Forestry/Agriculture Officer (as needed)*

The responsibilities of the DLC are as follows:

- Review and resolve cases escalated from the community level or reported directly to the Asamankese District office.
- Conduct investigations and field visits, where necessary.
- Propose corrective actions.
- Communicate decisions to complainants.
- Maintain records of all cases.

The following procedures will be used for managing complaints:

1. Receives referral from CLC with:
    - Completed grievance form
    - Records of CLC deliberations
    - Referral Form (Annex 8)
2. DLC issues Acknowledgement Receipt to the CLC.
3. DLC investigates the complaint and may meet with complainant and respondent.
4. Resolution timeframe: within 7 days of receipt.
5. Resolved cases are recorded as "solved" with actions.
6. Unresolved cases are marked "unsolved and referred" and forwarded to the RLC.

DLC maintains its own GRM Logbook and submits quarterly reports to the COCOBOD PIU.

iii) Regional Level Committee (RLC)

The **RLC** addresses grievances unresolved at the district level (or reported directly to the Regional CHED office) and ensures consistency of grievance management across cocoa districts.

The membership of the RLC shall comprise:

- *CHED Regional Manager –* ***Chairperson***
- *Eastern Regional COCOBOD E&S Focal Person -* ***Secretary***
- *Representative of Akyem Abuakwa and Akyem Kotoku Traditional Councils*
- *Regional Chief Cocoa Farmer*

- *Eastern Regional Coordinating Council Representative*
- *Representative of Regional Cocoa Farmers' Cooperatives*

The procedures to be followed to manage complaints are as follows:

1. Receives referral with full documentation from the DLC.
2. Issues Acknowledgement Receipt to DLC.
3. Conducts investigations and necessary hearings.
4. Resolution timeframe: within 7 days.
5. Marks resolved cases **as** "solved" and records actions.
6. Marks unresolved cases as "unsolved and referred" and forwards to NLC.

The DLC maintains a regional-level GRM Logbook and submits quarterly reports to PIU.

iv) National/Project Level Committee (NLC)

The NLC is the final administrative level in the GRM. It reviews complex or unresolved grievances (and also grievances lodged directly at the project level) and ensures adherence to COCOBOD's safeguard procedures.

The membership of the NLC is as a follows:

- *COCOBOD Project Coordinator –* ***Chairperson***
- *COCOBOD PIU Social Specialists -* ***Secretary***
- *COCOBOD PIU Environmental Specialists*
- *Executive Director, CHED (or his representative)*

The responsibilities of the NLC will be:

- Oversee overall GRM implementation.
- Ensures documentation, reporting, and monitoring.
- Handles complex, cross-community, or unresolved cases escalated from lower levels.
- Ensures that contractor actions align with ESMP obligations.

The NLC will follow the following procedures for managing complaints:

1. Receives referrals from the RLC, including complete documentation (or those lodged directly at the project level).
2. Issues Acknowledgement Receipt to the RLC.
3. Convenes a meeting within 5 days of receiving the case.
4. Aims to resolve grievances within 7 days from receipt.
5. Resolved cases are recorded as "solved**"**.
6. If unresolved, the complainant is advised to seek redress through:
   - Alternative Dispute Resolution mechanisms
   - Ghana's Court System

The NLC shall maintain a national GRM database and submit quarterly reports to COCOBOD PIU and the World Bank.

Table 9.1 - GRM Timeframes Summary

Level	Resolution Time	Acknowledgement Time
CLC	14 days	Immediate – 48 hours
DLC	7 days	Immediate – 48 hours
RLC	7 days	Immediate – 48 hours
NLC	7 days	Meeting convened within 5 days; resolved within 7 days

Figure 9.1, below, demonstrates the process of the GRM through the various resolution levels.

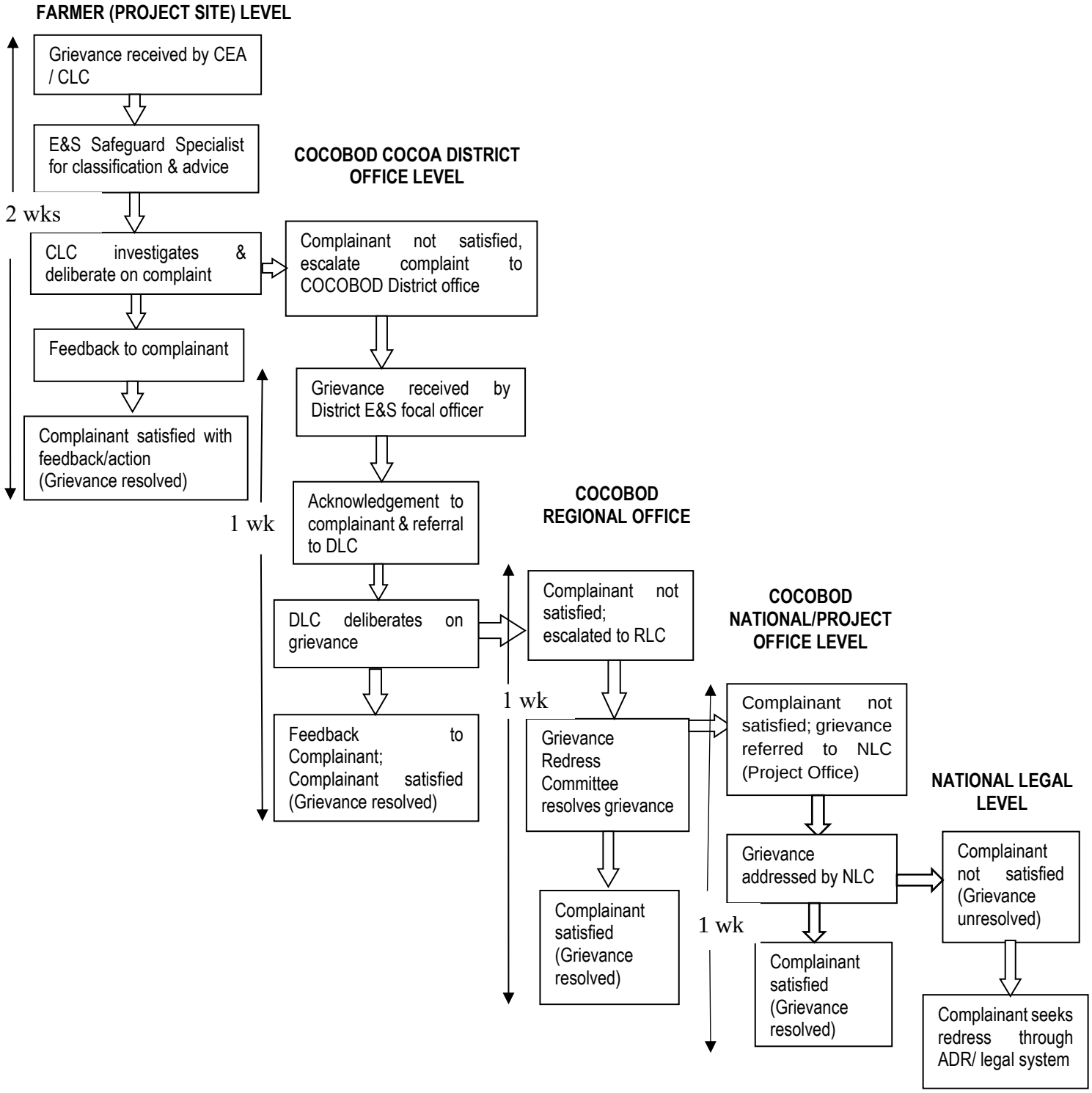


Figure 9.1 – GRM Process Flow Diagram

9.5 Sensitive Cases of Grievance

The project anticipates that sensitive grievances may arise during implementation. For such cases, PAPs must be assured of confidentiality, anonymity, transparency, and timely resolution. Sensitive complaints may include gender-based violence (including sexual exploitation and harassment) and child labour concerns. Where these do not constitute criminal offences, Grievance Redress Committees (GRCs) may receive the complaint but must maintain strict confidentiality.

9.5.1 Gender-Based Violence, Sexual Exploitation and Abuse and Sexual Harassment (GBV/SEA/SH)

Specific procedures will guide the handling of GBV and SEA/SH cases under the GRM. When such cases are received, the GRM shall record the complaint only with the survivor's consent and ensure anonymity, consistent with a survivor-centered approach. This approach requires that the rights, wishes, safety, dignity, and well-being of the survivor remain paramount throughout prevention and response actions.

All sensitive cases shall be referred to the appropriate mandated service provider and/or the appropriate government authority depending on the case in question within 24 hours of receipt for specialized handling. All GBV/SEA/SH cases shall also be reported to the World Bank, through the Task Team Leader (TTL), within 24 hours. Referral shall not depend on whether the survivor agrees to have the case formally recorded.

Criminal cases, including rape, defilement, and other criminal forms of gender-based violence, shall be received by the GRC and referred immediately to the mandated Government authorities for redress. Such cases fall outside the scope of the project GRM and must be addressed in accordance with the laws of the Republic of Ghana.

A referral pathway for GBV/SEA/SH case management is presented in Figure 9.2 below.

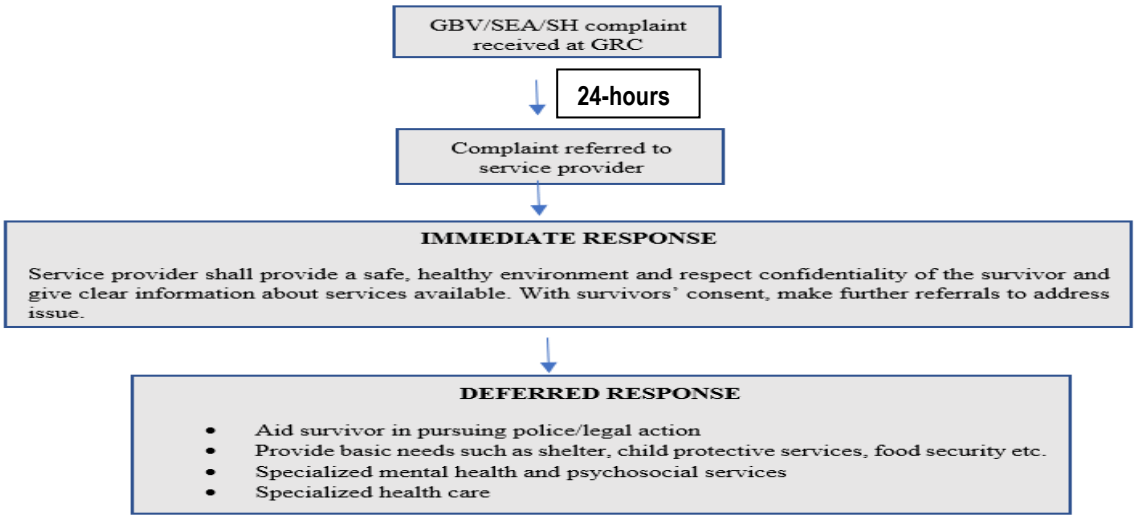


Figure 9.2 - GBV/SEA/SH referral pathways

9.5.2 Child Labour

Grievances involving persons under 18 years require specialized handling. In line with the *Project ESMF*, COCOBOD is required to activate community-level child protection structures in participating districts (including the Asamankese Cocoa District) to support the identification and referral of child labour cases, consistent with the *Child Labour Free Zones (CLFZ)* model and the *Ghana Child Labour Monitoring System (CLMS)*. The Asamankese cocoa rehabilitation activities will collaborate with child protection mechanisms at community, district, regional, and national levels throughout implementation.

Under this ESMP, when child labour cases are reported to any GRC committee, they shall be managed outside the standard GRM process. Designated COCOBOD Gender and Child Labour Officers at COCOBOD's district, regional, and national offices shall be responsible for managing such cases. Under the guidance of these officers, the Asamankese District Cocoa Officer (DCO) shall ensure that GRCs make referrals follow CLFZ and CLMS procedures, including the use of specialized mechanisms such as Ministry of Gender, Children and Social Protection's (MGCSP's) Social Welfare Information Management System (*SWIMS)* and *Orange Centre* where advanced support is required.

The COCOBOD PIU Social Safeguards Specialist and the Asamankese Cocoa District Social Safeguards focal person shall ensure implementation of the GRM will also involve coordinated action with national child protection authorities—including MGCSP, Ministry of Labour, Jobs and Employment (MLJE), and Social Welfare Offices—to facilitate specialized interventions and the prompt removal of children from harmful activities.[3]

a. Child Labour Case-Handling Process for Asamankese Cocoa Rehabilitation Activities

i) Identification and Initial Screening

Project staff, contractors, community monitors, and community child protection structures shall conduct routine monitoring to identify potential child labour risks. Any observed or reported involvement of a person under 18 in hazardous work or project-related activities triggers (***immediate upon observation/report***) an immediate preliminary screening to confirm:

- Age of the child
- Nature of activity performed
- Associated hazards or risks

Cases meeting the national definition of child labour or Worst Forms of Child Labour (WFCL) are escalated immediately.

ii) Immediate Safeguards and Child Safety Measures

Upon confirmation or reasonable suspicion of child labour, the project shall:

- Ensure the child is removed from hazardous activity without delay
- Prevent retaliation against the child or household
- Maintain confidentiality and uphold the child's dignity in line with child protection standards.

[3] To support this role, COCOBOD has established MoUs with key ministries such as MoGCSP, MJLE, Office of the Head of Local Government Services (OHLGS), and MLGCRA, which hold mandates for addressing child protection cases.

No interviews shall be conducted without the presence of a trained child protection officer or approved social welfare personnel.

Timeframe: Immediate

iii) Reporting Through Established Structures

All cases shall be reported ***within 24 hours*** to the designated GRM focal person and the district-level child protection structure and within 48 hours to the World Bank. Reporting must follow national protocols, including mandatory notification to the District Social Welfare and Labour Department.

iv) Case Assessment and Classification

A joint assessment team, comprising the PIU's Gender/Child Labour Officer and district child protection authorities shall classify the case according to national criteria:

- Child Work (permissible)
- Child Labour (non-hazardous but unlawful)
- Hazardous Child Labour or WFCL

Cases categorized as hazardous child labour or WFCL receive accelerated intervention.

Timeframe: Within 48 hours

v) Referral to Mandated Authorities and Services

Consistent with national systems, all confirmed child labour cases shall be referred to the appropriate mandated service provider, including social welfare, labour officers, or specialized rehabilitation centres. Referrals shall comply with the Ghana Child Labour Monitoring System (CLMS) and Child Labour Free Zone (CLFZ) standards.

Specialized cases may require additional referral to psychosocial services or child protection units.

Timeframe: Within 24-48 hours of confirmation

vi) Household Engagement and Remediation Planning

Following referral, district authorities and the PIU's child labour officer shall engage the child's household to:

- Assess socio-economic drivers
- Develop a remediation plan
- Support access to social protection services, education, or livelihood support as appropriate.

Remediation shall align with national protocols and international best practice for sustainable withdrawal and prevention.

Timeframe: Within 7 days

vii) Follow-Up and Verification

The project shall conduct scheduled follow-up visits in collaboration with district-level authorities to verify that:

- The child has not returned to hazardous work

- Remediation activities are being implemented
- The household is supported and stable

Follow-up data shall be captured in the CLMS for documentation and national reporting.

Timeframe: Every 2-4 weeks

b. Documentation and Confidential Recordkeeping

All child labour cases, including detection, referral, remediation, and follow-up, shall be documented using standardized national forms. Records shall remain confidential and accessible only to authorized personnel.

c. Reporting and Compliance Oversight

Quarterly child protection performance reports shall be submitted to project management and district authorities to assess compliance with national child labour frameworks and international conventions. Persistent risks or systemic gaps must be escalated for corrective action. Figure 9.3 illustrates the Child Labour GRM.

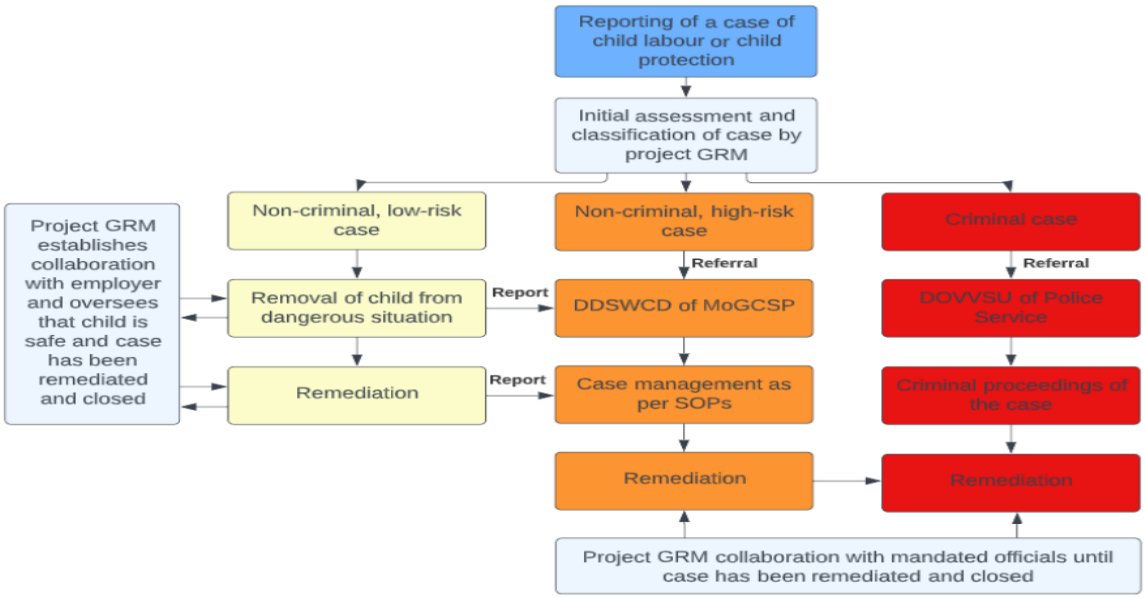


Figure 9.3 - Categorization and addressing of child labour issues under the GRM

9.6 Worker Grievance Management Framework

The project shall establish and maintain a structured Worker Grievance Redress Mechanism (W-GRM) to ensure that all categories of project workers, including direct workers, contracted workers, and casual labour engaged through the contractor, have accessible, transparent, and safe channels to raise concerns related to their employment and working conditions. The W-GRM is designed in line with the requirements of World Bank Environmental and Social Standard 2 (ESS2), the national labour framework, and relevant conventions of the International Labour Organization (ILO) ratified by Ghana.

9.6.1 Objectives of the Worker GRM

The W-GRM aims to:

- Provide an accessible and non-retaliatory mechanism for workers to lodge grievances.
- Ensure timely, fair, and confidential resolution of labour-related complaints.
- Strengthen worker–management relations and improve workplace conditions.
- Ensure compliance with ESS2 and national labour legislation administered by the National Labour Commission (Ghana).

9.6.2 Scope of the Worker GRM

The mechanism shall address grievances related to:

- Terms and conditions of employment
- Occupational health and safety (OHS) concerns
- Working hours, remuneration, and benefits
- Discrimination, unfair treatment, and intimidation
- Misconduct or inappropriate behavior by supervisors or co-workers
- Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH), guided by survivor-centred principles
- Retaliation against workers who report concerns
- Breaches of the project's Code of Conduct.

Criminal matters, including assault, theft, and severe SEA/SH cases, shall be referred directly to mandated government authorities in line with national law.

9.6.3 Institutional Arrangements

The contractor shall establish a dedicated Worker Grievance Committee at the project site, led by:

- The Contractor's Human Resources (HR) Focal Person
- The Occupational Health and Safety (OHS) Officer
- A worker representative elected by the labour force
- The project's Safeguards Team representative.

Grievances related to child labour, harassment, or SEA/SH shall additionally involve the Project Gender Officer and relevant national protection bodies.

9.6.4 Grievance Uptake Channels

Multiple reporting channels shall be available to ensure accessibility for all workers:

- *On-site grievance drop boxes*
- *Dedicated grievance phone line or SMS channel (Insert number here)*
- *Direct reporting to supervisors, OHS officers, or HR focal persons*
- *Anonymous submission forms*
- *Email submissions for skilled workers (Insert email address here).*

Workers shall receive written and verbal orientation during induction on the use of the mechanism.

9.6.5 Grievance Resolution Process

Step 1: Receipt and Registration (Within 24 hours)

All grievances shall be logged in the Worker Grievance Register, with date, nature of complaint, and worker category. Anonymous grievances shall also be recorded. Workers' GRM submission form is included in Annex 11. A sample GRM logbook is included in Annex 6b.

Step 2: Acknowledgment (Within 48 hours)

The complainant shall receive acknowledgment of the grievance, unless submitted anonymously.

Step 3: Screening and Categorization (Within 72 hours)

The Grievance Committee shall classify the grievance according to severity:

- **Category 1:** Routine workplace concerns (e.g., shift schedules, PPE availability)
- **Category 2:** OHS risks, discrimination, payment disputes
- **Category 3:** Serious violations including SEA/SH, violence, child labour indicators, or criminal conduct

Category 3 grievances follow an accelerated and confidential procedure.

Step 4: Investigation and Resolution (Within 7–14 days)

The Committee shall carry out fact-finding, interview relevant parties, and recommend corrective actions.

Where required, technical input may be sought from:

- *District Labour Office*
- *Environmental and Social Safeguards Team*
- *Community protection structures (for sensitive cases).*

Step 5: Communication of Decision (Within 14 days of resolution)

Workers shall be informed of the outcome, corrective measures, and timelines for implementation.

Step 6: Appeal Process (Within 7 days)

If the worker is dissatisfied, they may escalate the grievance to the Project Implementation Unit (PIU) or the **National Labour Commission (Ghana)**, in accordance with national dispute resolution procedures.

9.6.6 Confidentiality and Non-Retaliation

The project shall enforce strict confidentiality in handling all grievances. Workers who file complaints shall be protected from retaliation, threats, or discriminatory treatment. This aligns with the protection principles of the ILO conventions and ESS2 requirements.

9.6.7 Documentation and Reporting

All grievances, investigative actions, decisions, and implemented resolutions shall be documented using standardized templates. Monthly summaries shall be submitted to the Project Implementation Unit Safeguards Team. Key trends shall inform corrective actions in labour management and OHS practices.

9.6.8 Training and Awareness

The contractor shall conduct:

- Induction training on the W-GRM for all workers
- Quarterly refresher training on labour rights and responsibilities
- Targeted training on SEA/SH prevention and reporting procedures.

Training records shall be maintained and subject to audit as part of ESMP performance monitoring.

9.6.9 Monitoring and Performance Indicators

Key indicators shall include:

- Number and type of grievances received
- Percentage resolved within agreed timeframes
- Number of unresolved or escalated grievances
- Worker satisfaction with grievance outcomes
- Reduction in recurrent labour-related issue*s*

These indicators shall feed into the project's quarterly ESHS performance reporting.

9.7 Monitoring and Evaluation of GRM

The E&S specialists, as well as the M&E specialists of COCOBOD PIU, shall be mandated to monitor the implementation of the GRM. The teams would rely on primary data from interviews with complainants on how grievances were collected, analyzed and handled and the process of feedback. Secondary data would also be collected from filled Grievance forms, GRM logbook, GRM Committee meeting records, referral forms etc. The teams shall report to the COCOBOD Project Coordinator for further action.

The E&S specialists would also be responsible for setting up an online GRM information system which would track the process of Grievance redress from the various GRM Committees.

9.8 Disclosure, Feedback and Closure of Complaints

The project will ensure wide awareness of the GRM through:

- Community durbars and stakeholder meetings as indicated in the Stakeholder Engagement section.
- Posters and flyers in English and local languages (Twi).
- Radio announcements.
- Farmer cooperative and association meetings, as specified in the Stakeholder Engagement section.
- Induction and orientation sessions for all project workers and subcontractors.

At each stage of the GRM:

- The complainant shall receive written notifications on:
    - Case status
    - Decisions made
    - Actions taken
    - Closure confirmation
- Communication shall be in local languages (Twi) where required.
- Copies of all correspondence shall be filed in the GRM database.

A complaint is closed when:

1. The agreed corrective action is implemented.
2. The complainant confirms satisfaction (unless anonymous).
3. The committee chair signs a Closure Form (see Annex 12), filed in the database.

The case is marked "closed" with a summary of actions.

9.9 GRM Record-Keeping and Reporting

Each level of the GRM shall maintain:

- GRM Logbook
- Copies of grievance forms, referral forms, meeting minutes
- Status tracking (open, solved, referred, closed)
- Quarterly reports to COCOBOD PIU

The COCOBOD PIU shall consolidate data and prepare quarterly and annual stakeholder engagement and ESMP performance reports.

9.10 World Bank Escalation

If a complainant is not satisfied with all local resolutions, they may contact the World Bank via:

- The Ghana Country Office
- The World Bank Grievance Redress Service (GRS) - **grievances@worldbank.org**
- The World Bank Inspection Panel

This avenue is separate and does not interfere with the local GRM process.

Section 10: Budget for ESMP Implementation

Below is a comprehensive **costed ESMP Implementation Budget** for the **Tree Crop Diversification Project (TCDP) ESMP**. The estimates are indicative and reflect typical implementation costs for a three-year rehabilitation programme. Actual expenditures should be refined during annual work planning and procurement.

Table 10.1: Provisional Costed ESMP Implementation Budget (USD)

ESMP Component	Cost Elements	Responsible Entity	Estimated Cost (USD)
Training & Capacity Building	Occupational Health and Safety (OHS) training, environmental awareness, chemical handling, integrated pest management, GBV/SEA/SH awareness, Code of Conduct orientation, emergency response training, community sensitization, refresher training	PIU, CHED, Contractors	**120,000**
Environmental Monitoring	Environmental inspections, monitoring of vegetation restoration, soil conservation, erosion control, water quality, waste management, biodiversity monitoring, environmental compliance audits	PIU Environmental and Social (E&S) Team, Supervising Consultant	**90,000**
Social Monitoring	Labour audits, monitoring of Labour Management Procedures (LMP), stakeholder engagement monitoring, grievance redress monitoring, livelihood restoration monitoring, community consultations	PIU E&S Team, CHED, Supervising Consultant	**70,000**
Occupational Health and Safety Equipment & PPE	Helmets, gloves, boots, goggles, reflective vests, respirators (where applicable), first-aid kits, fire extinguishers, replacement PPE, safety signage	Contractors	**150,000**
Waste Management	Waste bins, segregation facilities, temporary storage areas, collection, transportation, licensed disposal of hazardous waste, spill kits, waste record keeping	Contractors, District Assemblies	**60,000**
Grievance Redress Mechanism (GRM) Implementation	Community grievance committees, grievance registers, hotline, communication materials, grievance database, committee meetings, monitoring and reporting	PIU, CHED, District GRM Committees	**45,000**
GBV/SEA/SH Prevention and Response Measures	Awareness campaigns, Codes of Conduct, confidential reporting mechanisms, survivor referral support, contractor training, community outreach, monitoring	PIU, GBV Service Providers, Contractors	**80,000**

ESMP Component	Cost Elements	Responsible Entity	Estimated Cost (USD)
Stakeholder Engagement	Community consultations, public disclosure meetings, stakeholder workshops, communication materials, translation, travel and logistics, information dissemination	PIU, CHED	**75,000**
Emergency Preparedness and Response	Emergency response equipment, spill response kits, evacuation signage, emergency drills, firefighting equipment, incident simulations	Contractors	**50,000**
ESMP Monitoring, Review and Reporting	Quarterly monitoring reports, environmental and social audits, compliance verification, external monitoring, annual ESMP review and update	PIU E&S Team, Independent Environmental Consultant	**60,000**
Environmental Restoration and Rehabilitation	Rehabilitation of temporary work areas, re-vegetation, erosion control measures, restoration of disturbed sites and borrow areas (where applicable)	Contractors	**80,000**
Independent Environmental and Social Audits	Mid-term and completion environmental and social compliance audits	PIU, Independent Auditor	**40,000**
Contingency (10%)	To address unforeseen environmental and social management requirements	PIU	**92,000**
Total Estimated ESMP Budget			**1,012,000**

Budget Assumptions

- The budget covers implementation of the ESMP over an estimated **three-year rehabilitation and maintenance period**.
- Contractors are responsible for financing routine site-specific mitigation measures, including PPE, waste management, housekeeping, traffic management, and emergency preparedness, through their contract prices.
- COCOBOD, through the Project Implementation Unit (PIU), will finance project-wide environmental and social monitoring, stakeholder engagement, capacity building, grievance management, and independent compliance monitoring.
- Specific support to households at the risk of child labour and systems strengthening for child labour prevention is financed under the Child Labour Subcomponent 1.3 of the Project.
- Costs are indicative and should be reviewed annually based on implementation progress, procurement outcomes, inflation, and emerging environmental and social risks.

ANNEXES

Annex 1 – Excerpts of COCOBOD's Cocoa Rehabilitation Protocol

The cocoa rehabilitation process will follow four main phases as outlined in the Cocoa Rehabilitation Protocol, namely, 1) Pre-Treatment, 2) Initial Treatment, 3) Land Preparation and Re-establishment and 4) Farm Maintenance.

i) Pre-Treatment Activities

The cocoa rehabilitation process begins with a series of preparatory steps designed to ensure technical accuracy, farmer participation, and operational readiness. These activities include:

i. Cleaning of Survey Data on Outbreak Areas

Cleaning of outbreak areas involves the following steps:

- *Removal of settlements, swamps, and other impediments from cocoa areas to reflect the actual treatable land.*
- *Updating outbreak boundaries to include cocoa farms that have recently become infected with CSSVD.*
- *Validation of cleaned outbreak areas by both the Regional and Head Office Cartography Teams to confirm alignment with actual ground conditions prior to the commencement of treatment.*

ii. Resolution of Outbreak Areas into Farms

Once outbreak areas are cleaned and validated, they are resolved into individual farm plots for treatment. The process includes:

- *Disaggregating cleaned outbreak areas into distinct farm boundaries for Initial Treatment.*
- *Clearing farm boundaries of debris, leaves, and tree trunks to a minimum width of three (3) feet.*
- *Measuring each farm using COCOBOD-recommended GPS devices, while adjusting settings for hilly terrain as needed.*
- *Capturing farmer(s) bio-data and linking each farm to its owner(s).*
- *Uploading all captured data (farm polygons and bio-data) onto the Cocoa Management System (CMS) for traceability and targeting.*

iii. Farmer Engagement

Effective farmer engagement is critical to the success of the rehabilitation process. This involves:

- *Farmer and landowner engagement and sensitization by CHED, with support from the PIU*
- *Physically verifying farm ownership and farmer details as captured in the CMS.*

iv. Engagement of Service Providers (SPs)

COCOBOD procures experienced private Service Providers to execute cocoa rehabilitation activities. Contract terms are based on performance, specifically the area of diseased cocoa area rehabilitated, maintained and handed over in accordance with COCOBOD guidelines. By signing the contract, the Service Provider:

- *Is granted official access to the farms within their designated outbreak zones.*

- *Commits to executing the rehabilitation in three (3) sequential phases, Initial Treatment, Land Preparation and Re-establishment and Farm Maintenance.*
- *Agrees to adhere to all project Environmental and Social (E&S) safeguards and protocols as outlined in relevant project documents (ESCP, SEP, ESMF, ESMP, LMP, LSP etc.), including conducting E&S Screening at the commencement of each phase of the rehabilitation exercise.*
- *Commits to engaging farmers as labour on their own farms, where required, to provide them with additional income opportunities during the rehabilitation period.*

ii) Initial Treatment (IT)

Initial Treatment (IT) under the cocoa rehabilitation process involves the removal of diseased cocoa trees and undesirable tree species, followed by the application of arboricides to the remaining stumps in the soil. This ensures the complete destruction of infected root systems and the elimination of the virus. The Initial Treatment phase comprises four key activities:

- *Slashing before tree cutting*
- *Cutting of infected and undesirable trees*
- *Arboricide application*
- *Hacking or chopping down of felled trunks*

i. Slashing before treatment

Slashing in the rehabilitation process refers to the cutting or clearing of overgrown weeds in the diseased farms to allow easy access into the farm by machine operators and other field teams. Slashing only occurs when weeds or shrubs obstruct machine operators from accessing the farm. Specific requirements for this activity include:

- *Ensure the area to be slashed is properly surveyed.*
- *Do not use weedicides, only mechanical or manual slashing methods are permitted.*
- *Slashing should improve accessibility for machine operators conducting tree cutting.*
- *Clearly demarcate farm boundaries and complete measurements after slashing.*

ii. Cutting diseased Cocoa and undesirable trees

Cutting of trees focuses on the removal of CSSVD-infected cocoa trees and undesirable species that pose a threat to the replanting phase. Requirements include:

- *Diseased cocoa trees should be cut at a height of not more than six (6) inches from the ground.*
- *Tree trunks must be divided into a minimum of three (3) separate parts after cutting.*
- *All undesirable trees should be identified and removed during the same operation. (A list of commonly known undesirable tree species is attached as Annex 3).*

iii. Application of Arboricide

Guidelines for the procurement of Arboricide include:

- *The arboricide should be EPA Ghana approved for use in the country.*
- *Arboricides must be packaged in 1-litre bottles, with 10 or 12 bottles per carton.*
- *Packaging should meet COCOBOD-approved standards, including airtight seals and leak-proof lids.*
- *Labels must include active ingredients, toxicity level, safety instructions, batch number, and expiration date.*
- *Usage and application rates must align with COCOBOD guidelines.*
- *Shelf life must be a minimum of two (2) years, with clear storage conditions indicated.*

- *The product must ensure complete destruction of treated tree stumps.*

Guidelines for Arboricide application include:

- *Appropriate personal protective equipment (PPE) must be worn during arboricide handling and application (see annexes for recommended PPEs).*
- *Arboricide should be mixed as prescribed in the material data sheet for maximum efficacy.*
- *Prepare only the required daily quantity to avoid wastage.*
- *Arboricide must be applied immediately after cutting to allow effective absorption through the xylem into the root system, ensuring complete destruction of the tree and preventing rejuvenation.*

Guidelines on handling empty/used arboricide containers:

- *Puncture through the container to render it unusable*
- *Collect all empty arboricide containers and store in a safe place under lock*
- *Prevent unauthorized access to the empty arboricide containers*

iv. Hacking/chopping down of felled trees

Hacking involves chopping tree trunks into smaller pieces to clear the area and facilitate replanting operations. Proper hacking is essential for preparing the land for the next phase. It allows easy access for labourers performing pre-planting activities. It is preferable to carry out hacking immediately after tree cutting, as the moisture content makes the wood easier to chop.

iii) Land Preparation and Re-Establishment

This phase involves activities aimed at restoring previously diseased and unproductive cocoa farms with improved hybrid cocoa varieties and appropriate shade trees.

To mitigate the high mortality rate of cocoa seedlings resulting from climate change impacts, the TCDP has adopted a shade management strategy that includes planting of plantain as temporary shade by each cocoa seedling and planting of economic trees as permanent shade within the farm, in line with recommended planting densities.

As a standard practice, temporary and permanent shade will be established during the first year of rehabilitation, while cocoa seedlings will be planted in the second year.

The land preparation and re-establishment phase involves the following sequential activities:

- *Nursery establishment for plantain BMT (bud multiplication Technique) sucker production*
- *Nursery establishment for cocoa seedling and economic shade tree production*
- *Slashing before Lining and Pegging*
- *Lining and Pegging*
- *Reinspection*
- *Holing for Plantain Suckers and Economic tree seedlings*
- *Plantain Sucker Production and Evacuation*
- *Planting protocols for Plantain Sucker/ Seedlings*
- *Holing for Planting of Cocoa Seedlings*
- *Evacuation and Transplanting Protocols for cocoa seedlings*
- *Planting of Cocoa Seedlings*

i. Nursery Establishment for Plantain Sucker Production using BMT

The Service Provider (SP)[4] is responsible for establishing plantain nurseries within operational zones to produce sufficient suckers for use as temporary shade in the re-establishment process. The following are the requirements for plantain sucker/seedling production:

- *Recommended growing medium: A mixture of 60% soil and 40% decomposed organic manure is ideal. Alternatively, use coconut peat or organic compost, consisting of 50-60% compost, sawdust, 10% biochar, and 30% topsoil.*
- *Polybag Size: Use standard 8cm x 10cm polybags (flat).*
- *Filling Polybags: Fill the poly bags with growing media, leaving 3 cm from the top for watering.*

ii. Nursery Establishment for Cocoa Seedling Production

The Seed Production Division (SPD) of COCOBOD will produce and supply hybrid cocoa seedlings under the project. The following are the requirements for hybrid cocoa seedling production:

- *Recommended Growing Medium: Use loamy soil or cocopeat with slow-release granular fertilizer.*
- *Polybag Size: For 3-month nursing, use smaller polybags (12.5cm x 25cm or 12.5cm x 20cm). For 6-month nursing, use larger polybags (18cm wide and 25cm high). Ensure the polybags have drainage holes.*

iii. Slashing Before Lining and Pegging

Conduct slashing to improve farm accessibility for re-establishment activities, where necessary. The following guidelines should be considered:

- *Avoid use of weedicides.*
- *Ensure full access for Rehabilitation Assistants.*
- *Ensure slashed areas are ready for lining and pegging at least one month after activity.*

iv. Lining and Pegging

Lining and pegging are essential steps in ensuring proper planting alignment for cocoa and shade trees. The following guidelines apply:

- *Use pegs made from termite-resistant materials such as bamboo or Gliricidia that can withstand harsh weather conditions.*
- *Pegs should be a minimum of four (4) feet long for clear visibility in the field.*
- *Bundle pegs in hundreds for easy transport and inventory at farm gates.*
- *An estimated 1,200 pegs are required per hectare.*
- *Pegs must be straight and firmly planted into the ground to prevent dislodgement.*
- *Maintain standard spacing of 3m x 3m during lining to ensure optimal tree distribution.*

iv) Re-inspection

This is essential to detect and retreat stumps or trees that show signs of rejuvenation or that were inadvertently overlooked after initial treatment. The following guidelines must be adhered to:

- *Carry out inspections for the first six (6) months and thereafter quarterly for eighteen (18) months.*

[4] The Service providers are supposed to acquire the necessary statutory permit(s) and license(s) for the establishment of the nurseries (e.g., the EPA Permit, Permit from the Water Resources Commission (in the event of water abstraction, if applicable)).

- *Check for any regrowth from cut stumps and re-treat if needed.*
- *Look for signs of reinfection and apply treatment where necessary.*
- *Identify and treat any cocoa trees that were overlooked or covered by debris.*
- *Record the condition of the replanted cocoa farms during each visit.*

vi. Holing for Plantain Suckers & Economic tree seedlings

The following guidelines must be observed to ensure proper holing for plantain suckers and economic tree seedlings:

- *Use Earth Chisel or Auger to dig holes.*
- *Ensure holing conforms to COCOBOD-approved dimensions (1ft x 1ft).*

vii. Plantain Sucker Production and Evacuation

The following guidelines must be followed during the production and delivery of plantain suckers or seedlings:

- *Suckers must have a girth at least 1.6 cm.*
- *Each sucker should have 3–4 healthy green leaves and be approximately thirty (30) cm tall.*
- *Suckers must remain intact in their polybags during loading, transport, and offloading. Interlock polybags to prevent shifting during transit.*
- *Service Providers and CHED District Offices should agree on quantity of plantain suckers to evacuate to farm gate at a time, based on size of farm land prepared to receive the suckers.*
- *Place suckers in wooden crates before transportation to reduce stress and damage.*
- *Ensure suckers are delivered to the farm gate. Where trucks cannot reach, use tricycles or porters.*
- *A COCOBOD-authorized officer must inspect and certify the suckers upon delivery and issue a Goods Received Note (GRN).*

viii. Planting protocols for Plantain Sucker

The following steps should be followed to ensure proper and successful planting of plantain seedlings:

- *Transport the suckers to the farm gate within one to two days after offloading at the main site.*
- *Begin planting not later than two (2) days after delivery to the farm.*
- *Carefully cut the polybag without disturbing the growing medium and plant the sucker.*
- *The ball of earth at the base of the sucker should not be removed before planting*
- *Firm the soil around the suckers to provide stability and prevent lodging.*

ix. Holing for Planting of Cocoa Seedlings

The following guidelines must be followed to ensure proper hole preparation for cocoa seedling transplanting:

- *Ensure holes are dug to COCOBOD-approved dimensions (1ft x 1ft).*
- *Use an Earth Chisel or Auger to dig the holes efficiently and uniformly.*

x. Evacuation and Transplanting Protocols for cocoa seedlings

The following protocols must be followed to ensure the safe evacuation, handling, and successful transplanting of cocoa seedlings during the re-establishment phase of rehabilitation:

- *Use seedlings with a girth of 0.5–1 cm in good condition. Avoid overgrown seedlings, and ensure taproots remain intact in the polybag.*
- *Seedlings are mostly ready for transplanting between 3 to 6 months after seeding.*

- *Ensure seedlings are healthy, with at least 4 green leaves and a firm (turgid) stem. Handle carefully during evacuation.*
- *Water seedlings continuously after offloading and before transplanting.*
- *Do not store seedlings near mature cocoa farms prior to planting.*
- *Eliminate termite queens from the field before transplanting.*
- *After planting, drench the seedlings in COCOBOD-approved termiticides when needed to protect seedlings from termite damage.*

xi. Planting of Cocoa Seedlings

The following protocols should be followed to ensure proper planting and establishment of cocoa seedlings:

- *Carefully remove the polybag before planting.*
- *Cut the polybag without disturbing the growing medium and place the seedling into the hole.*
- *Firm the soil around the seedling to ensure stability and prevent lodging.*
- *Adopt climate-smart planting techniques by creating a sunken depression around the base of the plant to optimize moisture retention and seedling survival.*

v) Farm Maintenance

The Farm Maintenance phase supports the healthy growth and survival of newly established cocoa, plantain, and economic shade trees. It involves routine agronomic practices and crop protection activities aimed at enhancing plant health, controlling pests and maintaining optimal farm conditions.

This phase involves:

- *Weeding.*
- *Insecticide application.*
- *Fertilizer application.*
- *Refilling vacant spaces with cocoa, plantain and economic shade tree seedlings*

Annex 2a – List of Registered Cocoa Farmers Cooperatives in Asamankese Cocoa District

S/ NO	COOPERATIVE/GROUP NAME	COMMUNITY	CERT. NO.	C/G CHAIRMAN NAME	C/G SECRETARY NAME
1	AMANFROM CO-OPERATIVE COCOA FARMING AND MARKETING SOCIETY LIMITED	AMANFROM	ER/P/AC /1452	AMOAKO BRONYA JOHN	ARTHUR PAUL
2	ADWINEPA CO-OPERATIVE COCOA FARMING AND MARKETING SOCIETY LIMITED	AKROSO	ER/P/AC /1356	AGYARE KOBINA AMOAKOH	ADIBI ISAAC ATTO BROWN
3	AKIM KYEREMASE NYAME BEKYERE CO-OPERATIVE COCOA FARMING AND MARKETING SOCIETY LIMITED	KYEREMASE	ER/P/AC /2282	KOOMSON JAMES	DARKO ERIC KWABENA
4	AKIM OBOYAMBO FANTE CO-OPERATIVE COCOA FARMING AND MARKETING SOCIETY LIMITED	OBOYAMBO FANTE	ER/P/AC /1609	MENSAH FELIX	AMOH GODSON
5	AKIM OBO YAMBO KROBO CO-OPERATIVE COCOA FARMING AND MARKETING SOCIETY LIMITED	OBOYAMBO KROBO	ER/P/AC /1603	DONKOR JOHN SENIOR	SACKITEY ANDREWS
6	TAKORASE ONUADO CO-OPERATIVE COCOA FARMING AND MARKETING SOCIETY LIMITED	TAKORASE	ER/P/AC /1795	KOW EDU YAW	KUMI SAMUEL
7	AKUAFO BEYE YIE CO-OPERATIVE COCOA FARMING AND MARKETING SOCIETY LIMITED	AKROSO	ER/P/AC /1357	AGBODZA EVELYN	BOAFO SAMUEL
8	ADUKROM ADZE FIR HAMA CO-OPERATIVE COCOA FARMING AND MARKETING SOCIETY LTD	ADUKROM	ER/P/AC /1580	JOSHUA ADAMS	DAVID STANLEY DONKOH
9	AKIM OTAIPRO KOROYE CO-OPERATIVE FARMING AND MARKETING SOCIETY LTD	AKIM OTAIPRO	ER/P/AC /1499	ASSAN THOMAS (TREASURER)	KOFI ALHASSA (ORGANISER)
10	KYEREMASE CO-OPERATIVE COCOA FARMERS AND MARKETING SOCIETY LTD	KYEREMASE	ER/P/AC /1318	SOLOMON QUEIKUMA ODOOM	IBRAHIM SALIFU
11	MANTE AKUAFOO NKOSOO CO-OPERATIVE COCOA FARMING AND MARKETING SOCIETY LIMITED	AKIM MANTE	ER/P/AC /1425	OTU MOSES	SEKYI PAUL
12	AKUAFOO BOAFO CO-OPERATIVE COCOA FARMING AND MARKETING SOCIETY LIMITED	ASIBIREM	ER/P/AC /1326	APPIANI RICHARD	MAHAMUD MISHEL
13	AKIM OSAMANKWAA ADWINEPA CO-OPERATIVE COCOA FARMING AND MARKETING SOCIETY LTD	AKIM OSAMANKWAA	ER/P/AC /1572	DRAMANI ISSIFU	ANNOBIL GODWAYS
14	AKIM YAW DONKOH NKABOM CO-OPERATIVE COCOA FARMING AND MARKETING SOCIETY LTD	AKIM YAW DONKOH	ER/P/AC /1607	OBENG KWAKU	APPIAH KELVIN
15	BANTAMA NYONKODO CO-OPERATIVE COCOA FARMING AND MARKETING SOCIETY LTD	BANTAMA	ER/P/AC /1511	EDUKU EVANS PETER	KOFO ANAN EMMANUEL

S/ NO	COOPERATIVE/GROUP NAME	COMMUNITY	CERT. NO.	C/G CHAIRMAN NAME	C/G SECRETARY NAME
16	AKYEM ESHIEM ADWINEPA CO-OPERATIVE COCOA FARMING AND MARKETING SOCIETY LTD	AKYEM ESHIEM	ER/P/AC /1552	WILSON SUNNU	EMMANUEL ARKOH
17	OKOTOKROM (CCP) CO-OPERATIVE COCOA FARMERS AND MARKETING SOCIETY LIMITED	OKOTOKROM	ER/P/AC /1077	ADU BENNETT KWASI	KANTANKA NANA DEBRAH
18	ADIEMBRA II CO-OPERATIVE COCOA FARMERS AND MARKETING SOCIETY LIMITED	ADIEMBRA NO. 2	ER/P/AC /2394	HARUNA SALISU	ENOCK OWARE AMPENE
19	AMANTRA CO-COPERATIVE COCOA FARMING AND MARKETTING SOCIETY LIMITED	AMANTRA	ER/P/AC /2309	SAMUEL KWASI APPIAH	BOSOKO DIVINE
20	ODUMAHAMA CO-COPERATIVE COCOA FARMING AND MARKETTING SOCIETY LIMITED	ODUMAHAMA	ER/P/AC /1904	SEFA ERIC	DOGBE AGBOVOR
21	PEACE AND LOVE CO-OPERATIVE COCOA FARMING AND MARKETING SOCIETY LIMITED	BETOOM	ER/P/AC /1987	OFFEI FRANCIS	TEI MENSAH JOSEPH
22	NYANOA (CCP) COOPERATIVE COCOA FARMERS AND MARKETING SOCIETY LIMITED	NYANOA	ER/P/AC /1163	MUHAMMED QUANSAH	SAMMY BENNOR
23	KWAO-BAAH (NHYIRA)COOPERATIVE COCOA FARMING AND MARKETING SOCIETY LIMITED	KWAO- BAAH	ER/P/AC /1070	MOHAMMED AWALE (VICE CHAIRMAN)	RICHARDSON ADUBOAH
24	ANIDASO COOPERATIVE COCOA FARMERS AND MARKETING SOCIETY LIMITED	AKIM BREMAN	ER/P/AC /1064	BRANDFORD AIDOO	ESSEL SETH
25	ADOM COOPERATIVE COCOA FARMING AND MARKETING SOCIETY LIMITED	OBINYIMDA	ER/P/AC /1524	ISAAC TORNYINGBAH	NANGBON FRANCIS
26	OSOGBE PEACE COOPERATIVE COCOA FARMING AND MARKETING SOCIETY LIMITED	OSOBGE	ER/P/AC /1941	AINOO EVANS	ADJEI NICHOLAS
27	ADOTIM COOPERATIVE COCOA FARMING AND MARKETING SOCIETY LIMITED	ADOTIM	ER/P/AC /2195	INKOOM KWAME GEORGE	SEKYI GEORGE
28	ABAMKROM (CCP) COOPERATIVE COCOA FARMERS AND MARKETING SOCIETY LIMITED	ABAMKROM	ER/P/AC /1069	ARTHUR KINGSLEY	DANSO STEPHEN ADJEI(ORGANIZER)
29	TAKORASE BEAKOYE (CCP)COOPERATIVE COCOA FARMERS AND MARKETING SOCIETY LIMITED	TAKORASE	ER/P/AC /1184	SAMUEL NINSON	PRINCE ARTHUR(ASS SECRETARY)
30	BENYINKROM ASOMDWE YE COOPERATIVE COCOA FARMING AND MARKETING SOCIETY LIMITED	BREKU	ER/P/AC /2024	SAM ISAAC	QUAO-FIFI JAMES
31	KRODUA ADWUMAYE (CCP)COOPERATIVE COCOA FARMERS AND MARKETING SOCIETY LIMITED	KRODUA	ER/P/AC /1182	ARMAH ERIC	ARMAH JOSEPH A. NII
32	ADWUMAPA COOPERATIVE COCOA FARMING AND MARKETING SOCIETY LIMITED	ABAMKROM	ER/P/AC /2174	ALBERT OCRAN	EMMANUEL ABDUL SALAM POBEE

S/ NO	COOPERATIVE/GROUP NAME	COMMUNITY	CERT. NO.	C/G CHAIRMAN NAME	C/G SECRETARY NAME
33	MEPOM ANIDASO COOPERATIVE COCOA FARMERS AND MARKETING SOCIETY LIMITED	MEPOM	ER/P/AC /1276	ABRAHAM ALAGLO	AKOTO VICTOR BOAFO
34	ASIKASU ODUMASE COOPERATIVE COCOA FARMERS AND MARKETING SOCIETY LIMITED	ASIKASU ODUMASE	ER/P/AC /1068	PAUL ARMAH	AMOS ADDO
35	SMALL LONDON CO-OPERATIVE	SMALL LONDON	ER/P/AC /1590	AGYIRI KOBENA	OKYERE BENJAMIN
36	ROYAL CO-OPERATIVE FARMERS SOCIETY AND MARKETING	NYAMEBEKYE RE	ER/P/AC /1549	MENSAH GEORGE	ACQUAH GABRIEL
37	NBO COOP	NYAME NTI	ER/P/AC /1337	PAINTSIL ALEX KWAME	ANSAH ADDO-AGYIRI
38	ATTA NE ATTA BIAKOYE (CCP) CO-OPERATIVE COCOA FARMERS AND MARKETING SOCIETY LIMITED	ATTA NE ATTA	ER/P/AC /968	BOAFO FRANCIS OHENE	PAUL KWESI ASARE
39	OWUSU KWAI CO-OPERATIVE COCOA FARMING AND MARKETING SOCIETY LIMITED	OWUSU KWAI	ER/P/AC /1586	OWUSU NANA KOFI	DONKOH DANIEL
40	ODJARDE (CCP) CO-OPERATIVE COCOA FARMERS AND MARKETING SOCIETY LIMITED	ODJARDE	ER/P/AC /1065	OFORI MARTINSON	NARTEY DAVID
41	KWESINTUM NYAMEBEKYERE COOP	KWESINTUM	ER/P/AC /1497	AMA FATIMA	OWUSON EVANS ENTSIE
42	KROYE COOP	APEADEM 2	ER/P/AC /1674	BILLY ETUAH	SEY BISMARK
43	ADWENPA YE COOP	BEKOASE	ER/P/AC /1676	TETTEY JOHN	MAWULI AVORNYO
44	APEADEM	APEADEM	ER/P/AC /2026	KUMI FRANCIS	AMPONSAH CHARLES
45	KOFI KYERE STAR CO-OPERATIVE COCOA FARMERS AND MARKETING SOCIETY LIMITED	KOFI KYERE	ER/P/AC /2565	ABRAHAM APPERTEY	KUFUFAM ENOCH
46	ANSAH BIAKOYE CO-OPERATIVE FARMERS AND MARKETING SOCIETY LIMITED	ANSAH	ER/P/AC /982	THEOPHILUS ASIAMAH ASARE	ISAHAK ABDUL
47	KOFI KYERE ONE CO-OPERATIVE COCOA FARMERS AND MARKETING SOCIETY LIMITED	KOFI KYERE 1	ER/P/AC /1135	NOBI KWABLA	EVANS NARTEY
48	WINNANG BIAKOYE CO-OPERATIVE COCOA FARMERS AND MARKETING SOCIETY LIMITED	WINNANG BIAKOYE	ER/P/AC /976	NACHIN WILLIAM	DANIEL ATIOGBE
49	KANTENYENSUA CCP CO-OPERATIVE COCOA FARMERS AND MARKETING SOCIETY LIMITED	KANTENYENSUA	ER/P/AC /975	SAMUEL ASARE	DANIEL KWASI ESSEL

S/ NO	COOPERATIVE/GROUP NAME	COMMUNITY	CERT. NO.	C/G CHAIRMAN NAME	C/G SECRETARY NAME
50	KOFIKYERE CO-OPERATIVE COCOA FARMERS AND MARKETING SOCIETY LIMITED	KOFIKYERE	ER/P/AC /1295	MODWJEHE FRANCIS TETTEH	ADJEI CHRISTIANA
51	APROKUMASE CO-OPERATIVE COCOA FARMING	APROKUMASE	ER/P/AC /1474	DAVID GAISEY	BENTIL ISAAC
52	AKIM ASUOSO CO-OPERATIVE COCOA FARMERS AND MARKETING SOCIETY LTD	ASUOSO	ER/P/AC /1145	YAW MBROH	ALEXANDER ADU BOFFAH
53	OSENHO NKANSAHFUOM CO-OPERATIVE COCOA FARMING AND MARKETING SOCIETY LTD	OSENHO	ER/PAC/ 2545	ALFRED AGO	ADDO DAVID
54	AKIM OSENHO CO-OPERATIVE COCOA FARMERS	OSENHO	ER/P/AC /1129	EMMANUEL DEBRAH NUEH	TETTEH EMMANUEL ANYETEY
55	BADUKROM CO-OPERATIVE COCOA FARMERS AND MARKETING SOCIETY LTD	BADUKROM	ER/P/AC /1146	DEGRAFT GYASI	SAMUEL ANU
56	TABITA CO-OPERATIVE COCOA FARMERS AND MARKETING SOCIETY LTD	TABITA	ER/P/AC /1144	ABU MORO	SALIFU MORO
57	TABITA NSUAKYI CO-OPERATIVE COCOA FARMINGAND MARKETING SOCIETY LTD	TABITA	ER/P/AC /2323	ROBERT FORSON	BASHIRU MOHAMA
58	ONYINAMIENU CO-OPERATIVE	ONYINAMIENU	ER/P/AC /1652	YAW MENSAH	BAIDOO ERIC
59	ASOMDWE COOPERATIVE COCOA FARMERS AND MARKETING SOCIETY LIMITED	AGYIRIKWAO	ER/P/AC /1288	RICHARD ATTA OBENG	OKWAN EMMANUEL
60	ADWENPA COOPERATIVE COCOA FARMING AND MARKETING SOCIETY LIMITED	ESSASO	ER/P/AC /1902	ARHIN KOOMSON	NARKOTEY EMMANUEL MARK
61	KUMIKROM (CCP) COOPERATIVE COCOA FARMERS AND MARKETING SOCIETY LIMITED	KUMIKROM	ER/P/AC /1164	ADJUMAKO DANIEL	AJABA KENETEY DANIEL
62	GOOD FUNDATION COOPERATIVE COCOA FARMING AND MARKETING SOCIETY LIMITED	KUMIKROM	ER/P/AC /1644	DANKWA WILLIAM ADDO	ASARE DANIEL
63	BUDU(CCP) COOPERATIVE COCOA FARMERS AND MARKETING SOCIETY LIMITED	BUDU	ER/P/AC /1131	AKOETIE LARBI ALEX	MENSAH JOHN
64	ESSASO(CCP) COOPERATIVE COCOA FARMERS AND MARKETING SOCIETY LIMITED	ESSASO	ER/P/AC /987	AGYIRI SAMUEL	ALI ISAAC
65	DWENDAMA COOPERATIVE COCOA FARMERS AND MARKETING SOCIETY LTD	DWENDAMA	ER/P/AC /1930	JAMES KWAME BAFFOE	OCRAN CHRISTOPHER
66	AKUAMASE COOPERATIVE COCOA FARMERS AND MARKETING SOCIETY LTD	AKUAMASE	ER/P/AC /1471	GEORGE KOFI ADAMS	GEORGE ADUMADZE

S/ NO	COOPERATIVE/GROUP NAME	COMMUNITY	CERT. NO.	C/G CHAIRMAN NAME	C/G SECRETARY NAME
67	CHRISTO ABBRABO PA COOPERATIVE COCOA FARMERS AND MARKETING SOCIETY LTD	MOFFRAM	ER/P/AC /1336	ARTHUR EMMANUEL	ALHASSAN SEIDU
68	AHANTA ONUADO COOPERATIVE COCOA FARMERS AND MARKETING SOCIETY LTD	AHANTA	ER/P/AC /2105	EDWARD AKRONG	BENJAMIN KOBINA EYIAH
69	BOTWE COOPERATIVE COCOA FARMERS AND MARKETING SOCIETY LTD	BOTWE	ER/P/AC /1441	OKYERE KOFI	MERCY GURAH
70	APINTO COOPERATIVE COCOA FARMERS AND MARKETING SOCIETY LTD	APINTO	ER/P/AC /2183	BISMARK MBIR	FREMPONG MANSO
71	YE ADWUMAPA CO-OPERATIVE COCOA FARMING AND MARKETING SOCIETY LIMITED	NSUANSA	CR/P/AC /1085	EMMANUEL BARNES	LOUIS ATUKPA ALEWOGBE
72	BOAFO NE NYAME CO-OPERATIVE COCOA FARMING AND MARKETING SOCIETY LIMITED	AHENANSAN DO	ER/P/AC /1903	OLIVER EDUAH	QUARMSON EDWIN
73	ASEMPA CO-OPERATIVE COCOA FARMING AND MARKETING SOCIETY LIMITED	AGYEIKWAA	CR/P/AC /2093	BOTCHWAY JOHN	ATUKPA PAUL LOVI
74	ADOYE CO-OPERATIVE COCOA FARMING AND MARKETING SOCIETY LIMITED	AGONA BOSOMPA	ER/P/AC /1986	ARHIN FRANK	NUKAFO FRANCIS
75	NKWANTA CO-OPERATIVE COCOA FARMING AND MARKETING SOCIETY LIMITED	NKWANTA NANDO	CR/P/AC /1293	DONKOH STEPHEN	ARTHUR AMOS
76	NSUTEM NYAME WO TUMI CO-OPERATIVE COCOA FARMING AND MARKETING SOCIETY	NSUTEM	CR/P/AC /1427	EMMANUEL ATOMBO	BUDU BISMARK FRANCIS

Annex 2b - Cocoa-sector Related CSOs and NGOs Operating in Asamankese Cocoa District

Stakeholder	Type	Current Role in Cocoa Sector	Potential Collaboration Strategy
Solidaridad Network (Cocoa Life Program)	International NGO	Implements Cocoa Life program; farmer training, gender equality, youth empowerment, Village Savings & Loans Associations.	Partner for farmer capacity building, gender mainstreaming, and livelihood diversification.
World Vision Ghana	International NGO	Cocoa Life partner; active in Eastern Region (Fanteakwa, Asamankese catchment); supports youth empowerment, environmental sustainability, and community development.	Collaborate on community resilience, youth inclusion, and environmental safeguards.
Rainforest Alliance	International NGO	Provides certification, sustainability training, climate adaptation, and forest protection.	Engage for certification schemes, climate-smart cocoa, and deforestation monitoring.
World Cocoa Foundation (WCF)	Global Cocoa Industry Platform	Leads Cocoa & Forests Initiative; promotes traceability, responsible sourcing, and landscape-level interventions.	Align project with traceability systems and industry sustainability standards.
Earth Care Ghana	National NGO	Runs Cocoa Innovation Leadership Boot Camps; equips farmers with modern technology, value addition skills, and scholarships.	Partner for farmer innovation, youth training, and value chain diversification.
Agro Eco – Ecological Organic Agriculture Initiative (EOAI)	Regional NGO	Promotes organic cocoa farming, farmer cooperatives, and resilience-building through savings groups.	Collaborate on organic certification, farmer cooperatives, and alternative livelihoods.
Local Cocoa Farmer Cooperatives & Associations	Community-based CSOs	Organize farmers for training, collective bargaining, and sustainability programs.	Entry point for grassroots engagement, farmer mobilization, and participatory monitoring.

Key Takeaways

- ***Solidaridad and World Vision*** *are the most directly active NGOs in Eastern Region cocoa districts, including Asamankese.*
- ***Rainforest Alliance and WCF*** *provide certification and sustainability frameworks that can strengthen compliance and traceability.*
- ***Earth Care Ghana and EOAI*** *bring innovation and organic farming practices that can diversify farmer livelihoods.*
- ***Local cooperatives*** *are indispensable for mobilizing farmers and ensuring community ownership.*

Annex 3 - Roles and Responsibilities of Key Actors in Cocoa Rehabilitation Process

S/N	ACTOR	RESPONSIBILITIES
a.	Farmer/Farm owner/Landowner	• Provide consent for rehabilitation by signing the Farmer Agreement. • Active participation in on-farm rehabilitation activities • Monitor the activities undertaken by the Service Providers on their farms.
b.	CHED District Office	• Coordinate and supervise all cocoa rehabilitation activities and field personnel within the district. • Sensitize and educate farmers and landowners on the rehabilitation programme and their responsibilities. • Conduct field surveys and resolve outbreak areas into farms; map affected farms using Global Positioning System (GPS) technology. • Provide extension services and address grievances arising during project implementation through the project's GRM. • Inspect rehabilitated farms, certify completed work by Service Providers and compile verification reports for submission to CHED National Office through the Regional Office.
c.	CHED Regional Office	• Supervise cocoa rehabilitation activities and monitor field operations across all districts within the region. • Collate and review reports from districts and ensure timely submission of regional reports. • Oversee the efficient allocation and utilization of logistics and resources across the region. • Identify and address emerging issues and grievances related to rehabilitation implementation. • Compile and submit verification and monitoring reports to the Executive Director (ED) of CHED.
d.	CHED Head Office	• Map and provide records of surveys and CSSVD outbreak areas to aid planning and implementation of the cocoa rehabilitation. • Provide technical supervision for the implementation of the cocoa rehabilitation programme. • Ensure efficient allocation, distribution, and utilization of logistics and resources across all operational levels. • Monitor the overall progress and performance of the cocoa rehabilitation programme. • Verify completed rehabilitation work and submit report to the PIU for further action. • Collate and submit consolidated progress and monitoring reports to the PIU.
e.	Private Service Providers	• Deploy qualified field staff including E&S personnel and farm labour to implement cocoa rehabilitation activities in line with quality standards in the Cocoa Rehabilitation protocol. • Execute all rehabilitation activities including slashing, tree cutting, arboricide application, replanting with approved materials (cocoa,

S/N	ACTOR	RESPONSIBILITIES
		plantain and shade tree seedlings) and maintenance, according to standards outlined in this protocol. • Adhere to environmental and social safeguards, including prevention of child labour and proper use of Personal Protective Equipment (PPE) and submission of E&S screening reports to the CHED district office. • Maintain accurate records and submit regular reports per the approved reporting schedule. • Notify CHED for inspection and certification upon completion of work. • Address field-level issues and grievances in collaboration with CHED and the PIU. • Comply fully with reporting, invoicing, and payment procedures.
f.	Seed Production Division (SPD)	• Provide quality planting materials (cocoa and economic shade trees seedlings).
g.	Cocoa Management System (CMS) Unit	• Maintain a centralized digital platform for capturing, storing, and managing data on cocoa farms, farmers, and rehabilitation activities. • Provide accurate shapefiles and farmer biodata to support effective planning and implementation. • Support traceability and accountability by linking rehabilitation interventions to specific farm locations and registered farmers. Maintain data integrity and collaborate with field teams to validate and update farm-level information.
h.	Project Implementation Unit (PIU)	• Provide overall coordination, oversight, and resource support for the implementation of cocoa rehabilitation activities to ensure project objectives are achieved. • Develop and maintain a robust Monitoring and Evaluation (M&E) system for tracking rehabilitation progress and outcomes. • Conduct field-level monitoring, collect data, and report on the performance of Service Providers, CHED staff, and farmer participation. • Monitor and report on compliance with environmental and social (E&S) safeguards. • Verify completed work and process direct payments to Service Providers and farmers. • Consolidate and submit quarterly and annual progress reports on rehabilitation to the World Bank.

Annex 4: Risk and Vulnerability Matrix for Child Labour and Trafficking

Activity	Type of Risk, Vulnerability and Response Required	Level 1 (Higher)	Level 2 (Medium)	Level 3 (Lower)	Level 4 (Risks Reduced, Needs Met; Wellbeing Outcomes)
Reporting	Child Labour and Child Trafficking Worst Forms of Child Labour (WFCL) Domestic and Gender-based Violence (D&GBV)	1) All forms of Child Trafficking a) Some may be situations in which the life or health (physical or mental) of a child is in danger or imminent danger; the child, parent, relative or close friend expresses urgency due to an event that is about to happen and needs to be prevented – for example moving to a new location, forced into a brothel, cross a border for exploitative purposes. b) Others may not be in such immediate risk but nevertheless response is necessary in the form of planning and preparation for rescue/other responses 2) Worst form of child labour in which the life or health of the child is in imminent danger. 3) All forms of WFCL and Child Trafficking involving violence or sexual exploitation (see D&GBV) including domestic workers (house help).	1) All cases of WFCL not requiring an immediate intervention. 2) Children being forced to work 3) Hazardous child labour situations not covered in the WFCL framework due to unique situations of children, such as disability. 4) All child labour cases in which child has dropped out of school. 5) Child hawking on the streets during school hours	1) Parents are threatening to send the child to work 2) Attendance at school is not regular, child is not coming to school on time. 3) Child is fatigued at school and having difficulties with studies, child's appearance and health are not good 4) Child is seen in markets during school hours	1) The child is rescued. 2) Child is no longer in WFCL or hazardous labour 3) Child is removed from exploitative situation Rehabilitation Factors #s 4-7: 4) Child is reintegrated/ reunified into local community or with family or into alternative care 5) Child receives vocation training certificate and is employed in safe responsible livelihood consistent with the laws 6) Parents are in more secure livelihoods or social protection prevents child labour/trafficking. 7) Psychosocial health is improved. 8) Child is back in school for at least two consecutive semesters and enrolled in a third.

					9) Employers have ceased illegal child labour practices. 10) Child traffickers and employers of WFCL face criminal penalties including jail and fines
Response	Child Labour, and Child Trafficking Worst Forms of Child Labour (WFCL) Domestic and Gender-based Violence (D&GBV	1) Law enforcement is immediately engaged (including as necessary of DOVVSU, GPS, Ghana Immigration Service, Human Trafficking Unit) 2) DSW/DSWCD is part of the rescue and removal, and leads coordination of comprehensive assistance, including immediate medical screening, counselling, and temporary shelter as necessary. 3) Child Labour Development Officers are engaged in the WFCL cases dealing with employers. 4) Health facilities are notified and stand ready to help. 5) School is notified for inclusive education planning. 6) Traditional Authorities are engaged to assist with reintegration and reunification, including monitoring	1) Same as higher risk, except for item 5, which can potentially be led by Girl Education Officer (GEOs) with other school staff including Guidance and Counselling Officers (GCOs) who may request assistance from DSW/DSWCD, Traditional Authorities, or other community leaders. If there are complex CP issues requiring health and law enforcement, then DSW/DSWCD becomes case manager. 2) Case associated with neglect, see response under Social Protection and Other Similar Vulnerable Households case category	1) School GEOs, GCOs & administrators lead the casework. Depending on the situation and prior knowledge of the case, school may request assistance from DSW/DSWCD, Traditional Authorities. If there are complex CP issues requiring health and law enforcement, then DSW/ DSWCD becomes case manager. 2) Case associated with neglect, see response under Social Protection and Other Similar Vulnerable Households case category	

MDT=Multi-disciplinary Team

Annex 5a - National Environmental Quality Standards (Ghana Standards –GS), Ambient Air Quality

The Ghana Standard for Environment and Health Protection –Requirements for Ambient Air Quality and Point Source/Stack Emissions (GS 1236,2019).

Substance	**Time Weighted Average (TWA)**		**Averaging Time**
Sulphur Dioxide (SO_2)	900 µg/m^3	Industrial	1 hr
	700 µg/m^3	Residential	1 hr
	150 µg/m^3	Industrial	24 hr
	100 µg/m^3	Residential	24 hr
	80 µg/m^3	Industrial	1 yr
	50 µg/m^3	Residential	1 yr
Nitrogen Oxides (measured as $N0_2$)	400 µg/m^3	Industrial	1 hr.
	200 µg/m^3	Residential	1 hr.
	150 µg/m^3	Industrial	24 hr
	60 µg/m^3	Residential	24 hr
Total Suspended Particulate	230 µg/m^3	Industrial	24 hr
	150 µg/m^3	Residential	24 hr
	75 µg/m^3	Industrial	1 yr
	60 µg/m^3	Residential	1 yr
PM_{10}	70 µg/m^3		24 hr
Smoke	150 µg/m^3	Industrial	24 hr
	100 µg/m^3	Residential	24 hr
	50 µg/m^3	Industrial	1 yr
	30 mg/m^3	Residential	1 yr
Carbon Monoxide	100 mg/m^3		15 min
	60 mg/m^3		30 min
	30 mg/m^3		1 hr
	10 mg/m^3		8 hr
Hydrogen Sulphide	150 µg/m^3		24 hr
Mercury	1 µg/m^3		1 yr
Lead	2.5 µg/m^3		1 yr

Substance	Time Weighted Average (TWA)		Averaging Time
Cadmium	10 - 20 ng/m^3		1 yr
Manganese	1 µg/m^3		24 hr
Dichloromethane (Methylene Chloride)	3 mg/m^3		24 hr
1,2-Dichloroethane	0.7 mg/m^3		24 hr
Trichloroethane	1 mg/m^3		24 hr
Tetrachloroethene	5 mg/m^3		24 hr
Toluene	8 mg/m^3		24 hr
Arsenic	30 ng/m^3	Industrial	24 hr
	15 ng/m^3	Residential	24 hr
Flouride	10 µg/l		24 hr

Annex 5b - National Environmental Quality Standards (Ghana Standards –GS), Ambient Noise Control

The Ghana Standard for Health Protection –Requirements for Ambient Noise Control (GS 1222,2018).

ZONE	DESCRIPTION OF AREA OF NOISE RECEPTION	PERMISSIBLE NOISE LEVEL IN dB(A)	
		DAY 0600 – 2200	NIGHT 2200 - 0600
A	Residential areas with low or infrequent transportation	55	48
B1	Educational (school) and health (hospital, clinic) facilities	55	50
B2	Areas with some commercial or light industry	60	55
C1	Areas with some light industry, places of entertainment or public assembly, and places of worship located in this zone	65	60
C2	Predominantly commercial areas	75	65
D	Light industrial areas	70	60
E	Predominantly heavy industrial areas	70	70

Annex 5c - National Environmental Quality Standards (Ghana Standards –GS), Effluent Discharge

Requirements for Effluent Discharge

Parameter	**Unit**	**Maximum Permissible Levels**
Colour (TCU)	TCU	200
pH	pH Units	6 - 9
Conductivity	μ S/cm	1500
Total Suspended Solids (TSS)	mg/l	50
Total Dissolved Solids (TDS)	mg/l	1000
COD	mg/l	250
Oil and grease	mg/l	5.0
Aluminum	mg/l	1.0
Copper	mg/l	5.0
Lead	mg/l	0.1

Annex 6 - Relevant International Conventions & Requirements

Convention	Main Characteristics	Participation of Ghana
Labour Rights		
International Labour Organization Conventions (ILO)	Minimum Age Convention The Minimum Age Convention, 1973 (No.138) states that the minimum age for admission to any type of employment or work which by its nature or the circumstances in which it is carried out is likely to jeopardise the health, safety or morals of young persons shall not be less than 18 years. Article 7 of the Convention states that national laws or regulations may permit the employment or work of persons 13 to 15 years of age on light work which is: *i. Not likely to be harmful to their health or development; and* ***ii.*** *Not such as to prejudice their attendance at school, their participation in vocational orientation or training programmes approved by the competent authority or their capacity to benefit from the instruction received.* Worst Forms of Child Labour Convention The ILO Convention of Worst Forms of Child Labour, 1999 (No. 182) was acceded to by Ghana on June 13, 2000. The Convention charges all ratified members to provide effective and time bound measures to prevent the engagement of children in the worst forms of child labour. The Convention further defined worst forms of child labour to include engagement of children in works that are likely to affect their health, safety, or morals. According to the Worst Forms of Child Labour Recommendation (No. 190), the ILO provides the following guidelines for work considered unsafe for children, this includes work involving toxic chemicals or fumes, work taking place in direct sunlight, carrying heavy loads, work that involves the presence of dangerous animals or insects, etc. Forced Labour Convention Forced Labour Convention, 1930 (No. 29) advocates for the suppression of all forms of forced labour. This means that States ratified to this convention must not only criminalize and prosecute forced labour, but also to take effective measures to prevent forced labour and provide victims with protection and access to remedies, including compensation. Right of Association (Agriculture) Convention Right of Association (Agriculture) Convention, 1921 (No. 11) secures all those engaged in agriculture the same rights of association and combination as to industrial workers, and to repeal any statutory or other provisions restricting such rights in the case of those engaged in agriculture.	R= 6th June, 2011 R=13th June, 2000 R=20th May, 1957 R= 14th March, 1973
Child/Human Rights		
African Charter on the Rights and Welfare of the Child	Article 15 of the African Charter on the Rights and Welfare of the Child, 1990 states that very child shall be protected from all forms of economic exploitation and from performing any work that is likely to be hazardous or to interfere with the child's physical,	S=18th August, 1997 R= 10th June, 2005

	mental, spiritual, moral, or social development. State Parties are required to take all appropriate legislative and administrative measures to ensure the full implementation of this Article. For the purposes of this Charter, a child means every human being below the age of 18 years.	
Convention on the Rights of the Child, 1989	Commitment to defend and guarantee the rights of children and to meet these commitments before the international community. States which are members of the Convention are required to develop and implement measures and policies which consider the best interests of the child.	R = February 5th, 1990 S = February 5th, 1990
Convention on the Elimination of All Forms of Discrimination against Women (CEDAW, 1979)	The Convention defines the term "discrimination against women" as any distinction, exclusion or restriction made based on sex which has the effect or purpose of impairing or nullifying the recognition, enjoyment or exercise by women, irrespective of their marital status, on a basis of equality of men and women, of human rights and fundamental freedoms in the political, economic, social, cultural, civil or any other field.	S = July 17th, 1980 R = January 2nd, 1986
Protection of Biodiversity		
Convention on Biological Diversity	The Convention on Biological Diversity underlines those threats to biological diversity had increased everywhere in the world, mainly as a result of the continuing destruction of natural Diversity (CBS, 1992) habitats. It has 3 main objectives, conservation of biological diversity, sustainable use of the components of biological diversity and fair and equitable sharing of the benefits arising out of the utilization of genetic resources.	R = August 29th, 1994 S = June 12th, 1992
International Plant Protection Convention	Aims to secure coordinated, effective action to prevent and to control the introduction and spread of pests of plants and plant products. The Convention extends beyond the protection of cultivated plants to the protection of natural flora and plant products. It also takes into consideration both direct and indirect damage by pests, so it includes weeds.	A= 22 Feb 1991
Climate Change		
UN Framework Convention on Climate Change (Rio, June 1992)	To stabilize the concentration of greenhouse gases in the atmosphere at a level that should prevent dangerous anthropogenic interference with the climate system. This level should be reached in sufficient time for ecosystems to adapt naturally to climate change, food production would not be threatened, and economic development could continue in a sustainable.	S = June 12th, 1995 AR = Sept 6th, 1995
The Montreal Protocol (1987)	The Montreal Protocol is a global agreement to protect the stratospheric ozone layer by phasing out the production and consumption of ozone-depleting substances (ODS).	S = 24 February 1988
Pesticides/Hazardous Chemicals		
International Code of Conduct for The Distribution and Use of FAO Pesticides	The basic function of the International Code of Conduct for the Distribution and Use of FAO Pesticides (Revised 2002) is to serve as a framework and point of reference for the judicious use of pesticides for all those involved in pesticide matters. The objectives of this Code include to establish voluntary standards of conduct for all public and private entities engaged in or associated with the distribution and use of pesticides and to address the need for a cooperative effort between governments of pesticide exporting and	Adopted

	importing countries to promote practices that minimize potential health and environmental risks associated with pesticides, while ensuring their effective use.	
Adopted Rotterdam Convention	The Rotterdam Convention provides Parties with a first line of defense against hazardous chemicals. It promotes international efforts to protect human health and the environment as well as enables countries to decide if they want to import hazardous chemicals and pesticides listed in the Convention. Together with the Stockholm and Basel Conventions and FAO's voluntary Code of Conduct, the Rotterdam Convention promotes a life cycle approach and provides the necessary tools for managing pesticides.	S = 11 Sept, 1998 R = 30th May, 2003 AA = 30th May, 2003
Basel Convention	The Basel Convention was created to protect people and the environment from the negative effects of the inappropriate management of hazardous wastes worldwide. It is the most comprehensive global treaty dealing with hazardous wastes from its generation, transport to disposal.	R = 9th June, 2005 DE = 5th Dec. 2019
Stockholm Convention	The Stockholm Convention is a global treaty to protect human health and the environment from highly dangerous, long-lasting chemicals by restricting and ultimately eliminating their production, use, trade, release, and storage.	S = 23rd May, 2001 R = 30th May, 2003

Signature = S; Ratification = R; Accession = A; Authorisation for ratification or accession = AR, Letters of ratification = LR; Participation = P; Letters of Accession = LA.

ANNEX 7: PERSONAL PROTECTIVE EQUIPMENT (PPE) REQUIREMENTS

ACTIVITY	SUB-ACTIVITIES	PPE REQUIRED	PURPOSE
Initial Treatment	Slashing	• *Wellington boots* • *Overalls*	***Wellington Boots*** Protection from foot and leg injuries from rolling objects, hot substances, chemicals, slippery surfaces, crawling animals, sharp objects, tree branches etc. ***Overalls*** Protection from extreme temperatures, toxic chemicals, insect bites etc. ***Gloves*** Protection of hands from burns, absorption of harmful substances, cuts, fractures etc. ***Goggles or Face shields*** Protection of eyes and face from particles, projectile objects etc. ***Nose masks*** Protection from particles, fumes, harmful gases, dust etc. ***Ear plugs*** Ear protection from noise that can cause hearing problems or loss of hearing. ***Helmet*** Protection from head injuries caused by fallen trees and branches.
	Cutting of cocoa and other undesirable trees	• *Gloves* • *Goggles or Face shields* • *Nose Masks* • *Ear Plugs or muffs* • *Helmet* • *Wellington boots* • *Overalls*	
	Aboricide application	• *Gloves* • *Nose Mask* • *Goggles or Face shields* • *Helmet* • *Wellington boots* • *Overalls*	
	Hacking/chopping down	• *Gloves* • *Goggles or Face shields* • *Wellington boots* • *Overalls* • *Ear Plugs or muffs*	
Land Preparation and re-establishment	Nursery establishment, Reinspection, Lining	• *Wellington boots* • *Overalls* • *Gloves*	
	Holing with augur and Planting of plantain/economic shade tree and cocoa seedlings	• *Gloves* • *Wellington boots* • *Nose Masks* • *Goggles or Face shield* • *Overalls*	
Farm Maintenance	Weeding	• *Overalls* • *Wellington boots*	
	Insecticide and Fertilizer application	• *Gloves* • *Nose Masks* • *Wellington boots* • *Overalls*	
	Refilling vacant spaces	• *Overalls* • *Wellington boots*	

Annex 8: Sample Code of Conduct

1. Purpose

This Code of Conduct (CoC) establishes the behavioral standards required of all workers, contractors, supervisors, service providers, and project-affiliated personnel involved in the Cocoa Rehabilitation Project. The CoC aims to ensure:

- *Safe, respectful, and lawful conduct*
- *Protection of community members, especially women, children, and vulnerable persons*
- *Prevention of sexual exploitation, abuse, harassment (SEA/SH)*
- *Environmental stewardship and compliance with the ESMP*
- *Zero tolerance for violence, exploitation, discrimination, or corruption*

All personnel are required to sign and comply with this CoC as a condition of engagement.

2. General Conduct and Professionalism

All project personnel shall:

1. *Behave professionally, respectfully, and responsibly at all times.*
2. *Follow all project instructions, procedures, and safety requirements.*
3. *Treat community members, colleagues, and farmers with dignity and without discrimination.*
4. *Refrain from abusive, threatening, or violent behavior under any circumstances.*
5. *Wear identifiable project-issued IDs or PPE when on duty.*
6. *Comply with national laws and project regulations at all times.*

3. Occupational Health and Safety (OHS) Standards

All workers must:

1. *Use required PPE at all times while working.*
2. *Operate equipment and tools only if trained and authorized.*
3. *Immediately report unsafe conditions, near-misses, or incidents to supervisors.*
4. *Avoid impairment from alcohol, drugs, or intoxicants while on duty.*
5. *Follow emergency response drills and evacuation procedures.*

Failure to follow OHS protocols will result in disciplinary action and possible removal from the project.

4. Environmental Responsibilities

Personnel shall:

1. *Comply with the ESMP and all environmental mitigation measures.*
2. *Prevent soil degradation, water contamination, and harm to vegetation.*
3. *Manage waste responsibly—no littering, burning, or unsafe disposal.*
4. *Handle agrochemicals only if trained, and strictly follow safety procedures.*
5. *Protect biodiversity and avoid harming wildlife unnecessarily.*

Environmental violations may lead to sanctioning, dismissal, or legal action.

5. Respectful Engagement with Communities

All workers must:

1. *Respect local customs, cultural norms, and leadership structures.*
2. *Obtain permission before entering private farms or community spaces.*
3. *Communicate clearly and respectfully with community members.*
4. *Avoid creating noise, dust, or disturbances outside approved work areas.*
5. *Not take photos, record videos, or share information about the project without authorization.*

6. Zero Tolerance for GBV/SEA/SH

The project enforces **strict zero tolerance** for:

- *Sexual exploitation or abuse of any person*
- *Sexual harassment in any form*
- *Intimidation, coercion, or exchange of favors for work or services*
- *Unwelcome sexual advances or comments*
- *Any sexual interaction with minors (under 18 years), regardless of consent*

Personnel must:

1. *Immediately report any SEA/SH allegation through designated reporting channels.*
2. *Cooperate fully with investigations.*
3. *Maintain confidentiality around SEA/SH incidents.*

Anyone violating these provisions will face immediate removal, contract termination, and legal prosecution.

7. Protection of Children and Vulnerable Persons

Workers must:

1. *Avoid any interaction with children not related to project tasks.*
2. *Not engage children in any form of labour, paid or unpaid.*
3. *Avoid being alone with a child or vulnerable person while working.*
4. *Report any observed child labour or child protection concerns.*

8. Anti-Corruption and Ethical Conduct

All personnel shall:

1. *Not solicit, accept, or grant bribes, kickbacks, or favors.*
2. *Not engage in theft or misuse of project materials.*
3. *Report any suspected corruption or fraudulent activities.*
4. *Maintain honesty in reporting time, materials, and work completed.*

9. Grievance Redress Compliance

Personnel must:

1. *Inform community members and workers about available grievance channels.*
2. *Support the resolution of complaints respectfully and transparently.*
3. *Not retaliate against anyone who files a grievance.*

10. Disciplinary Measures

Violation of the Code of Conduct may result in:

- *Verbal or written warning*
- *Suspension*
- *Removal from the project site*
- *Contract termination*
- *Referral to law enforcement*
- *Civil or criminal prosecution*

11. Acknowledgment and Signature

I, the undersigned, understand, accept, and commit to comply with the above Code of Conduct for the Cocoa Rehabilitation Project. I acknowledge that violations can result in disciplinary measures, removal, or legal consequences.

Name:_____ **Position:**_____
Contractor/Employer:_____ **Signature:**_____
Date: _____

Annex 9: LIST OF DESIRABLE AND UNDESIRABLE SHADE TREE SPECIES

Desirable Shade Trees	**Undesirable Shade Trees**
Terminalia ivorensis (Amire)	Ceiba petandra (Onyina)
Terminalia superba (Ofram)	Cola gigantea (Watapuo),
Albizia coriaria (Awiemfuo samina)	Cola chlamydantha (Kra bise, Osonkrobia, Tenamfera)
Entandrophragma angolense (Adinam, cedar)	Adansonia digitata (Odadee)
Funtumia elastica (Ofuntum)	Blighia sapida (Akyewobiri)
Alstonia bonei (Nyamedua)	Canthium glabriflorum (Gyapam, Nteteadupon)
Pycnanthus angolensis (Otie)	Musanga cecropoides (Odwuma)
Milicia excelsa (Odum)	Carapa procera (Kwakuo bise)
Spathodea campanulata (kukuoninsuo)	Lecaniodiscus cupanoides (Dwindwera)
Ficus exaperata (Nyankyeren)	Myrianthus arboreus (Nyankuma)
Mahogany	

Source: Cocoa manual, CRIG (2010)

Annex 10: Outline of ESMP Monitoring Report for the Asamankese Cocoa Rehabilitation Project

1. Executive Summary

Brief overview of monitoring activities, key findings, progress on ESMP implementation, critical issues, and recommended corrective actions.

2. Introduction

- *Purpose and scope of the monitoring report*
- *Monitoring period covered*
- *Project location (including activities undertaken in **Asamankese**)*
- *Summary of project phase (e.g., site preparation, clearing, rehabilitation works)*

3. Methodology

- *Monitoring approach and frequency*
- *Tools and instruments used (checklists, interviews, observations, sampling)*
- *Stakeholders consulted*
- *Compliance criteria (national regulations, World Bank ESSs, ESMP commitments)*

4. Summary of Project Activities During the Reporting Period

- *Activities undertaken by contractors and field teams*
- *Workforce data and labour deployment*
- *Summary of equipment and machinery used*
- *Any changes in project scope relevant to ESMP monitoring*

5. Environmental and Social Performance Monitoring

5.1 Environmental Performance

- *Vegetation removal and land disturbance*
- *Soil erosion control measures*
- *Waste management and disposal practices*
- *Hazardous materials and fuel handling*
- *Air emissions and dust suppression*
- *Noise and vibration control*
- *Water use and water quality protection*
- *Biodiversity protection (if relevant)*

5.2 Social Performance

- *Labour and working conditions compliance*
- *OHS implementation (PPE use, incidents, training)*
- *Community health and safety*
- *Traffic and transport management*
- *Community interactions and issues*
- *Child labour surveillance and referrals*
- *SEA/SH risk mitigation and reporting mechanisms*

6. Compliance with Mitigation Measures

- *Table showing planned vs. actual implementation of ESMP mitigation actions*
- *Level of compliance (Full / Partial / Non-compliance)*
- *Reasons for gaps*

- *Corrective and preventive actions*

7. Grievance Management

7.1 Community Grievances

- *Number and type of grievances received*
- *Status (resolved / pending / escalated)*
- *Response time and actions taken*

7.2 Worker Grievances

- *Types of labour-related complaints*
- *Actions implemented and timeline*
- *Sensitive cases (SEA/SH, child labour, rights violations) treated with confidentiality*

8. Capacity Building and Training Activities

- *Training delivered (OHS, child labour, GBV/SEA/SH, GRM, environmental controls)*
- *Number of participants (disaggregated by gender where relevant)*
- *Outcomes and observed improvements*

9. Incident and Accident Reporting

- *Summary of environmental or social incidents*
- *Near misses, accidents, and corrective responses*
- *Reporting to authorities (where applicable)*
- *Lessons learned and preventive recommendation*

10. Stakeholder Engagement Updates

- *Community meetings, farmer engagements, and district authority interactions*
- *Issues raised and responses provided*
- *Disclosure activities (leaflets, notices, radio announcements, etc.)*

11. Key Findings and Corrective Actions

- *Key non-compliances and risks identified*
- *Recommended corrective measures, responsible parties, and timelines*
- *Priority actions for next monitoring cycle*

12. Conclusions and Recommendations

- *Overall ESMP implementation performance*
- *Recommendations to improve compliance, monitoring accuracy, and environmental/social outcomes*

13. Annexes

- *Monitoring checklists*
- *Photographic evidence*
- *Attendance sheets for training*
- *Copies of permits or regulatory correspondence*
- *GRM logs*
- *Field sampling data (if applicable)*

Annex 11: Outline of Evaluation Reports

A. Mid-Term Evaluation Report Outline

1. Executive Summary

- *Purpose and scope of the mid-term evaluation*
- *Key findings*
- *Summary of performance against targets*
- *Major issues, risks, and deviations*
- *Priority recommendations for course correction*

2. Introduction

- *Background of the cocoa rehabilitation project*
- *Objectives and expected outcomes*
- *Institutional arrangements (COCOBOD, PIU, CHED, contractors)*
- *Purpose of the mid-term evaluation*
- *Evaluation period and methodological limitations*

3. Evaluation Methodology

- *Evaluation criteria (effectiveness, efficiency, relevance, sustainability, ESMP compliance)*
- *Data collection methods (field visits, interviews, document review, monitoring data analysis)*
- *Stakeholders consulted*
- *Tools used (checklists, observation forms, survey instruments)*

4. Progress on Project Implementation

- *Overview of planned vs. executed activities*
- *Status of rehabilitation activities (cutting, replanting, shade management)*
- *Status of procurement and logistics*
- *Performance of contractors and district teams*
- *Implementation challenges and delays*

5. Assessment of Environmental and Social Performance

- *5.1 ESMP Compliance*
- *Status of mitigation measures*
- *Monitoring results*
- *Non-compliance events and corrective actions*
  - *5.2 Social Performance*
- *GRM functionality and grievance trends*
- *Labour conditions and OHS performance*
- *Community engagement and inclusion of vulnerable groups*
- *GBV/SEA/SH risk management*
  - *5.3 Environmental Performance*
- *Soil, water, biodiversity, and waste management performance*
- *Agrochemical handling and storage*
- *Environmental incidents and response actions*

6. Assessment of Project Effectiveness

- *Progress toward expected outputs (seedlings delivered, farms rehabilitated, trainings conducted)*
- *Quality and survival rates of replanted cocoa*
- *Farmer adoption of improved practices*
- *Achievement of ESMP performance indicators*

7. Assessment of Project Efficiency

- *Use of financial and material resources*

- *Timeliness of activity implementation*
- *Contractor productivity*
- *Value for money*

8. Key Issues, Risks, and Constraints

- *Operational challenges*
- *Environmental and social risks*
- *Institutional bottlenecks*
- *Emerging community concerns*

9. Preliminary Outcomes and Trajectory to Project Goals

- *Early signs of productivity improvement*
- *Social and environmental benefits observed*
- *Likelihood of achieving final project outcomes*

10. Recommendations for Course Correction

- *Immediate corrective actions*
- *Adjustments to ESMP measures*
- *Strengthening community engagement*
- *Improvement of monitoring and reporting*
- *Capacity-building needs*

11. Conclusions

B. Final Evaluation Report Outline

1. Executive Summary

- *Purpose and timing of evaluation*
- *Key findings and lessons learned*
- *Degree of achievement of project outcomes*
- *Summary of environmental and social performance*
- *Sustainability prospects*
- *Final recommendations*

2. Introduction

- *Background of the cocoa rehabilitation project*
- *Objectives, scope, and expected results*
- *Implementation period and major components*
- *Purpose and significance of the final evaluation*

3. Evaluation Methodology

- *Evaluation questions and criteria*
- *Data collection and analysis methods*
- *Stakeholder engagement approach*
- *Limitations and reliability of findings*

4. Project Implementation Performance

- *Summary of planned activities vs. achieved results*
- *Quality and coverage of rehabilitation works*
- *Performance of contractors and technical teams*
- *Administrative and coordination performance*

5. Environmental and Social Safeguards Evaluation

- *5.1 ESMP Implementation and Compliance*
- *Compliance status across all ESMP components*
- *Results of environmental and social monitoring*
- *Effectiveness of mitigation measures*
  - *5.2 Environmental Outcomes*
- *Soil quality and land restoration improvements*
- *Biodiversity and vegetation recovery*
- *Proper agrochemical and waste management*
  - *5.3 Social Outcomes*
- *Community satisfaction*
- *Labour and OHS outcomes*
- *Functionality and responsiveness of the GRM*
- *GBV/SEA/SH prevention and response effectiveness*
- *Equity and inclusion impacts*

6. Effectiveness Assessment

- *Achievement of outputs and outcomes*
- *Improvement in cocoa farm productivity*
- *Adoption of good agricultural practices*
- *Changes in farmer livelihoods and resilience*

7. Efficiency Assessment

- *Cost-effectiveness of interventions*
- *Efficient use of time, labour, and materials*
- *Comparison with planned budgets and timelines*

8. Impact Assessment

- *Long-term environmental improvements*
- *Enhanced cocoa yield and farmer income*
- *Reduced disease pressure (e.g., CSSVD)*
- *Strengthened farmer capacity and knowledge*

9. Sustainability Assessment

- *Institutional sustainability (COCOBOD, CHED capacity)*
- *Environmental sustainability of rehabilitated farms*
- *Economic and livelihood sustainability*
- *Need for continued interventions or extension support*

10. Lessons Learned

- *What worked well and why*
- *Operational obstacles and solutions*
- *Implications for scaling up or replication*

11. Recommendations

- *Policy-level recommendations*
- *Technical recommendations for future rehabilitation*
- *Improvements to safeguard systems (ESMP, GRM, OHS, GBV/SEA/SH)*
- *Recommendations for long-term project support*

12. Conclusion

- *Overall project performance*
- *Contribution to national cocoa sector objectives*
- *Final judgement on success and sustainability*

Annex 12: GRIEVANCE REGISTRATION AND REDRESS FORM

GRIEVANCE REGISTRATION FORM (FORM A) – For Complainant

Name (Complainant): ……

ID Number (PAPs ID number): ……

Contact Information (house number/ mobile phone) ……

Nature of Grievance or Complaint: ……..……

Details of Grievance……

……
……
……

Name (Receiver):……Signature ……Date.…….….

Name (Filer):……Signature……. Date……..…...

Relationship to Complainant (if different from Complainant): ……

GRIEVANCE AND RESOLUTION FORM (FORM B) – For COCOBOD/SERVICE PROVIDER

Name (Complainant): ……

ID Number (PAPs ID number): ……

Contact Information (house number/ mobile phone) ……

Nature of Grievance or Complaint: ……..……..

Details of Grievance: ……...

……
……
……
……

Name (Receiver):……. Signature……Date:……...…..

Name (Filer):……..Signature……Date:……..

Relationship to Complainant (if different from Complainant): ……..……

Review/Resolution Level 1 (District) ☐ Level 2 (Zonal) ☐ Level 3 (National) ☐

Date of Conciliation Session: ……...

Was Filer/Complainant Present? Yes No

Was field verification of complaint conducted? Yes No

Findings of field investigation……...…….

……

Summary of Conciliation Session Discussion……..…….

Issues……..……

Was agreement reached on the issues? Yes No

If agreement was reached, detail the agreement……

……
……..

If agreement was not reached, specify the points of disagreement:……

……
……

Signed (Conciliator):…….Signed (Filer/Complainant): ……..

Signed: …….

(Independent Observer e.g. Assembly Member/Opinion Leader)

Date: …….

Implementation of Agreement

Date of implementation: ……

Feedback from Filer/Complainant: Satisfied ☐ Not Satisfied ☐

If satisfied, sign off & date:……..……

(Filer/Complainant) (Conciliator)

If not satisfied, recommendation/way forward:…….

……
……..…… ……..

(Signature & date of Filer/Complainant) (Signature & date of Conciliator)

Annex 13: Grievance Acknowledgement Receipt

Asamankese Cocoa Rehabilitation Activities – Environmental and Social Management Plan (ESMP)

1. Receipt Information

- *Acknowledgement Receipt No.:* _____
- ***Date of Receipt:*** ____ / ____ / _____
- ***Time of Receipt:*** _____
- ***Mode of Submission:*** ☐ *Verbal* ☐ *Written* ☐ *Phone Call* ☐ *SMS/WhatsApp* ☐ *Email* ☐ *Other:* _____

2. Complainant Details (Complete only with the complainant's consent)

- ***Name:*** _____
- ***Address/Community:*** _____
- *Contact Information (Phone/Email):* _____
- ***Preferred Contact Method:*** _____

3. Grievance Summary (Provide a brief, neutral description of the concern)

_____

_____

_____

4. Receiving Officer Details

- *Name of Officer Receiving Grievance:* _____
- ***Designation/Unit:*** _____
- ***Signature:*** _____ ***Date:*** ____ / ____ / _____

5. Acknowledgement Statement to Complainant

Your grievance has been received by the Asamankese Cocoa Rehabilitation Project team. It will be reviewed in accordance with the Grievance Redress Mechanism (GRM) procedures outlined in the Environmental and Social Management Plan (ESMP).

You will receive an update on the status of your grievance within ___ **days**, and a resolution will be sought within ____ **days**, depending on the complexity of the issue.

6. Signature of Complainant (Optional)

- ***Name:*** _____
- ***Signature:*** _____ ***Date:*** ____ / ____ / _____

Annex 14: Sample Grievance Redress Mechanism (GRM) Logbook
Asamankese Cocoa Rehabilitation ESMP

Log No.	Date Received	Complainant Name / Contact	Community / Location	Grievance Channel Used	Grievance Summary	Category	Severity Level	Acknowledgement Date	Assigned Officer	Initial Assessment Outcome	Action Taken / Resolution Steps	Date Resolved	Resolution Outcome	Feedback Provided?
001/2026	10/02/2026	Kwame A., 024xxxxxxx	Kofikrom	In-person	Contractor machinery blocking footpath	Community Safety	Medium	10/02/2026	CLO	Requires corrective action	Machinery relocated; signs installed	12/02/2026	Resolved	Yes
002/2026	11/02/2026	Anonymous	Asamankese	Grievance Box	Noise from chainsaw at night	Environment	High	11/02/2026	Safeguards Officer	Non-compliance identified	Night work suspended; monitoring initiated	13/02/2026	Resolved	N/A

Annex 15: Grievance Closure Form

Asamankese Cocoa Rehabilitation Activities – Environmental and Social Management Plan (ESMP)

1. Grievance Identification

- ***Grievance ID Number:*** _____
- *Date Grievance Was Received:* ____ / ____ / _____
- ***Complainant Name (if provided):*** _____
- ***Community/Location:*** _____
- ***Contact Information:*** _____

2. Summary of Grievance

(Provide a concise description of the issue raised)

_____

_____

_____

_____

3. Resolution Actions Taken

- *Investigation Completed on:* ____ / ____ / _____
- *Summary of Findings:*

_____

_____

- *Corrective/Remedial Actions Implemented:*

_____

_____

- ***Responsible Person/Unit:*** _____
- *Date Corrective Action Completed:* ____ / ____ / _____

4. Outcome of Grievance Handling

- *Final Status of Grievance:*

☐ Resolved ☐ Partially Resolved ☐ Unresolved but Closed

☐ Referred to Higher Authority/External Mechanism

- *Explanation/Justification:*

_____

_____

_____

5. Complainant Confirmation (Optional)

The complainant has been informed of the outcome and confirms acceptance of the resolution.

- ***Complainant Name:*** _____
- ***Signature:*** _____

- ***Date:*** ____ / ____ / _____
- *Comments (if any):*

(If the complainant cannot be reached or declines to sign, state reason here.)

_____

6. Closure Authorization

- *Name of GRM Officer/Responsible Staff:* _____
- ***Designation:*** _____
- ***Signature:*** _____
- ***Date:*** ____ / ____ / _____
- *Official Stamp/Seal (if applicable)*

7. Additional Notes (if applicable)

Annex 16: Grievance Resolution Meeting Record Template

Asamankese Cocoa Rehabilitation Activities – Environmental and Social Management Plan (ESMP)

1. Meeting Details

- ***Meeting Reference Number:*** _____
- ***Date of Meeting:*** ____ / ____ / _____
- ***Time:*** _____
- ***Venue:*** _____

2. Grievance Information

- ***Grievance ID:*** _____
- *Date Grievance Was Received:* ____ / ____ / _____
- ***Complainant Name (if provided):*** _____
- ***Community/Location:*** _____
- *Brief Summary of Grievance:*

---

3. Participants

Name Role / Representation Contact Information Signature

(Include GRM Committee members, complainant or representative, community leaders, COCOBOD field staff, contractors, and observers as applicable.)

4. Summary of Discussions

(Provide a factual, concise record of key points raised by all parties.)

---

5. Agreed Actions / Resolution Measures

Action Item	Responsible Person/Institution	Timeline / Deadline	Remarks

6. Outstanding Issues (If Any)

(Identify issues requiring escalation or additional follow-up.)

---

7. Final Outcome of Meeting

- *Resolution Status:*

☐ Resolved ☐ Partially Resolved ☐ Not Resolved (Escalated)

- *Details / Justification:*

---

8. Confirmation by Complainant (Optional)

I confirm that the issues discussed and the actions agreed represent my concerns.

- ***Name:*** _____
- ***Signature:*** _____
- ***Date:*** ____ / ____ / _____
- *Comments:*

(If complainant declines to sign or is unavailable, explain briefly.)

---

9. GRM Committee Validation

- ***Name of Chairperson/GRM Officer:*** _____
- ***Signature:*** _____
- ***Date:*** ____ / ____ / _____
- ***Name of Secretary/Record Officer:*** _____
- ***Signature:*** _____
- ***Date:*** ____ / ____ / _____

10. Attachments (If Applicable)

- *Attendance sheets*
- *Evidence or photos*
- *Copies of letters, reports, or investigation notes*
- *Any other supporting documents*

Annex 17: Grievance Referral Template

1. Referral Information

Item	Details
Referral Reference No.:	
Date of Referral:	
Referring GRM Committee / Office:	
Name of Officer Completing Referral:	
Position / Role:	
Contact Information:	

2. Complainant Information

(Complete only with consent; maintain anonymity for SEA/SH or sensitive cases)

Item	Details
Name (or Anonymous Code):	
Gender / Age (if disclosed):	
Community / Location:	
Contact (optional):	

3. Grievance Details

Item	Details
Date Grievance Was Received:	
Mode of Submission: (☐ In-person ☐ Phone ☐ Written ☐ Grievance Box ☐ Other)	
Grievance Category: (☐ Environmental ☐ Social ☐ Health & Safety ☐ Labour ☐ Child Labour ☐ SEA/SH ☐ Other)	
Summary of Grievance:	*(Brief, factual description)*
Confidential Case? (☐ Yes ☐ No)	
Requires Immediate Attention? (☐ Yes ☐ No)	

4. Reason for Referral

Item	Details
Justification for Referral:	*(Why the case cannot be resolved at the GRM Committee level)*

Item	Details
Type of Specialist Support Required:	☐ Child Protection ☐ SEA/SH Service Provider ☐ Law Enforcement ☐ Social Welfare ☐ Health Facility ☐ Labour Officer ☐ Other

5. Receiving Institution / Service Provider

Item	Details
Name of Institution / Agency:	
Contact Person:	
Position / Unit:	
Telephone / Email:	
Address / Location:	

6. Actions Undertaken Prior to Referral

Item	Details
Initial Assessment Conducted? (☐ Yes ☐ No)	
Immediate Safety Measures Taken:	
Information Provided to Complainant:	
Consent for Referral Obtained? (☐ Yes ☐ No)	*Required for all non-criminal cases*
For SEA/SH Cases:	*Referral must follow survivor-centred protocol; do not record personal details without consent.*

7. Documents Attached

☐ Initial Grievance Form

☐ Assessment Notes

☐ Consent Form (if applicable)

☐ Any supporting evidence

☐ Incident Report (for emergencies)

☐ Other (specify): _____

8. Handover Confirmation

Item	Details
Date and Time of Transfer:	
Method of Transfer: (☐ In-person ☐ Email ☐ Phone ☐ Other)	
Receiving Officer Name & Signature:	
Referring Officer Name & Signature:	

9. Follow-Up Tracking (by GRM Committee)

Item	Details
Feedback Received from Receiving Agency:	
Date Feedback Was Received:	
Outcome / Status:	
Case Closed? (☐ Yes ☐ No)	
Closure Date:	

Annex 18: Costed Environmental and Social Management Plan (ESMP) Budget Table

ESMP Component	Cost Elements	Responsible Entity
Training & Capacity Building	OHS training, GBV/SEA/SH awareness, chemical safety, community sensitization	PIU, CHED, Contractors
Environmental Monitoring	Field inspections, soil & vegetation monitoring, biodiversity checks	PIU-ESS Team
Social Monitoring	Labour audits, GRM operations, community consultations	PIU-ESS Team, CHED
OHS Equipment & PPE	Gloves, boots, helmets, goggles, first-aid kits	Contractors
Waste Management	Containers, segregation points, hazardous waste disposal logistics	Contractors, District Assembly
GRM Implementation	Hotline operation, grievance tracking system, committee meetings	PIU, CHED, District GRM Committee
GBV/SEA/SH Prevention Measures	Training, confidential reporting channels, service provider support	PIU, GBV Service Provider
Stakeholder Engagement	Community meetings, information materials, travel costs	PIU, CHED
Emergency Preparedness	Emergency response kits, drills, signage	Contractors
ESMP Review & Reporting	Quarterly audits, document updates, external validation	PIU-ESS Team
TOTAL ESMP BUDGET		**PIU / COCOBOD**

Annex 19: CHILD LABOUR PREVENTION PROTOCOL

(Extracted from Labour Management Procedures – LMP)

1. Definition of a Child

A child is defined as any person below the age of eighteen (18) years. The minimum age for employment or engagement in project activities shall follow Ghanaian law and World Bank ESS2 requirements. Light work may be permitted for children within legally acceptable age limits provided such work does not harm their health, safety, or education.

2. Minimum Age and Permitted Work

Children below the minimum employment age are not permitted to work on the project. Light work may only be permitted for children within legally accepted age ranges and under conditions that do not:

- Affect their health
- Affect their safety
- Affect their schooling
- Expose them to hazardous work

Worst Forms of Child Labour are strictly prohibited.

3. Procedures if Child Labour is Found

If child labour is identified during project implementation, the following actions shall be taken:

1. Children under the minimum working age found on site shall be immediately removed from the work site.
2. If children aged between 14–15 or 15–18 are found working under conditions not consistent with permitted work, a workplace and child situation assessment shall be conducted immediately.
3. Appropriate remedial actions shall then be implemented in collaboration with relevant authorities and child protection institutions.
4. Cases may be handled through the project Grievance Redress Mechanism where necessary.

4. Child Labour Risk Assessment Procedure

The project shall conduct child labour risk assessments for each subproject and activity using the following steps:

- Identify communities and persons vulnerable to child labour risks.
- Identify hazardous activities for children.
- Consult NGOs, Farmer Based Organizations, and relevant stakeholders.

- Review national legislation and World Bank ESS2 requirements.
- Evaluate and prioritize child labour risks.
- Decide on actions to prevent or control risks.
- Implement preventive and control measures.
- Monitor, review, and update preventive measures regularly.

5. Responsibilities of Project Institutions and Contractors

TCDA, COCOBOD, Contractors, and Subcontractors shall:

- Ensure no child labour is engaged in project activities.
- Maintain records of all project workers.
- Include child labour clauses in contracts and Codes of Conduct.
- Provide training and awareness on child labour.
- Monitor and report child labour risks.
- Implement grievance redress mechanisms for labour issues.
- Ensure compliance with Ghana labour laws and World Bank ESS2.

6. Training and Awareness

All workers shall receive training and orientation on:

- Child labour prevention
- Occupational health and safety
- GBV/SEA/SH
- Workers' rights
- Code of Conduct

Annex 20: Biomass Waste Management Plan for CSSVD-Affected Cocoa Rehabilitation

1. Introduction

The rehabilitation of Cocoa Swollen Shoot Virus Disease (CSSVD)-affected cocoa farms involves the removal of diseased cocoa trees to facilitate re-establishment with improved planting materials. Approximately 3,401 ha of cocoa farms will be rehabilitated under the Asamankese Cocoa District, generating an estimated 34,000 tonnes (approximately 10tonnes/ hectare) of cocoa biomass.

Unlike hazardous waste, cocoa biomass generated during rehabilitation does not present a continuing phytosanitary risk once the tree has been cut. The CSSVD virus survives only in the living stump and root system. Consequently, disease control focuses on killing the remaining stump through the application of an approved arboricide, while the cut stems, branches and leaves are managed as non-hazardous organic biomass.

This Biomass Waste Management Plan provides procedures for the safe handling, utilization and monitoring of biomass generated during rehabilitation activities.

2. Objectives

The objectives of this plan are to:

- provide procedures for safe management of cocoa biomass generated during rehabilitation
- prevent environmental nuisance arising from unmanaged biomass
- provide strategies for packing and utilization of the biomass generated
- ensure compliance with the ESMP and COCOBOD Cocoa Rehabilitation Protocol.

3. Scope

This Plan applies to all cocoa rehabilitation activities involving the cutting of diseased cocoa trees, chopping of stems and branches, application of approved arboricides to tree stumps, management of leaves and small branches, temporary storage of chopped cocoa wood, and the orderly collection of firewood by adult community members for domestic use.

4. Biomass Management Procedures

4.1 Tree Cutting

Only diseased cocoa trees, infected contact trees and trees approved for removal under the Cocoa Rehabilitation Protocol shall be cut.

4.2 Stump Treatment

Immediately after cutting, all remaining cocoa stumps shall be treated with approved arboricides in accordance with the Cocoa Rehabilitation Protocol to kill the living stump and root system and prevent regrowth. The treated stump shall remain undisturbed until complete die-back has occurred.

4.3 Management of Leaves and Small Branches

Leaves, twigs and small branches generated during rehabilitation shall be retained and evenly spread across the farm to decompose naturally. This will enhance soil organic matter, conserve soil moisture, reduce soil erosion, and recycle nutrients to support subsequent cocoa establishment.

Open burning of leaves and small branches shall be strictly prohibited except where specifically authorized by the relevant regulatory authority under exceptional phytosanitary circumstances.

4.4 Management of Tree Stems and Large Branches

Large stems and branches shall be chopped into manageable pieces of approximately **0.5–1.0 m in length** and neatly stacked at designated locations within or along the edge of the rehabilitated farm. The stacked wood shall be placed in a manner that does not obstruct farm operations, footpaths or watercourses, create safety hazards, and remains easily accessible for collection by authorized adult community members for domestic firewood.

4.5 Beneficial Community Use

The chopped cocoa wood shall be provided free of charge to adult members of the host communities for domestic firewood, supporting sustainable biomass utilization and contributing to community livelihoods.

Collection shall be undertaken under the supervision of the Service Provider and the beneficiary farmer to ensure orderly removal and prevent conflicts.

Children shall not participate in the collection, transportation or loading of firewood.

5. Environmental Protection Measures

The Service Provider shall implement the following environmental protection measures throughout biomass management activities:

- Ensure that biomass is not stacked within 30 m of streams, wetlands, watercourses, or other environmentally sensitive areas.
- Prevent obstruction of natural drainage channels, access roads, footpaths, and farm operations during biomass handling and storage.
- Protect retained desirable shade trees and other non-target vegetation from unnecessary damage during tree cutting, chopping and stacking operations.
- Strictly prohibit the open burning of cocoa biomass.
- Maintain good housekeeping by keeping work areas and farm access routes free from scattered biomass and other obstructions.
- Remove any residual wood or biomass remaining after community collection where it poses an obstruction or safety risk.
- Reinstate and restore temporary biomass stacking areas to their original condition before completion of rehabilitation activities.

6. Occupational Health and Safety

Workers engaged in tree cutting and chopping operations shall:

- Wear appropriate personal protective equipment (PPE), including safety helmets, eye protection, gloves, safety boots and reflective vests, as applicable.
- Receive training on safe chainsaw operation, tree-cutting techniques and emergency response procedures before commencing work.

- Use only approved, well-maintained cutting equipment that is inspected regularly to ensure safe operation.
- Maintain safe working distances between workers and establish exclusion zones to prevent injury to workers and the public.
- Apply safe manual handling techniques when lifting, carrying, stacking and transporting chopped wood to minimize the risk of musculoskeletal injuries.
- Restrict access to active work areas by preventing unauthorized persons from entering tree-felling and wood-processing zones through appropriate supervision and warning signage.

7. Roles and Responsibilities

The successful implementation of this Biomass Waste Management Plan requires coordinated efforts among COCOBOD, the Service Provider, CHED, Environmental and Social Specialists, and beneficiary farmers. Table XX outlines the key roles and responsibilities of each stakeholder in ensuring that biomass generated during cocoa rehabilitation is managed safely, efficiently, and in accordance with this Plan.

Table XX: Roles and Responsibilities for Implementation of the Biomass Waste Management Plan

Institution	Responsibilities
COCOBOD PIU	Overall supervision and monitoring of implementation
CHED	Technical supervision and verification of biomass management
Service Provider	Tree cutting, chopping, stacking and housekeeping in accordance with this Plan
Environmental & Social Specialists	Periodic monitoring and reporting
Beneficiary Farmers and Community members	Collect stacked firewood safely and only after authorization by the Service Provider

8. Monitoring Requirements

The following indicators shall be monitored during implementation:

Indicator	Monitoring Frequency	Responsible Party
Percentage of cut tree stumps treated with arboricide	Daily	Service Provider / CHED
Percentage of biomass chopped and properly stacked	Weekly	Service Provider

Number of unauthorized biomass burning incidents	Monthly	PIU Environmental Specialist
Number of farms where leaves and small branches are retained for natural decomposition	Monthly	CHED
Number of community firewood collections undertaken safely	Monthly	Service Provider
Number of biodiversity or environmental complaints related to biomass management	Quarterly	PIU

9. Reporting

The Service Provider shall include a Biomass Waste Management section in the monthly Environmental and Social (E&S) Report submitted to CHED and the PIU. The report shall summarize the area rehabilitated, the estimated quantity of biomass generated, the proportion of biomass that has been chopped and properly stacked, the status of stump treatment with approved arboricides, the quantity of firewood collected by community members, any incidents of non-compliance with this Plan, and the corrective actions implemented to address identified deficiencies.

10. Expected Outcomes

Implementation of this Biomass Waste Management Plan is expected to:

- Ensure the safe, efficient and environmentally sound management of cocoa biomass generated during rehabilitation activities.
- Prevent environmental nuisance, indiscriminate disposal and unnecessary accumulation of biomass on rehabilitated farms.
- Improve soil fertility, moisture retention and nutrient recycling through the natural decomposition of leaves, twigs and small branches.
- Promote the beneficial reuse of chopped cocoa wood by providing a sustainable source of domestic firewood to surrounding communities, thereby contributing to local livelihoods.
- Eliminate the practice of open burning of cocoa biomass and its associated air quality and greenhouse gas impacts.
- Enhance compliance with environmental and social requirements while supporting the sustainable rehabilitation of CSSVD-affected cocoa farms.

Annex 21: Pictures of Stakeholder Engagement at Asamankese District

Stakeholder Engagement Session among TCDP PIU, Asamankese CHED Officials and the Service Provider in the Asamankese Cocoa District in February 2026.





An Engagement with Cocoa Farmers by PIU and CHED at Asamankese Cocoa District in October 2024



