Ministry of Food & Agriculture (MoFA)

West African Food System Resilience Program - Phase 2 (FSRP2) (P178132)

Stakeholder Engagement Plan - Ghana

February 2023

Abbreviations and Acronyms

ADB	Agricultural Development Bank
ADR	Alternative Dispute Resolution
AfCFTA	Africa Continental Free Trade Area
AGRA	Alliance for Green Revolution in Africa
AGRHYMET	Agriculture, Hydrology and Meteorology
APD	Animal Production Directorate
ARAP	Abbreviated Resettlement Action Plan
ARI	Animal Research Institute
AWPPEA	Agogo Women Plantain Producers and Exporters Association
CD	Customs Division
CDA	Coastal Development Authority
CERC	Contingency Emergency Response Component
CERSGIS	Centre for Remote Sensing and Geographic Information Services
CGRC	Community Grievance Resolution Committee
CLG	Crop Life Ghana
CORAF	West and Central Africa Council for Agricultural Research and Development
CRI	Crop Research Institute
CSO	Civil Society Organisation
CSIR	Council for Scientific and Industrial research
DAs	District Assemblies
DAES	Directorate of Agricultural Extension Services
DCS	Directorate of Crops Services
DGC	District Grievance Committee
DFSA	Department of Fisheries Science and Aquaculture
EA	Environmental Assessment
EAA	Environmental Assessment and Audit
e-AP	e-Agricultural Programme
ECG	Electricity Company of Ghana
ECOWAS	Economic Community of West African States
EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
ESIA	Environmental and Social Impact Assessment
ESF	Environmental and Social Framework
ESS	Environmental and Social Standards
FAO	Food and Agriculture Organization
FDA	Food and Drugs Board
FoC	Forestry Commission
FA	Farmers Associations
FC	Fisheries Commission
GBV	Gender Based Violence
GCAP	Ghana Commercial Agriculture Project
GDP	Gross Domestic Product

GIDA	Ghana Irrigation Development Authority
GMA	Ghana Meteorological Agency
GNAFF	Ghana National Association of Farmers and Fishermen
GPA	Ghana Police Service
GoG	Government of Ghana
GRC	Grievance Resolution Committee
GRIDCO	Ghana Grid Company Limited
GM	Grievance Mechanism
ICT	Information Communication Technology
IESS	Institute of Environment and Sanitation Studies
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
IFDC	International Fertilizer Development Center
INSTI	Institute for Scientific and Technological Information
IRI	Industrial Research Institute Land Valuation
LVD	Land Valuation Division
MBDA	Division Middle-Belt Development Authority
MDAs	Ministries Departments and Agencies
M&E	Monitoring and Evaluation
MEP	Monitoring and Evaluation Plan
MET	Monitoring and Evaluation Team
MMDAs	Metropolitan, Municipal and District Assemblies
MoF	Ministry of Finance
MoFA	Ministry of Food and Agriculture
MSA	Meteorological Services Authority National
NADMO	National Disaster Management Organisation
NEDCo	Northern Electricity Distribution Company
NDA	Northern Development Authority
NGOs	Non-Governmental Organizations
PAPs	Project Affected Persons Preliminary
PESA	Environmental and Social Assessment
PDO	Program Development Objective
PIU	Project Implementing Unit
PPD	Plant Protection Division
PPRSD	Plant Protection & Regulatory Services Directorate
PS	Performance Standard
RAP	Resettlement Action Plan
RCC	Plan Regional Coordinating Council
RPF	Resettlement Action Framework
SDF	Semi-Deciduous Forest Zone
SEA/SH	Sexual Exploitation Abuse/Sexual Harassment
SEP	Stakeholder Engagement Plan

SIM	Stakeholder Identification Matrix
SLWM	Sustainable Land and Water Management
SRI	Soil Research Institute
TELCO	Telecommunication Companies
ToR	Terms of Reference
UENR	University of Energy and Natural Resources
VC	Value Chains
VSD	Veterinary Services Directorate
FSRP2	West Africa Food System Resilience Program, Phase 2
WBG	The World Bank Group
WIAD	Women in Agriculture Development
WRC	Water Resources Commission
WRI	Water Resources Institute
WUA	Water Users Association

Table of Contents

List of Figures

List of Tables

1.0 INTRODUCTION

1.1 Background

The Government of Ghana (GoG) through the Ministry of Food and Agriculture (MoFA) in collaboration with Economic Community of West African States (ECOWAS) and the World Bank is undertaking the second phase of the West African Food System Resilience Program (FSRP2) under the World Bank Multi-Phase Programmatic Approach (MPA). The Program includes three regional institutions: Economic Commission of West African States (ECOWAS), The Permanent Interstate Committee for Drought Control in the Sahel (CILSS), and the *West* and Central African Council for Agricultural Research and Development (CORAF). Phase 1 FSRP2 countries include Burkina Faso, Mali, Niger, and Togo. Phase 2 countries are Chad, Ghana, and Sierra Leone. The Program is expected to end December 2030. Ghana's FSRP with financing envelope of US$ 150 Million is expected to end on September 30, 2028.

The FSRP2 focuses on building resilience to climate change in Africa's food security adapted in the context of the West African Region's specific set of insecurity drivers. The proposed intervention logic builds on the 2019 Africa Food Security Leadership Dialogue (AFSLD).[1]

The Program development objective (PDO) is to strengthen regional food system risk management, improve the sustainability of the productive base in targeted areas and to develop regional agricultural markets. The focus will be on investments in resilience creation to enable the food sector to exploit its significant potential as an engine for poverty alleviation, job creation and provider of healthy and nutritious food. The five key components of the Program (with regional and national sub-components) include:

1) Digital advisory services for agriculture and food crisis prevention and management;
2) Sustainability and adaptive capacity of the food system's productive base;
3) Market integration and trade;
4) Contingent emergency response component; and
5) Project management.

The FSRP2 is prepared under the World Bank Environmental and Social Framework (ESF) which requires the Borrower to comply with the applicable Environmental and Social Standards (ESSs). The World Bank safeguard policies require that MoFA assesses and mitigates the potential environmental and social impacts of proposed activities under the Program. This also applies to the national Environmental Assessment (EA) Regulations (LI 1652), which require such undertakings undergo the required assessment.

Preliminary assessment shows the Program triggers eight (8) World Bank ESSs, comprising ESS1, ESS2, ESS3, ESS4, ESS5, ESS6, ESS8, and ESS10. The ESS10 advocates for effective stakeholder engagement, information dissemination and disclosure at all stages and with all stakeholders as a way to improve the

[1] This dialogue was held in Kigali, Rwanda in August 2019 to catalyse collective efforts to deal with hunger and vulnerability to climate change in Africa. It was hosted by the Government of Rwanda and was organized by core partners that included the African Union Commission (AUC), the World Bank, Food and Agriculture Organization (FAO), the International Fund for Agricultural Development (IFAD), and African Development Bank Group (AfDB). The AFSLD process was started to help galvanize actions and financing to address Africa's food security challenges.

environmental and social sustainability of projects, enhance project acceptance, and make significant contribution to successful project design and implementation.

1.2 Purpose and Objective of the SEP

The ESS10 of the World Bank ESF and the EA Regulations of Ghana provide the general framework and procedures for planning and conducting stakeholder engagement activities for any proposed project; and recognize the importance of open and transparent engagement with project stakeholders as an essential element of EA good practice.

Stakeholder engagement is described by the ESS10 as an inclusive process conducted throughout the project life cycle. This must be properly designed and implemented to support the development of strong, constructive and responsive relationships, important for the successful identification and management the environmental and social risks and impacts of projects under the program.

The stakeholder engagement activities will be initiated at the early stages of all project development processes to be effective as an integral part of project preparation, planning and decision-making on risks and impacts. Effective consultation, participatory approaches and information disclosure promote stakeholder and community ownership and collaboration and help to:

- Establish a systematic approach to identifying and engaging stakeholders to help build and maintain constructive relationships, particularly with project-affected parties;
- Assess the level of stakeholder interests and support to enable their views taken into account in project design and social performance;
- Promote and provide means for effective and inclusive engagement with project-affected parties throughout the project life cycle;
- Ensure that appropriate project information on environmental and social risks and impacts is disclosed to stakeholders in a timely and appropriate manner and format; and
- Provide project-affected parties with accessible and inclusive means to raise issues and grievances, which will be appropriately responded to and grievances managed.

This SEP will facilitate the establishment of general principles and procedures to guide the identification of relevant stakeholders and to plan for engagement once a project location is specified or known.

1.3 Report Organisation

This draft SEP report has been organized into eight (8) sections as follows:

- Chapter 1: Introduction
- Chapter 2: Stakeholder engagement standards
- Chapter 3: Project description
- Chapter 4: Socio-economic baseline condition
- Chapter 5: Stakeholder identification analysis
- Chapter 6: Previous stakeholder engagement activities
- Chapter 7: Stakeholder engagement program
- Chapter 8: Resources and responsibility for implementation
- Chapter 9: Grievance mechanism
- Chapter 10: Monitoring and reporting

2.0 STAKEHOLDER ENGAGEMENT STANDARDS

2.1 National Requirements

The requirement for stakeholder participation in the impact assessment process is underscored in the Environmental Assessment Regulations, 1999 (LI 1652) of Ghana. This is required at every stage of and throughout the process - the Initial Assessment, Preliminary Environmental Assessment, Scoping, Environmental and Social Impact Assessment and Strategic Assessment stages, etc. Certain stages, however, have elaborate procedures to follow such as serving scoping notices to announce the commencement of an ESIA process for transparent and inclusive purposes.

The requirement for stakeholder participation in the impact assessment process is underscored in the Environmental Assessment Regulations, 1999 (LI 1652) of Ghana. This is required at every stage of and throughout the process - the Initial Assessment (Regulation 5(c)), Scoping (Regulation 12(k)), and Environmental and Social Impact Assessment stage, etc. (Schedule 4). Certain stages, however, have elaborate procedures to follow such as serving scoping notices (Regulations 15 and 16(3) and Schedule 3) to announce the commencement of an ESIA process for transparent and inclusive purposes.

There is also a provision in LI 1652 for Public Hearing (Regulation 17), when certain conditions are triggered, such as a strong adverse public reaction to a proposal, or where there is the need for resettlement, or the project could have extensive effects on the environment, people and communities. In certain cases, a Public Hearing could be held for a proposed project even at the scoping stage, where the scale of the project and its impacts are considered very significant and of special adverse nature at the onset.

The Data Protection Act, 2012 (Act 843) sets out the rules and principles governing the collection, use, disclosure and care for personal data or information by a data controller or processor. Therefore, the right of individuals' information will be respected and their information will not be disclosed without their consent. The collection of personal information will adhere to the data protection principles set out in the Act, Section 17 - 23. The Right to Information Act, 2019 (Act 989) also requires the right to access to information. It is meant to ensure Ghanaians have access to governance or official information from public offices on request and without request. Stakeholders have the right to ask for information on the program and will be briefed accordingly at the start of the engagement and throughout.

The National Gender Policy overarching goal is to mainstream gender equality concerns into the national development processes by improving the social, legal, civic, political, economic and socio-cultural conditions of Ghanaians, particularly women, girls, children, the vulnerable and others with special needs, persons with disability and the marginalized. In this regard, FSRP2 will make provisions to ensure that activities under the program are focused and provide equal opportunity for all in line with section 4.2 of the policy.

The roles and inputs of stakeholders in the case of the FSRP2 will constitute an integral part of good industry and international best practices of the assessment process. This will inform the identification of stakeholders and the maintenance of good relationship, including information disclosure. Stakeholder involvement will also afford the opportunity to review the appropriateness of mitigation and other safeguards measures, and management and monitoring arrangements. Furthermore, it will support ongoing awareness creation and stakeholder engagement prior to the development of any sub-project under the various components.

2.2 World Bank Group's Environmental and Social Framework

The World Bank Group's Environmental and Social Framework (ESF) Standard 10 addresses the requirements for stakeholder consultation as part of the EA process. Stakeholder Engagement and Information Disclosure recognise the importance of open and transparent engagement between the project proponent and project stakeholders as an essential element of good international practice. Effective stakeholder engagement can improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation.

The key requirements of ESS10 are the following:

- Borrowers will engage with stakeholders throughout the project life cycle, commencing such engagement as early as possible in the project development process and in a timeframe that enables meaningful consultations with stakeholders on project design. The nature, scope and frequency of stakeholder engagement will be proportionate to the nature and scale of the project and its potential risks and impacts.
- Borrowers will engage in meaningful consultations with all stakeholders.
- Borrowers will provide stakeholders with timely, relevant, understandable and accessible information, and consult with them in a culturally appropriate manner, which is free of manipulation, interference, coercion, discrimination and intimidation.
- The process of stakeholder engagement will involve the following, as set out in further detail in this ESS: (i) stakeholder identification and analysis; (ii) planning how the engagement with stakeholders will take place; (iii) disclosure of information; (iv) consultation with stakeholders; (v) addressing and responding to grievances; and (vi) reporting to stakeholders.
- The Borrower will maintain and disclose as part of the environmental and social assessment, a documented record of stakeholder engagement, including a description of the stakeholders consulted, a summary of the feedback received and a brief explanation of how the feedback was taken into account, or the reasons why it was not.

A Stakeholder Engagement Plan proportionate to the nature and scale of the project and its potential risks and impacts needs to be developed by the Borrower. It has to be disclosed as early as possible, and before project appraisal, and the Borrower needs to seek the views of stakeholders on the SEP, including on the identification of stakeholders and the proposals for future engagement. If significant changes are made to the SEP, the Borrower has to disclose the updated SEP.
The Borrower should also propose and implement a grievance mechanism to receive and facilitate the resolution of concerns and grievances of project-affected parties related to the environmental and social performance of the project in a timely manner.

2.3 Comparison of the World Bank ESS10 with National Requirements

National requirements highlight the need for owners/occupiers of affected land for development to be formally notified at least a week in advance of the intent to enter and be given at least 24 hours' notice before actual entry. The WB ESS10 on the other hand provides for project-affected persons, host communities, etc. to be consulted and the opportunities to participate in the planning, implementation, and monitoring of the resettlement program, including determining eligibility for compensation and for establishing appropriate and accessible grievance mechanisms.

The WB ESS10 also recognises the importance of open and transparent engagement between a proponent embarking on a project and the project stakeholders as an essential element of good international practice. The Environmental Assessment Regulations, 1999 (LI 1652), Sections 15 and 17 require a proponent to initiate a public information and consultation program for the area likely to be affected by the proposed project.

There are gaps between the national and international requirements. Consultation procedures throughout the project cycle shall be implemented in accordance with ESS10. These shall cover affected persons and host communities (where applicable). Non-governmental organizations (NGOs) and community leaders will be involved as appropriate. Opportunities will be provided to participate in the planning, implementation, and monitoring of the resettlement program, and in particular in respect of compensation measures, additional livelihood restoration proposals and the timing of activities. All relevant documents shall be disclosed in a format and at locations accessible to affected persons and for a reasonable minimum period. These include project designs, mitigation and compensation measures, progress on implementation, and changes in designs. Grievance procedures need to be established to avoid claimants having to go to law.

3.0 FSRP2 DESCRIPTION

3.1 Background

ECOWAS is home to more than 360 million people of whom about 55% live in rural areas. Most derive their food and livelihood from agriculture, which contributes approximately 29% of gross domestic product (GDP) and constitutes 28% of total exports of ECOWAS by value. More than 30% of the population remains in poverty (below US$1.90 PPP per day) and around 60% of the poor derive their livelihoods in part or entirely from agriculture. Climate change, extreme poverty, rapid population growth and insecurity are driving high levels of vulnerability of communities throughout the sub-region. West Africa is also a climate change migrant hotspot globally, projected to reach between 17.9 million and 54.4 million people.

As of April 2020, 11.4 million people in West Africa were severely food insecure and the number was projected to rise to 17 million by August 2020, not considering likely major disruptions by COVID-19 and a possible spill over of the locust outbreak in Eastern Africa. COVID-19 driven trade restrictions are threatening to trigger price spikes in the large food import-dependent region and mobility restrictions have had immediate effects on food supply and demand, with strong expected impacts on food security and nutrition outcomes. ECOWAS and member states are deploying responses and focusing efforts to preserve and increase domestic production to secure the next harvest of key staples, anticipating further restrictions in international trade should the pandemic worsen.

Agriculture is an engine of growth and poverty alleviation in Africa. Africa has experienced faster agricultural growth (+4.6% over 2000-2017) than the global average over the same period (+2.9%). There is further headroom as African agriculture could be 2-3 times more productive if it intensified further with demand for food being projected to grow by 4.6% per annum. This growth presents significant economic opportunities but also raises pressure on production to deliver sufficient food with shrinking per capita endowments of natural resources.

There is, therefore, the need to develop food systems that will support nations meet the growing demand for food, while adequately mitigating, diversifying and transferring production risks faced by the already shrinking natural resources in the face of climate change experienced in the region. It is against this background that the FSRP2 was developed. Implementation of FSRP2 is particularly important for Ghana's food and nutrition security due to the uncertainty of the nature and severity of COVID-19 impacts across the agricultural value chains (VCs).

3.2 Overview of FSRP2

The GoG through MoFA in collaboration with ECOWAS and the World Bank is undertaking the FSRP2 under the World Bank MPA Instrument. The Program includes three regional institutions: Economic Commission of West African States (ECOWAS), The Permanent Interstate Committee for Drought Control in the Sahel (CILSS), and the *West* and Central *African* Council for Agricultural Research and Development (CORAF). Phase 1 FSRP2 countries include Burkina Faso, Mali, Niger, and Togo. Phase 2 countries are Chad, Ghana, and Sierra Leone. The Program is expected to end in December 2030. Ghana will implement the program for 5 years (expected end date December 2028) with a financing envelope of US$150 Million.

The program focuses on building resilience to climate change in Africa's Food security adapted in the context of the West African Region's specific set of insecurity drivers. This program proposed intervention

logic builds on the 2019 Africa Food Security Leadership Dialogue.[2] The Program hinges on three thematic pillars which are: 1) Agriculture and food crisis prevention and management, 2) sustainability and adaptive capacity of the food system's productive base and 3) market integration and trade.

3.3 Program Development Objectives

The main PDO of the FSRP2 is to strengthen regional food system risk management, improve the sustainability of the productive base in targeted areas and to develop regional agricultural markets. The agricultural priority focus of Ghana in this program aligns with regional priorities outlined in the regional agricultural policy for West Africa with greater integration in markets in the sub-region. The specific PDOs are:

- To establish risk management architecture to provide early warning support to value chain actors at national and regional level;
- To scale up dissemination, adoption and capacity building programmes focused on regional and national priority commodities;
- To develop, expand and maintain areas under Sustainable Land and Water Management (SLWM);
- To strengthen partnership among actors in priority value chains; and
- To facilitate and promote regional trade in inputs and output of targeted value chains.

The primary beneficiaries are the producers, aggregators, traders and all actors of the selected VCs. Other beneficiaries include key participants in establishing, managing and dissemination risk management data and information as well as researchers, public and private extension service and advisory agencies, research institutions, universities, private sector, Non-Governmental Organisations (NGOs), trade associations, financial Institutions and government agencies involved in value chain management.

The following are the proposed PDO level outcome indicators:

- Strengthened regional food crisis prevention and management systems are used for decision making;
- Total number of project beneficiaries;
- Producers adopting supported agricultural technologies and services, including access to agrometeorological information through digital channels (by gender);
- Area under sustainable and integrated land management practices; and
- Countries implementing regional trade policy in targeted input and output VCs.

3.4 Program Components

The Program has 5 components based on current food insecurity crisis towards more medium to longterm investments aimed at building the resilience of the food system and its productive base. The components comprise:

1) Strengthening digital advisory services for agriculture and food crisis prevention and management;

[2] This dialogue was held in Kigali, Rwanda in August 2019 to catalyse collective efforts to deal with hunger and vulnerability to climate change in Africa. It was hosted by the Government of Rwanda and was organized by core partners that included the African Union Commission (AUC), the World Bank, Food and Agriculture Organization (FAO), the International Fund for Agricultural Development (IFAD), and African Development Bank Group (AfDB). The AFSLD process was started to help galvanize actions and financing to address Africa's food security challenges.

2) Securing the sustainability and adaptive capacity of the food systems productive base, natural resource base and scaling up Climate Smart Agriculture;
3) Developing regional value chains and integration of food trade corridors;
4) Contingency Emergency Response Component (CERC); and
5) Project management.

3.4.1 Component 1: Digital Advisory Services for Agriculture and Food Crisis Prevention

This component will establish decision support systems to prevent and manage agriculture and food crisis and response by integrating data and leveraging cutting edge science, innovation and technologies. Also, regional capacity will be strengthened and institutional sustainability as well as private sector engagement enhanced to provide demand-driven digital advisory services. The two sub-components are:

- Regional Sub-component 1.1 - Upgrading food crisis prevention and monitoring systems; and
- National Sub-component 1.2 - Strengthening creation and provision of digital advisory services for farmers.

Sub-Component 1.1: Upgrading Food Crisis Prevention & Monitoring Systems

This aims to transform the regional food and agriculture risk management architecture (food security relevant data collection, analysis, forecast and management) in order to provide information and advisory services to support risk management decisions. This would be done by strengthening the capabilities, coordination and organization of agriculture, hydrology and meteorology (AGRHYMET) and other institutions mandated to fulfil these functions at the regional level as well as systematically engaging the private sector. It will also support:

- Regional institutional capacity for monitoring and delivering information services on food security including through the "Cadre Harmonise";
- Strengthening the existing regional agriculture information system by integrating regional multi-dimensional vulnerability data information systems to support decision making through improved advisory, Hydromet and early warning services;
- Reorganizing existing and developing new pest and disease monitoring and management mechanisms; and
- Regional collaboration through the facilitation of the regionally harmonized approaches in relation to the above including development of a learning platform for national climate information providers (public & private).

Institutions will be supported with improved ground-based data collection systems and high-end digital tools such as satellites, ground stations, weather stations, last-mile radio systems, flowmeters, drones, barometer, computer processors, etc.

Sub-Component 1.2: Strengthening Creation and Provision of Digital Advisory Services

This aims to increase access to and use of location-specific information relevant to food security by decision makers and farmers via national extension systems. This sub-component will include:

- Capacity building and institutional strengthening activities for Hydromet and Agromet service providers (public and private) at the national level;
- Enhancing the national capability to observe Hydromet phenomena to supplement regional and global weather data and infrastructure;
- Development and provision of impact-based forecasting, warning and advisory services to respond to the demands of the agriculture and food security;

- Support the timely delivery of agro-meteorological information to farmers using multi-modal channels including ICT in partnership with the private sector; and
- Support to the development of climate information that can better inform the development of agriculture and risk financing instruments.

3.4.2 Sustainability and Adaptive Capacity of Food System's Productive Base

This component targets the resilience of agro-sylvo-pastoral production systems allowing small and medium producers, especially women and youth, to sustainably meet their nutritional needs and raise incomes from the sale of surpluses in local and regional markets. This would be achieved through:

- Adapting and adopting technologies, innovation and knowledge to counter the evolving challenges of the food system; and
- Building resilience in food insecurity priority areas through multisectoral interventions including better access to innovation and technologies.

The two sub-components are:

- Regional Sub-component 2.1 - Adapting and adopting innovations and technologies for resilient food systems; and
- National Sub-component 2.2 - Strengthen food security through sustainable practices in targeted areas.

Sub-Component 2.1: Adapting and adopting Innovations and Technologies for Resilient Food Systems This aims to strengthen the regional research and extension systems to deliver, in a sustainable manner, improved technological innovations including climate-smart, nutrition-sensitive, gender- and youth friendly technologies. Specifically, the sub-component would strengthen the capacity of the regional agriculture research system to fine tune existing technologies and accelerate technology transfer at the regional level from national research programs. The project will place emphasis on harnessing disruptive technologies with the objectives of:

- Improving advisory and information service provision for boosting agricultural productivity; Enhancing market linkages;
- Improving farmers' financial inclusion; and
- Providing data analytics and agriculture intelligence solutions backed by data infrastructure, remote sensing and mapping technologies, precision agriculture tools, and computing power, etc.

This sub-component will scale up the introduction of digital agriculture (E-extension, electronic markets for agriculture technologies, inputs and products), support the strengthening of the seed system, soil fertility management (development of soil maps, promotion of soil testing, monitoring of soil fertility and introduction of targeted fertilizer blending). These activities may not require land acquisition.

Sub-component 2.2 will sustainably improve rural households' food security and their resilience to climate variability in targeted areas. Proposed interventions like land and watershed restoration, floodplains restoration, water mobilization and irrigation developments and delivery of farm/community level CSA packages of technologies will be coordinated through spatial/participatory planning and management at the watershed level.

3.4.3 Component 3: Market Integration and Trade

This component will seek to expand food trade in West Africa to enable an effective distribution of surplus produce to deficit regions and facilitate production and commercialization of agricultural inputs and technologies within and across national borders. The 2 sub-components are:

- Regional Sub-component 3.1 - Facilitate trade across key corridors and consolidate food reserve system; and
- National Sub-component 3.2 - Support to Development of Strategic Value Chains.

Sub-component 3.1 will support the implementation of sound regional regulations and policies to strengthen the regional agricultural and food input and output markets.

Sub-component 3.2 will support the development of up to three VCs per participating country, focusing on backward and forward segments of priority staple crops and short cycle livestock VCs, with the potential for tangible positive impacts on regional food security.

3.4.4 Component 4: Contingency Emergency Response Component

This component will allow for a reallocation of credit proceeds from other components to provide immediate emergency recovery support following an eligible crisis or emergency.

3.4.5 Component 5: Project Management

Project management will be coordinated by ECOWAS, which would delegate technical work to the relevant mandated organizations (principally AGRHYMET and CORAF).

3.5 Implementation Target Areas

The FSRP2 will be implemented in selected district in as follows:

- Ashanti
- Bono East
- Central
- Eastern

eight (8) regions of Ghana. The proposed regions are

- Greater Accra
- Upper East
- Savannah
- Volta

3.5.1 Ashanti Region

Districts to benefit from the Project in the Ashanti Region include:

- Ejura Sekyedumase
- Sekyere Central
- Sekyere Affram Plains
- Asante Akyem North
- Offinso North

3.5.2 Bono East Region

Districts in the Bono East Region where some Project activities will be implemented include:

- Techiman North
- Techiman South
- Atebubu Amantin
- Nkoranza North
- Nkoranza South
- Sene West

3.5.3 Central Region

The identified district in the Central Region to benefit from the Project is the Effutu District.

3.5.4 Eastern Region

The identified district to benefit from the Project in the Eastern Region is the Lower Manya Krobo District.

3.5.5 Greater Accra Region

The Project will be implemented on the Accra Plains mainly the Shai Osudoku and Kpone Katamanso Districts, specifically the Kpong Irrigation Scheme and the Kpong Left Bank Irrigation Project.

3.5.6 Savannah Region

In the Savannah Region the project will be implemented in the Forest Transition and Guinea Savannah areas covering 27,810km^2 of land and a population of and 834,787 persons.

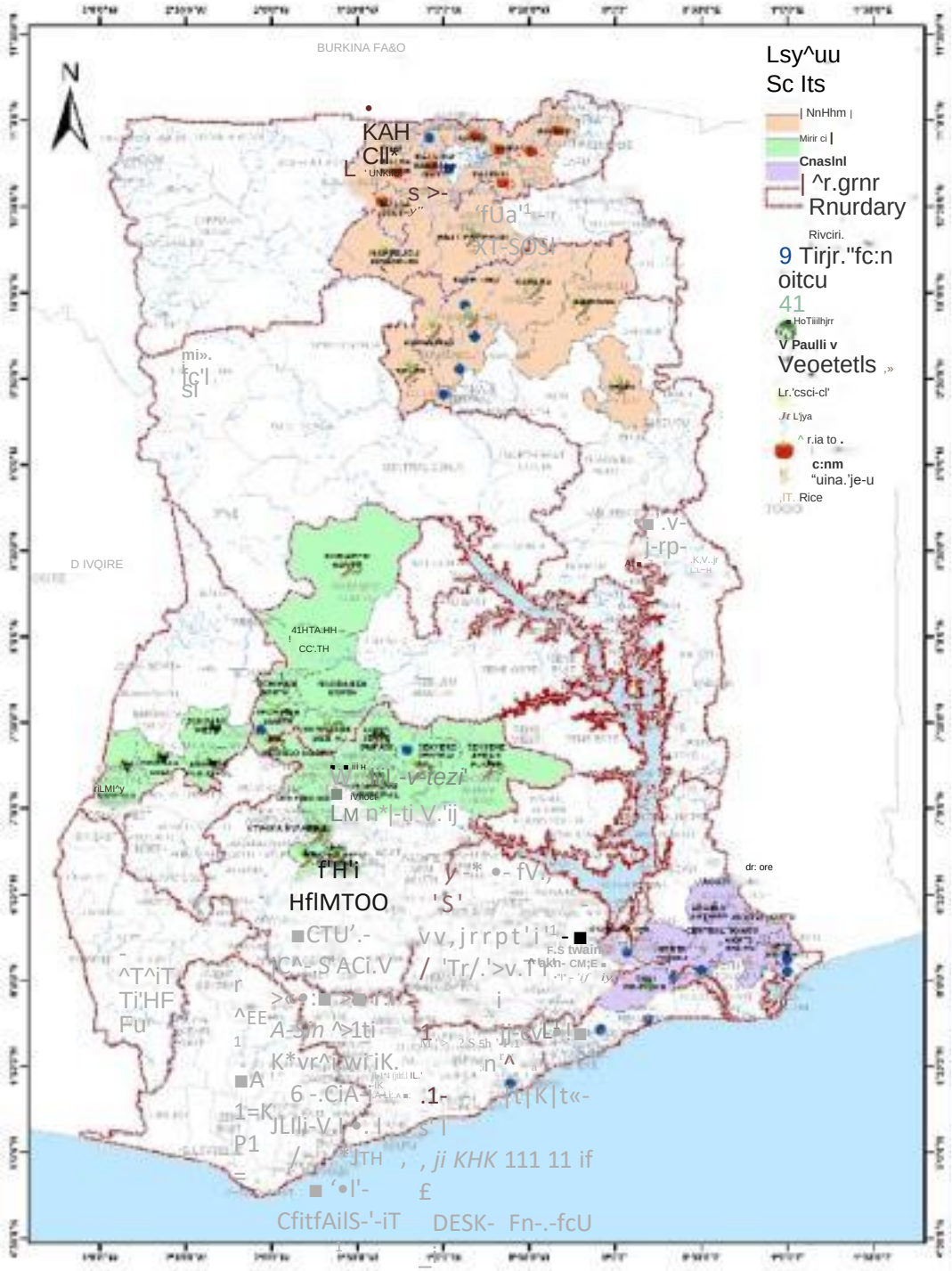
3.5.7 Upper East Region

The Project will be implemented within the White Volta Basin area covering 12,000km^2 with a population of about 1.4 million in the Upper East Region of Ghana.

3.5.8 Volta Region

In the Volta Region the Project will be implemented in the Agotime Ziope, Adaklu Anyingbe, Central Tongu, North Tongu, and Ketu North Districts.

MAP OF FSRP PROJECT AREAS AND COMMODITIES



3.6

Figure 3.1: Map of Ghana showing FSRP Project Areas and Communities

Program Components Requiring Land Take

A review of the Project components/sub-components was carried out with the view to identifying which ones would potentially require land take or acquisition of any form during implementation. The Table 3.1

shows the components of the Project whose implementation could require land acquisition, hence could raise resettlement issues.

Table 3.1 Identified Project Components Requiring Land for Implementation

Components	Sub-Components	Project Activities Requiring Land
1.0: Digital advisory services for agriculture and food crisis prevention and management	***1.1: Regional Level*** Upgrading food crisis prevention and monitoring systems	Establishment of Weather Stations and Ground Stations, etc. for information delivery services on food security may require acquisition of land
	1.2: National Level Strengthening creation and provision of digital advisory services for farmers	Establishment of Weather Stations and Ground Stations, etc. components for information delivery services on food security may require acquisition of land
2.0: Sustainability and adaptive capacity of the food system's productive base	***2.1: Regional Level*** Adapting and adopting innovations and technologies for resilient food systems	Harnessing measures to boost agriculture productivity, gender- and youth friendly technologies, extension systems, the seed system, soil fertility, mechanization services, market linkages, and digital agriculture could lead to huge agricultural expansion through conversion of other land use types and acquisitions.
	2.2: National Level Strengthen food security through sustainable practices in targeted areas	Proposed interventions such as watershed and floodplains restoration, water mobilization and irrigation developments, and land development including grazing reserve/corridor would require substantial land and acquisition of access rights, like easements or rights of way.
3.0 Market Integration and Trade	***3.1: Regional Level*** Facilitate trade across key corridors and consolidate food reserve system	Expansion of food trade in West Africa enabling effective distribution of food produce to deficit regions could potentially lead to unwholesome food due to transit challenges, which may require land for disposal of food waste
	3.2: National Level Support to development of strategic, priority staple crops and short cycle livestock value chains	Land would be required for potential expansion in the priority staple crops and short cycle livestock sectors. Facilitation of the production and commercialization of agricultural inputs and technologies would require land for setting up seeds, fertilizers, veterinary product industries
4.0: Contingency emergency response component	Reallocation of credit proceeds from other components to provide immediate emergency recovery support following an eligible crisis	Land not required for implementation
5.0: Project management	Coordination of the Project management by ECOWAS	Land not required for implementation

involving delegation of technical work to mandated organizations

4.0 SOCIO-ECONOMIC BASELINE CONDITIONS

This section presents a description of the existing environment, comprising mainly socio-economic conditions of the proposed project areas and the country generally. The chapter will also present information on socio-demographic characteristics of the agricultural population of Ghana, including issues of land tenure system in a gender disaggregated data. The targeted areas are within the Lower Volta Basin, the White Volta Basin (which traverses the NDA regions), the Forest Transition and Guinea Savannah zones, and to a limited extent, areas in the Eastern, Greater Accra and Central regions (Table 4.1).

Table 4.1 Regional Distribution of Targeted Program Areas

Target Area of Intervention	Region	Districts	
Target Area 1 - Lower Volta Basin (covering 6,950km^2 with 565,330 population)	Volta Region	Agotime Ziope Adaklu Anyingbe Central Tongu	North Tongu Ketu North
	Eastern Region	Lower Manya Krobo	
	Greater Accra Region	Shai-Osudoku	
Target Area 2 - White Volta Basin (covering 12,000km^2 with 1.4million population)	Upper East Region North-East Region Savannah Region Northern Region	Not yet identified	
Target Area 3 - Forest Transition and Guinea Savannah areas (covering 27,810km^2 and 834,787 population)	Bono East Region	Techiman North Techiman South Atebubu Amantin	Nkoranza North Nkoranza South Sene West
	Ashanti Region	Ejura Sekyedumase Asante Akyem North Sekyere Affram Plains	Sekyere Central Offinso North

The other intervention regions are Central and Savannah Regions.

4.1 Methodology for Data Collection

The methods used for gathering data included document review, institutional consultations through virtual meetings, e-mails, phone calls and text messages as well as secondary data gathered by some project stakeholders. An account mainly of the existing socio-economic conditions including the following were assembled:

- Land use categories;
- Land acquisition and tenure system;
- Socio-economic activities and farming systems;
- Heritage and cultural resources; and
- Ethnic groups.

The general hydrological, topographic, water resources and eco-climatic conditions of the country and the intervention areas are also described.

4.2 General Country Characteristics

The Republic of Ghana has an area of 239,540km^2 with a total border of 2,093km (including 548km with Burkina Faso to the north, 688km with Cote d'Ivoire to the west, and 877km with Togo to the east). It has

a coastline of 539km on the Gulf of Guinea (the Atlantic Ocean). The country is divided into 16 administrative regions and 170 districts.

The country is characterized by fairly low relief with few areas of moderate elevation in the north and east. The land is generally 600m above sea level. Physiographic regions include the coastal plains, the forest dissected plateau, and high hill tops which are important ecological sub-systems in a generally undulating terrain. At the southern and northern margins of the Volta Basin, there are two prominent areas of highland - the Kwahu Plateau, and the Gambaga Escarpment. On the eastern margins of the Volta Basin is a relatively narrow zone of high mountains running in a south-west to north-east direction with the Akwapim, Buem, Togo Ranges registering the highest point (Mt. Afadjato) in the country.

Average rainfall over the country is about 1,260mm/year, but ranges from 890mm/year in the coastal zone near Accra to 2,030mm/year in the southwestern rainforests. The rainfall is bi-modal in the southwestern forest zone, giving a major and a minor growing season; elsewhere, a unimodal distribution gives a single growing season from May to October. Except for the southwestern zone, the reliability of the rainfall, particularly after crop germination, is a major factor affecting crop growth and agriculture in general.

The poverty trends between 1992 and 2013 Ghana's national level of poverty fell by more than half from 56.5% to 24.2%, thereby achieving the Millennium Development Goal (MDG) 1 target. However, the annual rate of reduction of the poverty level slowed substantially from an average of 1.8% points per year in the 1990s to 1.1% point per year reduction since 2006. Conversely, the rate of reduction of extreme poverty has not slowed since the 1990s and progress in cutting extreme poverty was achieved since 2006 (cut from 16.5% to 8.4%). This means that relatively more progress has been made for the extreme poor in recent years than those living close to the poverty line.

Households in urban areas continue to have a much lower average rate of poverty than those in rural areas (10.6% vs 37.9%). However, urban poverty has dropped in recent years much faster than rural poverty and as a result the gap between urban and rural areas has doubled with rural poverty now almost 4 times as high as urban poverty compared to twice as high in the 1990s.

At the regional level, the Northern, Upper East, and Upper West regions continue to have the highest poverty rates. However, substantial progress has been achieved since 2006 in the Upper East region as poverty has dropped from 72.9% in 2006 to 44.4% in 2013. Northern region is of great concern because of its high level of poverty fall from 55.7% to 50.4%. Since the 1990s overall, the Northern Region has seen the smallest progress in poverty reduction. This is a major issue for the country given that the Northern Region now makes up the largest number of poor people of all the regions in Ghana (1.3 million). Although the proportion of people living in poverty has declined by a quarter since 2006, the number of people living in poverty has only declined by 10% (from 7 million to 6.4 million), meaning that poverty reduction is not keeping pace with population growth.

For child poverty, there are still 3.5 million children living in poverty today which accounts for about 28.3% of all children. It's estimated that a child is almost 40% more likely to live in poverty than an adult.

Child labour is generally very prevalent in Ghana and is a family coping mechanism linked to poverty. It perpetuates intergenerational poverty and therefore risks offsetting gains linked to poverty reduction. Child labour is most prevalent in the agriculture sector, where labour is mostly hazardous and therefore qualifies as one of the worst forms of child labour (to be eradicated by 2025 as per SDG target 8.7). Its prevalence is significant in most of the targeted regions with rates above the national average in the Savannah, Upper East, Bono East, and Volta regions.

Project region	General child labour prevalence (MICS 2017/18)
Savannah	54%
Upper East	42%
Bono East	34%
Volta	32%
Central	30%
Eastern	30%
Ashanti	22%
Greater Accra	11%

In Ghana, gender division varies across different ethnic groups. Among the Akan, women assume the basic domestic and childcare roles with both genders assume responsibility for basic agriculture production. Traditional craft production is divided according to gender with men engaging in weaving, carving and metalworks whiles women engage in pottery, food processing and petty trade, which is almost exclusively

a woman's occupation. Women independently control any money that they receive from their own works, even though their husbands normally provide the capital funding. Wives, however, assume the main work and financial responsibility for feeding their husbands and children and for other child-care expenses. Akan women also assume important social, political, and ritual roles. Within the lineage and extended family, female elders assume authority, predominantly over other women.

Among the Ga and Adangme, women are similarly responsible for domestic chores. They do not do any farm work and are heavily engaged in petty trade. They are prominent traders as they control a major portion of the domestic fish industry and the general wholesale trade in Greater Accra Region. Northern and Ewe women, on the other hand, have fewer commercial opportunities and assume heavier agricultural responsibilities in addition to their housekeeping chores.

Ghana has a modern medical system funded and administered by the government with some participation by church groups, international agencies and NGOs. Facilities are scarce and are predominantly located in the cities and large towns. Some dispensaries staffed by nurses or pharmacists have been established in rural areas and have been effective in treating common diseases such as malaria.

There is in place a National Health Insurance Scheme (NHIS) which aims to promote equity in access to health care. However, less than one-half of the population are members of the NHIS. Though a Mental Health Law (Act 846) was passed in 2012, psychiatric care and access to mental health services are limited.

Traditional medicine and medical practitioners remain important because of factors such as the dearth of public facilities, traditional beliefs and the tendency for Ghanaians to patronize indigenous and modern systems simultaneously. Customary treatments for disease focus equally on supernatural causes, the psychosociological environment, and medicinal plants. Keepers of fetish shrines focus more heavily on magical charms and herbs, which are cultivated in a garden adjoining the god's enclosure. More secularly oriented herbalists focus primarily on medicinal plants that they grow, gather from the forest or purchase in the marketplace. Some members of this profession specialize in a narrow range of conditions, for example, bonesetters, who make casts and medicines for broken limbs.

The Ghanaian education system is divided in 3 parts namely, basic education, secondary education and tertiary education with lessons being taught primarily in English. The youth literacy rate jumped from 71% in 2000 to 86% in 2010.

Education indicators in Ghana reflect a gender gap and disparities between rural and urban areas as well as between the southern and northern parts of the country. Those disparities drive public action against illiteracy and inequities in access to education with eliminating illiteracy being a key objective of Ghanaian education policy for the last 40 years. Vocational education and ICT training within the education system have also been emphasized in Ghanaian education policy and has increased over the years.

Nationally, the average household size is 4.5 people per household (Michael Bauer Research, 2019). Northern Region is the top region by average household size in Ghana with average household size of 7.7 persons that accounts for 15.81% of Ghana's average household size as at 2010. The top 5 regions with others being Upper West, Upper East, Brong Ahafo and Volta account for 58.52% of it (Knoema, 2010). About 28.46% of the employees in Ghana are active in the agricultural sector, 22.19% in industry and 49.36% in the service sector (World Bank, 2020).

Ghana boasts of waterfalls such as Kintampo Waterfalls and the largest waterfall in West Africa, the Tagbo Falls in addition are the palm-lined sandy beaches, caves, mountains, rivers and meteorite impact crater. Other attractions include reservoirs and lakes such as Lake Bosomtwe and the largest man-made lake in the world by surface area, Lake Volta. Ghana also has dozens of castles and forts, UNESCO World Heritage Sites, nature reserves and national parks.

According to statistics from the National Report of the 2017/2018 Ghana Census of Agriculture (GCA), agriculture contributes more than one-fifth (21.2%) of the GDP (GSS, 2020) and is the largest employer of the Ghanaian workforce, 36.1% (GSS, 2016). Yet, given the annual population growth rate of 2.5%, agricultural production does not grow correspondingly to meet the increasing demand for food, feed, fuel and fibres. However, improvement in food and nutrition security are core components of the agricultural development and poverty reduction strategy of the Government of Ghana as reported in the Food and Agriculture Sector Development Policy (MoFA, 2007).

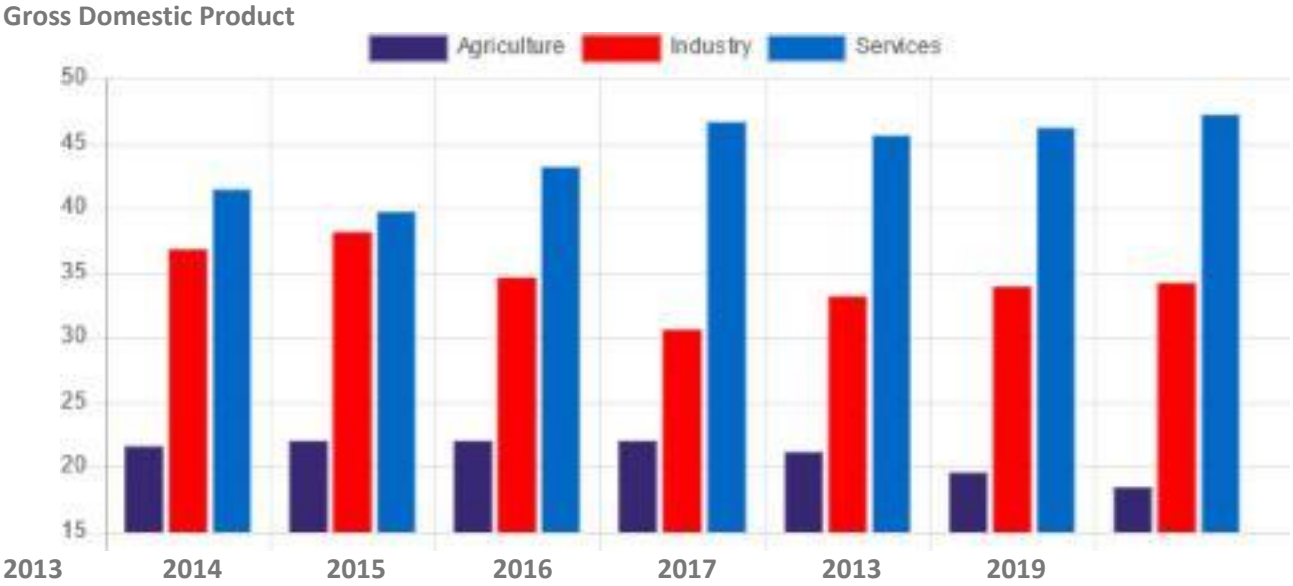


Figure 4.1 Agriculture, Industry and Services Statistics in Ghana

Agricultural activities in the country still remains rural and rudimentary with little innovation and modernisation. Most agricultural holders use traditional tools and equipment for production whereas the use of modern tools and equipment such as tractors, shellers, power tillers, hatchery/incubator, meat processing equipment and milking equipment are negligible. While fertilizer is not used by most holders, the use of pesticides is highly prevalent among holders. Crop cultivation is predominantly dependent on rain and mortality in livestock is high. The sector is characterised by the consumption of own produce. Agriculture production is largely small-scale with the majority of parcels of land used for the cultivation of crops smaller than 2 acres. The level of education among agricultural holders is low with males dominating the sector. In addition to this, the youth, generally, find agribusiness unattractive (GSS, 2020).

There are 2,585,5315 agricultural households with a population of 11,340,947 persons of which 5,663,765 (49.5%) are males. The population of agricultural households in rural areas is 8,527,553 (75.2%). More than 99% of the population of agricultural households are Ghanaian of which females (5,643,420) are slightly more than males. About 36% of the population are in the first two age groups of 0-14 years

(4,044,521) and 15-35 years (4,077,618). A total of 11,218,736, representing 98.9% of agricultural households, are without any form of disability. A population of 6,077,994 (57.2%) of persons in agricultural households who are aged 4 years or older have attained basic education while an additional 1,280,263 (12.1%) have attained secondary level of education. For persons who are 11 years or older, about two- thirds are literate in at least one language. More than half of the population of agricultural households (4,635,640) have ever married (GSS, 2020).

4.2.1 Youth in Agricultural Households

The consideration of the youth is as defined by both the United Nations (15-24 years) and the National Youth Policy of Ghana (15-35 years). The number of youths in agricultural households is 2,270,441 representing 20.0% of the total agricultural household population. A similar pattern is observed for both urban (20.7%) and rural (19.8%) areas. Out of the total youth in agricultural households, 51.3% are males and 48.7% are females. For urban areas, there are almost the same proportions of males and females and for the rural areas, the proportion of males (51.7%) is 3.4%age points higher than females.

4.2.2 Youth 15-35 Years - Ghana's Definition

The youth population in agricultural households is 4,077,618, representing 36.0% of the total agricultural household population. The youth in urban agricultural households form 37.7% of the total population of agricultural households while the proportion for rural agricultural households is 35.4%. The female youth constitute about 51.0% of the total youth population. There are more female youth than male youth in both urban (51.5% and 48.5% respectively) and rural (50.6% and 49.4% respectively) agricultural households.

4.2.3 Educational Attainment and Literacy

Among the agricultural household population in the country, those who are aged 4 years or older forms 93.7% of the total agricultural household population (11,340,947). Out of this number, majority (57.2%) have basic education, 12.1% have secondary/vocational education, and only 3.1% have tertiary education. However, more than one-quarter (27.2%) of the agricultural household population have never attended school. The proportion of females who have never attended school (31.5%) is higher than that of males (23.0%). The proportion of household members who have never attended school is higher in rural areas (30.2%) than in urban areas (18.4%). Except for basic education, where high proportions are observed for both males and females in rural and urban areas, educational attainment is higher among urban than among rural household members.

With respect to tertiary education, there is relatively higher proportion of persons in urban areas (6.4%) compared to 2.0% of those in rural areas. Nearly two-thirds (65.8%) of household members, 11 years or older, are literate in at least one language and 34.2% are non-literate in any language. Out of the total household members, 38.4% are literate in both English and a Ghanaian language, 13.6% are literate in a Ghanaian language only, while 12.8% are literate in English language only. The literacy level for males (71.1%) is higher than that for females (60.5%). Similarly, the proportion of male household members (11 years or older) who are literate in English and a Ghanaian language (43.5%) and English only (14.0%) are higher compared to their female counterparts (33.4% and 11.6% respectively). Generally, literacy rates are higher in urban than in rural areas and follow a similar pattern for both males and females.

4.2.4 Relationship to Head of Agricultural Households

Children of the head of agricultural households form more than half (51.9%) of the agricultural household population and spouses form 13.9%. Together, the extended family members of the head and spouse form a little more than one-tenth (11.2%) of the household population. Grandchildren constitute about

5% of the household members. The proportion of male-headed households in urban areas are two and half times that of female-headed household. In rural areas, there are 3 male-headed households to every female-headed household.

4.2.5 Marital Status

Of the agricultural household members who are 16 years or older, more than half (53.1%) are married and 33.4% have never been married. The proportion of married household members in rural areas (53.9%) is higher than those in urban areas (51.1%). A higher proportion of persons residing in urban areas (36.2%) compared to those in rural areas (32.3%) have never been married. In both urban and rural areas, the proportions of males who have never been married are higher than their female counterparts (by more than 9%age points), while widowed females in both urban and rural areas are in higher proportions (about five times higher) than their male counterparts.

Almost all (99.2% of males and 94.6% of females) persons in their early youth (16-19 years) are not married and only about 2% are married while majority of household members aged 25-59 years are married. Females marry at an earlier age compared to males. Among age group 20-24 years, 28.1% of females compared to 7.6% of males are married and at age 25-35 years, 70% of females are married compared to about 50% of males. Also, nearly one-third of persons 60 years or older are widowed (of which females make 53.2% and males 10.8%). A similar pattern is observed for both urban and rural areas and there are no marked differences between the age groups.

Almost all persons in their early youth (16-19 years) have never married (98.2% in urban areas and 96.6% in rural areas) while majority of household members aged 25 years or older are married. Persons in rural areas marry at earlier ages compared to those in urban areas. Among persons in the 20-24 years age group, 20.3% in rural areas are married compared to 11.3% in urban areas and for age group 25-35 years, 62.9% of persons in rural areas are married compared to 54.0% in urban areas.

4.2.6 Nationality of Agricultural Household Members

Almost all the agricultural household population (99.8%) are Ghanaian while the remaining 0.2% are other nationals. Among other nationals (25,338), Togolese and Burkinabes outnumber nationals of other countries and constitute respectively 35.5 and 23.4% of the non-Ghanaian agricultural household population. Similar patterns are observed for males and females, and in both urban and rural areas.

4.2.7 Persons with Disability

There are 122,209 persons in agricultural households with some form of disability and this constitutes 1.1% of the agricultural household population. Similar proportions are observed across urban and rural areas and for male as well as female household members. Among the various forms of disabilities, persons who are physically challenged form the highest proportions for both males and females in both urban and rural areas. Among those with some form of disability, close to two-fifths (38.3%) suffer physical disability and about one-fifth have sight disability. The prevalence of all forms of disability is higher in urban areas than rural areas for both males and females.

The proportion of persons engaged in the cultivation of forest trees who have some form of disability is 2.2% while the proportion for all other types of agriculture is less than 2% in both urban and rural areas with the least being persons engaged in capture fisheries (0.6%). A similar pattern is observed for urban and rural areas for each type of agricultural activities and for males and females. However, for males the proportions are relatively higher among persons engaged in forest tree (2.0%), beekeeping (1.8%) and

1.5% for persons engaged in tree cropping and aquaculture. For females, the proportions are relatively higher for persons engaged in forest tree (3.0%), tree cropping (2.1%) and livestock (1.5%).

4.2.8 Size of Agricultural Households

Agricultural households have an average household size of 6.6 persons. The average household size is slightly higher in rural areas (6.6 persons) than in urban areas (6.4 persons). A little more than one-quarter (25.9%) of households have either four or five members. One-quarter (24.7%) of the households have between six and nine members. One-fifth (20.4%) of the total households are single member households. Households with six or more members constitute 31.4% in rural areas compared to 26.8% in urban areas. The proportions are almost equal in both urban and rural areas for households with 2-3 and 4-5 members.

In contrast, one person households form 23.2% in urban areas and 19.4% in rural areas. Households headed by persons aged 15-19 years have the highest proportion (50.7%) of single member households. More than one-third (36.2%) of households headed by persons aged 36-59 years have six or more members. About one-fifth (20.4%) of heads of households aged 60 years or older live alone. For female heads aged 60 years or older, 26.8% live alone compared to 16.8% recorded for their male counterparts.

4.2.9 Main Activity of Agricultural Holders

The main activity of the majority (65.7%) of all agricultural holders is arable cropping followed by tree cropping (30.9%). Only 3% of agricultural holders are mainly engaged in livestock rearing. Whereas a slightly higher proportion of female holders (68.6%) than male holders (65.7%) are mainly engaged in arable crop farming, the reverse is the case for holders mainly engaged in tree crop farming (of which males account for 32.1% and females 27.9%). There is an overwhelming dominance (more than 90%) of male holders engaged in capture fisheries, aquaculture and bee-keeping. This male dominance is relatively reduced to an average of 70% for poultry, arable and tree crops. A similar pattern is observed for holders in urban and rural areas.

4.3 Surface Water Resources

4.3.1 Lower Volta Basin Area - Surface Water

The Lower Volta Basin is located below the confluence of the Black Volta and the White Volta rivers, excluding the Oti River drainage area. The surface water resources in the basin consist of flows from outside the country and flows from within the country. Discharges of White Volta at Nawuni and Mole River at Lankatere were used to estimate the total basin discharge (Table 4.2).

Table 4. 2 Surface Water Flow of the Lower Volta of Ghana

Station	**River**	**Catchment Area**	**Annual Discharge (m^3/s)**	**Dry Season Discharge (m^3/s)**	**Wet Season Discharge (m^3/s)**
Nangodi Yarugu	Red Volta White Volta	10,974 41,619	30.72 80.00	0.34 2.17	61.12 157.00
Total inflow			**110.72**	**2.51**	**218.12**
Nawuni Lankatere	White Volta Mole	96,957	229.98 73.31	18.95 15.78	440.05 131.33
Total outflow			**303.29**	**34.73**	**571.38**
Total flow from within the catchment area in Ghana			**192.57**	**32.22**	**353.26**
% Total inflow / Total outflow			**36.5**	**7.2**	**38.0**

The Lower Volta Basin covers a total area of about 68,588km^2 and most of that (50,432km^2) is located in east-central Ghana. The basin includes also portions of the Northern, North East, Savannah, Bono East, Bono, Oti and Volta Regions, and the Ashanti and Eastern Regions and also parts of Togo.

Annual rainfall in the basin varies from about 1,100mm in the northern part of the basin to about 1,500mm in the central and to about 900mm in the southern part. Pan evaporation is about 1,800mm per year and runoff from within the basin is estimated to be 89mm/year. The natural total mean runoff from the Basin is estimated to be 1,160m^3/s with the Volta Lake behind Akosombo dam providing extensive regulation. Current river water withdrawals in the basin include about 1.86m^3/s domestic water supplies, about 0.71m^3/s for irrigation, and about 566m^3/s for power.

Water has always been held as sacred in all of the world's religions. Immersion in water and baptism are common within the Christian faith (civiltaqua.org). In most rural and urban communities in Ghana, water bodies represent deities. Most ethnic groups along river bodies give different names to the water bodies and perform customary rituals for the water gods. In most rural communities, surface water also serves as a source of drinking water for both humans and livestock. All projects that require the use of water will require consultation with the respective traditional authorities for the necessary rituals and purification. Projects that depend on water must accommodate the interest of water users in order not to create situations that will lead to restriction of access for the purpose of rituals by traditionalist and other religious persuasions.

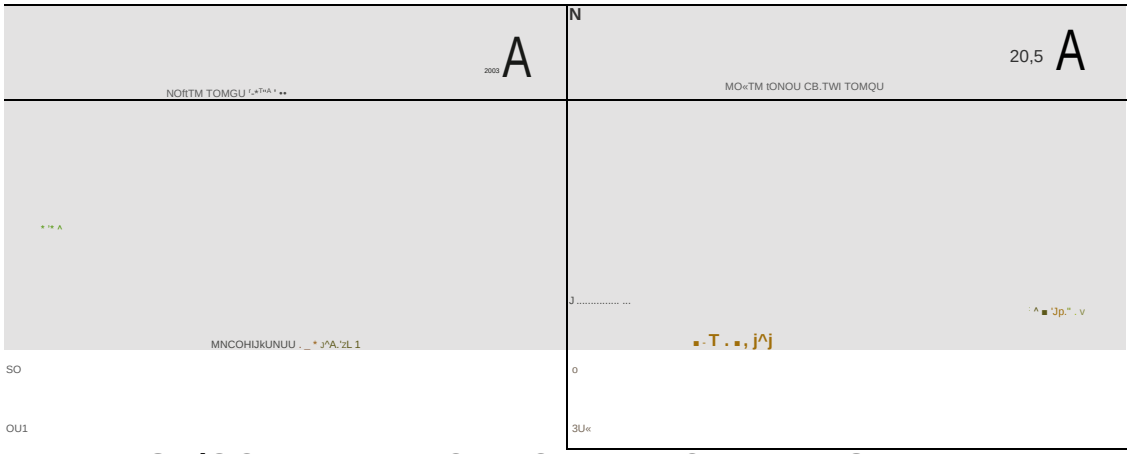


Figure 4. 2 Land Use Map of the Lower Volta Basin (2003, 2015)

4.3.2 White Volta Basin Area - Surface Water

The White Volta sub-basin covers about 49,210km^2 in Ghana, representing 46% of its total catchment area distributed in Ghana, Burkina and Togo. The White Volta covers mainly the north-central Ghana and some

parts of the former Upper and Northern Regions. It is located within the Interior Savanna Ecological Zone and is underlain by the Voltaian and granite geologic formations.

Annual rainfall ranges between 1,000mm in the north and 1,200mm in the south; pan evaporation is about 2,550mm/year and runoff from within the basin averages about 96.5mm/year. The average annual runoff from the White Volta is about 272m^3/s and the mean monthly runoff from within the basin varies from a maximum annual flow of 1216m^3/s to a minimum of about 0.11m^3/s.

Development potentials have been identified in the White Volta Basin which include a total of 63 megawatts of installed hydroelectric generating capacity, 155,809 hectares of irrigation, flood control, domestic water supply, navigation and recreation.

The movement of cattle, sheep, and people across national boundaries is common within the basin. This phenomenon is usually accompanied by reckless destruction of vegetation, watering sources, etc. The situation also creates social tension and disruption of socio- economic activities, sometimes proving fatal.

4.4 Land Use, Ownership and Degradation

About three-quarters (75.2%) of parcels used by holders for the production of crops are owned (52.2%) or inherited (23.0%) by the holders. Land used for share-cropping constitutes 8.9% whereas parcels held in trust (2.1%) by state and squatting (1.8%) are not very common types of tenure arrangements.

The total number of parcels used for the production of annual crops, tree crops and forest trees is 3,130,492. More than eight in every ten parcels (84.0%) are used either partially or solely in the cultivation of arable crops, 40.9% for tree crops and 1.0%. This general pattern is reflected in all the land tenure arrangements, except for parcels used for share-cropping. Share-cropping is the most common land tenure arrangement used for the cultivation of tree crops (70.0%) and the least for the cultivation of arable crops even at 75.1%. Cultivators of arable crops use all types of land tenure arrangements systems intensively with renting and squatting being close to 100%. The use of share-cropping system of land tenure arrangement is the dominant choice for the cultivation of tree crops at 70% with the other forms well below 50%. Similar patterns are observed in the land tenure arrangement for the urban and rural areas.

In all the types of land tenure arrangements, the proportion of the parcels used for the cultivation of crops (arable crops, tree crops and forest trees) by female holders constitute less than a quarter (24.2%), except for trusteeship and squatting where the proportion of parcel used by female holders are about one-third (33.8% and 32.7% respectively). Freehold and inheritance are the dominant land tenure arrangements. For all three types of crops, holders who use freehold or inheritance constitute about three-quarters. More than half of the holders engaged in arable crops (50.2%), forest trees (55.8%) and tree crops (57.0%) own their parcels through freehold. The proportion of holders who acquired their parcels through inheritance is the second highest for holders cultivating arable crops (24.0%), forest tree (21.9%) and tree crops (19.7%). The proportion of female holders engaged in tree cropping (59.8%) who own their parcels of land is higher than that of male holders (56.2%)

Generally, majority (82.6%) of the parcels used by holders is not covered by any form of documentation on the tenure arrangement. Only about 13% of the parcels have complete documents, with 3.2% having partial documentations. The proportions of parcels under freehold (16.0%), share-cropping (15.7%) and leasehold (13.4%) land tenure arrangements covered by documents are relatively higher compared to the

other categories of tenure arrangements. Three-quarters (74.7%) of the total number of parcels of land (3,130,492) are used by male holders. The proportion of parcels with documents used by males under leasehold (14.7%) and share-cropping (16.3%) is substantially higher than for females (leasehold is 4.5% and share-cropping is 2.9%). The proportion of documented parcels used by male and female holders under freehold and inheritance are almost the same.

Seven in ten of parcels used for tree crop and forest tree farming have no documentation and eight in ten parcels for arable crop farming are also not covered by any documentation. Only about a tenth of parcels used for arable crops have full documentation, while 2.9% of parcels for arable crops have partially complete documentation. For the cultivation of tree crops and forest trees, about one-fifth of parcels have documents. Majority of parcels of land (56.7%) under cultivation are small-scale, one-quarter (25.6%) are medium-scale, while 17.7% are large-scale.

A higher proportion of females (71.4%) than males (51.7%) engage in small-scale farming in both urban and rural areas. Most of the parcels used for all three types of crops (arable crops, 59.4%; tree crops, 49.1%; and forest trees, 53.1%) are small-scale (56.7%) with medium-scale parcels constituting a quarter (25.6%) and large-scale (17.7%) being the remainder of parcels. A similar pattern is observed for both sex of holder and type of locality, with the exception of forest tree cultivation in the urban areas where large-scale farming is second to small-scale.

4.4.1 Lower Volta Basin Area - Land Use

Current land use is short bush fallow cultivation along the immediate banks of the river, and less intensive bush fallow cultivation elsewhere. Animal grazing is common while the lakeshores are extensively settled by fishing families. Charcoal burning involving the cutting of wood has become an extensive economic activity in the southern dry forest and transitional environments such as in parts of the Afram sub-basin.

The Afram Plains and other areas in the south have been the focus of increasing settlement and agricultural development since the 1960s, having been generally thinly populated in the past as part of the empty "middle belt". The forest and transitional areas are intensively farmed with cocoa, coffee, plantain, cocoyam, cassava, oil palm, and maize on small bush fallow plots. A large modern commercial farm at Ejura specializes in maize production. Timber extraction takes place in these areas.

Recent developments, particularly below the Akosombo Dam, include irrigated rice, sugar, and vegetable cultivation in the areas immediately adjoining the Volta River. The areas around the coastal lagoons, such as the Songhor, are used for salt mining. Figure 5.1 illustrates the land use cover changes of the Lower Volta Basin between 2003 and 2015.

The indigene-settler rivalry arising out of the Volta River Authority (VRA) resettlement programme following the creation of the Volta Lake led to the conflicts between the Kwahu (indigenes) and Ewe (settlers). These conflicts revolved around land struggles with ethnic/chieftaincy undertones has influenced the allocation and land use in the area.

4.4.2 White Volta Basin Area - Land Use

The predominant land use is cultivation (NAES, 1993), with widespread grazing of large numbers of cattle and other livestock up to 100 cattle/km^2 (FAO, 1991), as well as compound cropping around houses (Wills, 1962; Adu, 1967; USAID/ADB, 1979; FAO, 1963; NAES, 1993). Farm sizes are usually less than 3ac. Grazing land including that obtainable under natural condition is generally poor. Annual bush burning further reduces the quality and quantity of fodder.

Extensive valley bottoms in many parts of the basin, particularly in the Guinea Savannah areas, have in recent years been cultivated for rice under rain-fed conditions. A long period of intensive cultivation and grazing (in the upland areas) without proper management practices have led to widespread soil erosion and loss of fertility of the upland soils.

Urban land use is small and most intensive in such centres as Bolgatanga, Bawku, Wa, Navrongo, Tamale, and Tumu. Due to the decentralisation of administration to the district level, urban type land use is becoming important in some of the district capitals, especially those along major trunk roads.

4.5 Agro-Ecological Zones in the Volta Basin of Ghana

There are 6 agro-ecological zones, defined on the basis of climate, reflected by the natural vegetation and influenced by the soil types recognized in Ghana (Figure 4.3). These consist of the Sudan, Guinea and Coastal Savanna Zones, Forest-Savanna Transitional Zone, the Semi-deciduous Forest Zone and the High Rainforest. In all these zones, the natural vegetation has undergone a considerable change because of human activities. Rainfall is generally accompanied by high intensities and energy loads and is therefore erosive, leading to alluvia soils (Fluvisols) and eroded and shallow soils (Leptosols) in all the zones (FAO-RAF, 2000/1).

Except for the Tropical Rainforest Zone, the Volta Basin of Ghana (covering most of the FSRP2 areas) falls in all the agro-ecological zones of the country. The largest portion is in the Sudan Guinea Savanna zones (24.2%) followed by the Forest Savanna Transition zone (11.2%) and the Semi Deciduous Forest zone (5.4%). The Coastal Savanna occupies a small area of about 0.5%.

4.6 The NDA Regions

The erstwhile Savanna Accelerated Development Authority (SADA), now Northern Development Authority (NDA) regions form more than half of the total land surface of Ghana. The project area lies between latitudes 8^0N and 11^0N and longitudes 1^0E and 3^0W. The economy of the northern savanna ecological zone is mainly agrarian, which is the basis of livelihood for most of the population. The small-scale family holding is the basic unit of production. Most of the project area falls within the Guinea Savanna zone, although activities may extend into a small area of Sudan Savanna in the extreme northeast corner of the country.

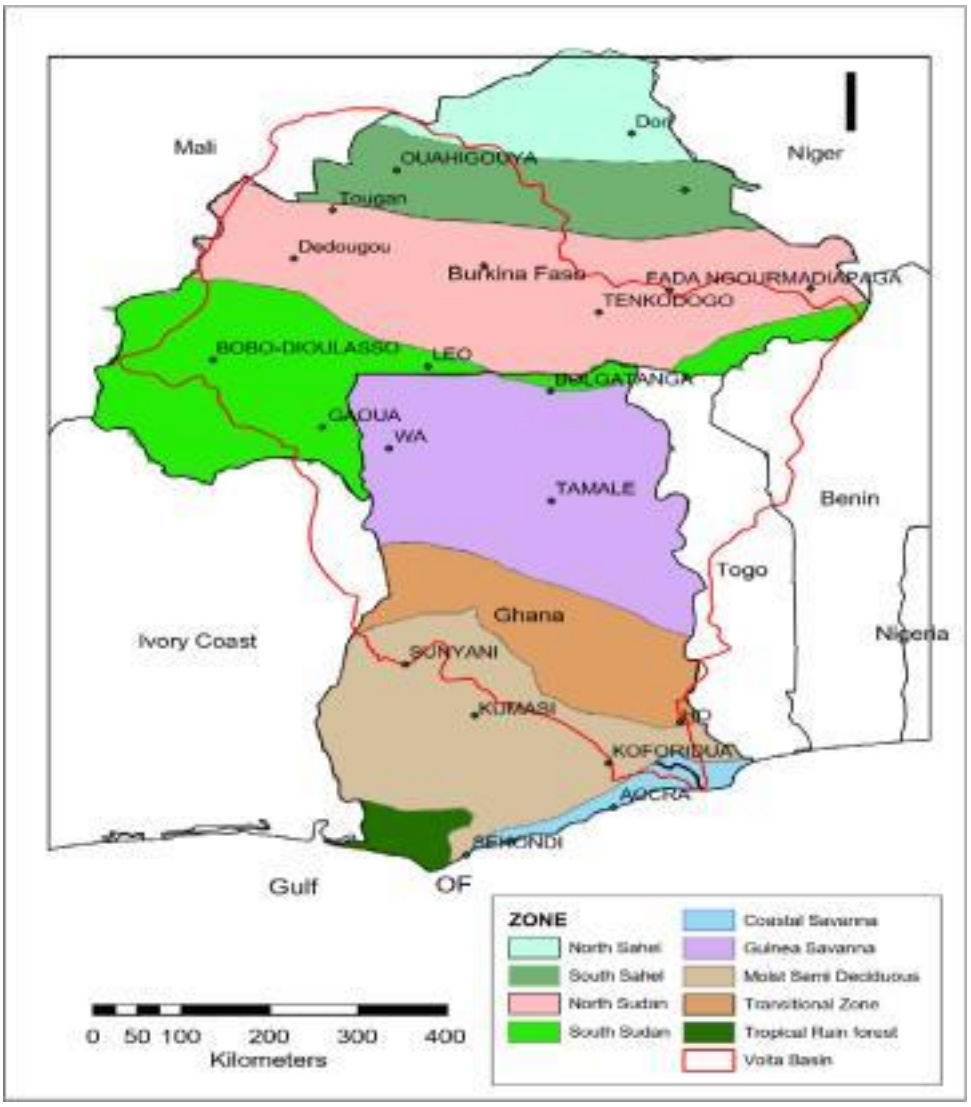


Figure 4. 3 Map Showing the Agro-Ecological Zones of Ghana and Burkina Faso

The WAFSRP2 has been identified to complement NDA's Agriculture Strategy and Network (Figure 4.4) to ensure the integration of priority agriculture areas, irrigation and flood control projects. This covers the following:

- Over 8-million-hectare land suitable for rain-fed or irrigated agriculture;
- Land highly suitable for 25 studied crops (with possibility of double and triple cropping);
- Suitable land for rice paddy field development;
- Suitable land for large scale livestock production; and
- 23 potential large and medium-sized dam sites for power, irrigation, aquaculture, flood control, tourism, and other uses.

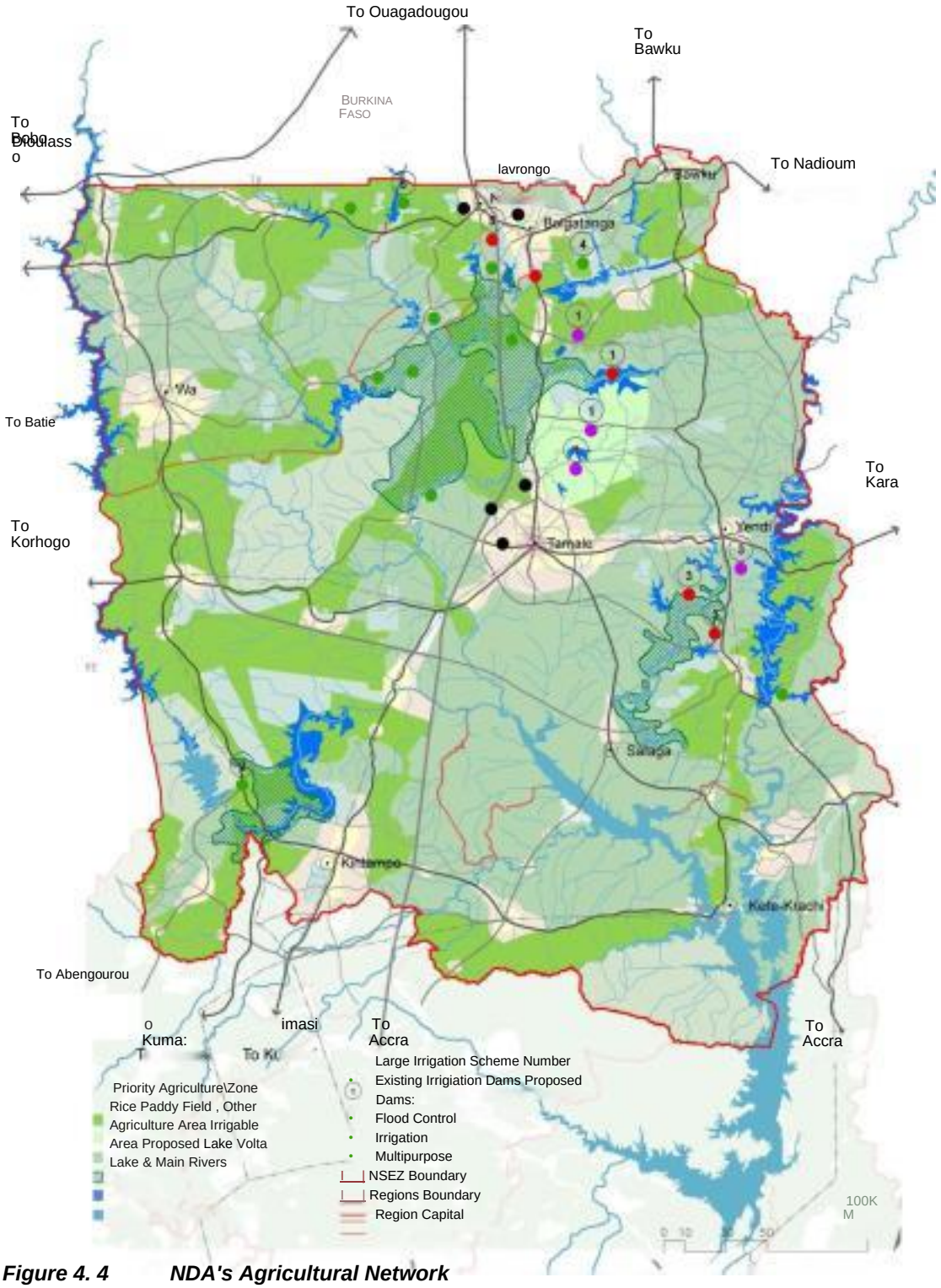


Figure 4. 4 NDA's Agricultural Network

4.6.1 Socio-Cultural Environment

The population of the former three northern regions (Northern, Upper East and Upper West) was 3,346,105 (2000 Population and Housing Census). The then Northern Region carried the highest human population of 1,854,994, followed by Upper East with 917,251 and Upper West with 573,860. However, population densities followed the reverse order of 104 persons/km^2 for Upper East, 31 persons/km^2 for Upper West and 26 persons/km^2 for the Northern Region.

The main ethnic groups include the Dagbani, Mamprusi and Gonja in the Northern Region, Dagaaba, Waala and Sisala in the Upper West, Builsa, Kassena, Nankani, Grunnie, Nabdam and Kussasi in the Upper East Region. Patrilineal inheritance is the norm and traditional authority is vested in the chief, who sits on a skin, an acknowledged symbol of identity of the group and authority (Acheampong, 2001).

On-farm Livelihood Activities

Most people in the three northern regions are traditionally crop and livestock farmers (cereals, root and tubers; and goats, cattle and sheep) for subsistence and gain. Outside farming season activities include farm produce processing and marketing, livestock grazing and "pastoralling", bush fire prevention and control and rehabilitation of residential structures.

Grazing is on communal basis and anyone with animals may graze animals on communal lands in the community. Herders from other communities will have to obtain grazing rights from the village chief or head of the land-owning group before putting their animals on communal lands to graze. Communal lands are "common good" and are rather taken for granted as limitless gift of nature available to be used. (Acheampong, 2001).

Culture and Religion

Each region consists of at least 3 ethnic groups and spoken languages are varied accordingly. The major ethnic groups are each represented by a paramount chief. The Northern Region has 4 paramount chiefs who represent four major ethnic groups. Islam is the dominant religion in the Northern Region, whereas Traditional and Christian religions are prominent in the Upper East and Upper West Regions respectively.

Disaster Risk Exposure

Risk sources range from erratic climatic conditions, limited opportunities for off-farm economic activities, poor planning and implementation of development policies to frequent incidence of bushfires, floods and droughts, which are the bane of the area's underdevelopment. Additionally, persistent inter- and intraethnic conflicts result in heavy loss of lives and property, with resources redeployed into conflict resolution. In the Northern Region, there are longstanding often violent inter-ethnic conflicts between the Gonja and the Konkomba and between Dagombas and Konkomba. Intra-ethnic conflict between Bimbagu and Bimbilla. Also, land use conflicts have been a source of violence between Fulani herdsmen and local farmers in the Northern parts of Ghana.

4.6.2 Land Tenure

In the Upper West and Upper East regions, ownership of land is vested in the Tindanas (Landowners), while in the Gonja area of the Northern Region the land-owning authority are the "skins" or chiefs. In most parts of the 3 northern regions undeveloped and unoccupied land may be described as communal lands and subject to common rights. These may be termed as local 'public' lands since they are for the whole community benefit. Land that may appear unoccupied is in many cases land that is utilized by local communities for a variety of livelihood activities.

The essential principle is that all lands are owned by the community or a group on communal basis. The Tindana determines new areas that are to be put under cultivation every farming season. Once a plot is allocated to an individual the person obtains a user's right and continues to till it. An individual acquires land user's rights by purchase, gift or through inheritance but cannot sell it to anyone outside the group. A person who obtains a user right to land cannot be deprived of the land without his/her consent even by the owner of the allodial title. A person who does not belong to the land-owning group can acquire stool or family land only by some form of grant/license or contract irrespective of whatever use it will be put to (Acheampong, 2001).

4.6.3 Gender and Vulnerable Groups Issues

Role of Women in Ghana's Economy

The concentration of women in skill and knowledge-based industries is low, as against the high concentration of women in the informal private sector employment and informal self-employment (Amu, 2006).

The gender characteristics of the unemployed indicate that the unemployment rate among women is lower than among males. Women's participation in the labour force and economic activity makes up almost half of the economically active population; but are mostly in the lower echelons of economic activity, especially the private informal sector where women are predominantly entrepreneurs of small and medium scale businesses (Amu, 2006). Women are found to be mainly employed in agriculture and allied fields, sales work and to a lesser extent production and transport and professional and technical.

Existing programs to enhance women's participation in economic activities have covered financial assistance in the form of micro credit as well as skills training and retraining through workshops, seminars, etc. However due to various operational constraints, financial assistance from micro-financial institutions has been poor and woefully inadequate.

Women in Agriculture

Within the agriculture sector, the unique relationship that exists between women and nature are predominant in all the sub-sectors namely farming, processing and distribution. As farm owners, farm partners and farm labourers, women are estimated to account for 70% to 80% of food consumed in Ghana. The predominant role of women in agriculture has enabled most women farmers to become increasingly responsible for the educational and other material needs of their wards, especially for female headed households.

The problems women face in carrying out economic activities, include the following:

- Access to and control over land due to traditional/cultural factors;
- Access to credit due to lack of collateral, inadequate savings needed for equity payment required for loans, cumbersome bureaucratic procedures for accessing credit facilities;
- Access to training due to ignorance on the awareness of training programs and low educational qualification;
- Access to hired labour on their farms due to rural-urban migration;
- Access to other inputs: fertilizer, extension services, information, technology, etc;
- Time constraints.

On access to and control of land it appears that most of the problems facing women in this area are associated with customary laws that are discriminatory to women as well as inefficiencies in land administration that tends to impact negatively women and other on minority groups.

Women's Rights to Own and Use Land

The traditional heritage that pertains in Ghana to a large extent is disadvantageous to women's access to and control over land. In principle, all stool subjects and lineage members irrespective of sex have inherent rights of access to stool and lineage lands (usufructuary rights). Lineage/stool members seeking land to farm or for any other purpose ask the lineage/stool head to assign them a piece of the land.

Discrimination against women in this allocation is widely reported. For instance, fewer women obtain land as women are often allocated less fertile land or they obtain smaller parcels of land. One important source of access to land for women is through marriage but when the marriage breaks down, they lose this access irrespective of the development they have made on the land because customary law does not recognize marital property or non-monetary contributions to the acquisition of property during marriage (Women's Manifesto, 2004). Women are also discriminated against in the allocation of lineage lands for reasons that are associated with marriage because their control over their rights to land tend to diminish upon marriage for the following reasons:

- Marriage and its attendant domestic obligations reduce women's chances of acquiring land or comparatively larger portions than men. A wife is by tradition under obligation to help her husband on his own farm or business and they tend to respond to this by abandoning their own farms/business or by acquiring smaller portions of land;
- Gender patterns in division of labour place land clearance in the hands of men, which gives them the priority in original acquisition and possession of the usufruct;
- Land is normally given on the basis of ability and means to develop such as ownership of financial resources, which many women tend not to have; and
- The emergence of permanent crops such as cocoa which require longer use of land have given preference to men who were more economically empowered to engage in it (Duncan, 2004).

Another way of acquiring land is to buy or lease from the original owners. However, this requires huge sums of money, which also limits women's access, especially poor women. Apart from this the problem of land administration complicates the purchase of land. This is because some landowners can sell one piece of land to two or more people, which tend to have violent outcomes. The difficulties of acquiring land can scare away women even when they have funds to acquire and will therefore buy through a male member of her family (brother/husband/father etc).

The difficulty in acquiring land by women particularly impacts negatively on women farmers who derive their livelihood from the land. When their access to land is hampered by cultural and economic constraints, their participation in economic activity is impaired and thus reduces their own efforts at improving themselves economically and socially. However, with the passage of the Land Act, 2020 (Act 1036), issues woman's access to land has been largely addressed.

In the Accra Plains, women are involved in farming, harvesting, marketing and all aspects of irrigation farming. They are allowed to own land and usually priority is given to community members including women where they mostly cultivate rice and vegetables.

In many parts of the NDA Regions, women do not have the right to own land. However, they do have a long-established right to borrow land from their husbands or male partners skin to cultivate a crop of their

own. If a woman is unable to obtain land from these men, she will negotiate the loan of land from another compound (Abaka-Yankson, 2009). With the introduction of the Water Users Association, women are increasingly getting involved in dry season irrigation farming which to a large extent represents a change in cultural behaviour towards women. In Bongo Central for instance, women participation in dry season irrigation increased by 64% in 4 years (Abaka-Yankson, 2009).

Gender Based Violence

In Ghana, traditional values, cultural norms as well as socializing processes have bestowed a low status on the Ghanaian woman and girl child. About 31.9% of Ghanaian women have faced at least one form of domestic violence - physical, economic, psychological, social or sexual (DOVVSU, 2020).

Thousands of children and adolescents live and work on the streets, the majority of these girls become vulnerable to sexual violence and exploitation. The traditional practice of engaging children and adolescents in farming and other related works alongside their parents to teach them necessary skills at times take on exploitive dimensions. There is a cultural habit to send children away to relatives to rear them and train them in a profession as a form of social education. However, if this kind of traditional practices originally were meant to fend for the welfare of children, social change and economic pressures have gradually led to these kinds of practices being less centred on caring for children. In the current context, not living with a biological parent is associated with a higher risk of exploitation. In Ghana, 16.6% of children aged 0-17 years are not living with neither biological parent. While most (56.1%) live with grandparents but also a significant proportion of children (30.7%) live with “other relatives”. While for the children who live with their grandparents, the age distribution does not show a consistent trend (not increasing, nor decreasing, but varying irregularly between different age-groups of children). However, for the children who live with “other relatives”, the proportion of children increases with age. Of the children who live with “other relatives”, 16.5% are between 0-4 years; 23.6% are between 5 and 9 years; 36.5% are between 10-14 years; and 41% are between 15 and 17 years (MICS 2017/18). Prohibited child marriage, female genital mutilation/cutting and the "troski" system of ritual enslavement still persist in certain parts of the northern regions[3]. These forms of violence, abuse, exploitation and neglect of children and adolescents are often rooted in social, cultural and gender-related beliefs and practices.

Concerns about Participation of Women and other vulnerable groups

The program issues of concern about participation of women arising from public consultation include:

- The need for the program to streamline processes for land acquisition by women;
- Women involvement in the market value chain;
- Involvement of women in decision making;
- Youth involvement and their roles;
- Knowledge and understanding of the out-growers scheme;
- Extension services available to women or just men;
- Women understanding and knowledge of the program;
- Negative impacts of the program on women, youth and children;
- Possible barriers preventing women from accessing aspects of the program;

[3] The *Trokosi* system in practiced in Southeast Ghana and is believed to have originated in the 16th or 17th century. *Tro* means deity and *kosi* means slave or wife and *Trokosi* thus translates as “slave” or “wife of the deity”. The practice of *Trokosi* involves holding young girls in servitude to appease the deities whom their families have offended. The Trotski system was banned in the constitution of Ghana in 1998 but the practice is still alive and, in some cases, has moved ‘underground’. Some members of the communities involved see the system as a traditional and reliable way of dispensing and maintaining social justice.

- Verification that the program will not make women worse off;
- Program support to improve project objectives to the beneficiaries;
- Current food security situation; and
- The need to educate women on the usage of chemicals since some of them are illiterates.

4.7 Major Farming Systems in Ghana

Two farming systems are dominant in Ghana, the bush fallow system (temporary system) and the permanent system. Some variants of both systems are used in some parts of the Volta basins, the HUZA and the mixed farming systems.

4.7.1 The Bush Fallow System

This is a system of land rotation between crops or fields and bush. A plot of land is cultivated for a number of farming seasons and abandoned when necessary, to revert to secondary vegetation. The average size of food farm cultivated under the bush fallow system is 1.10ha. During the dry season, men clear the land by hand with vegetation burnt after clearing. All trees of economic importance, such as shea butter, dawadawa and the oil palm trees are left standing.

4.7.2 The HUZA Farming System

A co-operative regroups of all the financial resources of the farmers with a sole purpose of collecting land. When the land is acquired, it is divided into strips for each farmer. The width of the strip is proportional to the farmer's financial participation. After two or three seasons of cultivation, when yields decline, the field is left fallow. Due to the pressure of population and the great demand for land, the length of the fallow period is now short (4-6 years).

4.7.3 The Permanent Systems

Contrary to the bush fallow system, these systems are intensive, and a piece of land is cultivated continuously. In Ghana, there are 2 permanent systems of food farming: the compound farming system and the Anloga-Keta system. In the Volta Basin, only the compound farming system is used.

The Compound Farming System

It is used in the densely settled areas of north-eastern and north-western Ghana which centres on the household compound. The land immediately surrounding the compound house is intensively cropped with vegetables and staples using organic soil regeneration techniques, which involve using household refuse and manure from livestock. The average size of a compound farm is less than an acre. These pieces of land are used for cultivating okra, tomato, pepper, maize, cocoyam and plantain.

4.7.4 The Mixed Farming System

It is characterized by a combination of cultivation with keeping of livestock (provides power and manure on the farm). Mixed farming is restricted to areas which are free from tsetse fly. The growing season is based on when rainfall is more than one-half of the potential evapotranspiration and ends when there is less than half the potential evapotranspiration.

4.8 Cropping Systems in the Volta Basin of Ghana

4.8.1 Sudan Savanna Zone

The basis of the cropping system throughout the zone consists mainly of pearl millet. The early millet is inter-planted with late millet or sorghum in fields close to compounds where fertility is highest. There has been a spread of European vegetable cultivation with the gradual decrease of some minor indigenous crops. Carrots, cabbage, lettuce and peas are now available and grown on irrigated plots close to towns.

4.8.2 Guinean Savanna Zone

Maize is the major cereal crop produced in this zone with more than 80% of the small-scale farmers cultivating it. Every farm family cultivates sorghum either as a sole crop or as an inter-crop. Cotton is also found at specific sites throughout the Savanna Zone. Other cash crops cultivated include groundnuts, cowpeas and rice. Marketing of cereals is done mainly by women, who pass on moneys generated to their husbands.

4.8.3 Forest Savanna Transitional Zone

Food crop production dominates the farming system with major commercial food production of maize, cassava, groundnut and yam being existent. Oil palm is also important as it is reserved in fallow land rather than grown plantations. Cotton and tobacco are important cash crops.

4.8.4 Deciduous Forest Zone

Cassava and plantain are the important food crops while cocoa and oil palm are important as cash crops. Vegetable production is increasing in importance in the zone.

4.9 Crop Husbandry Processes and Activities

4.9.1 Sudan Savanna Zone

Compound farms and bush farms are found in this zone. On the bush farm, no manure is applied, and it consists in land rotation. The plots take place 2 to 4 km away from the farm. In the compound system, the land cultivated is directly around the homestead and is fertile because household and farm refuse are used as manure.

Tobacco, gourd, melon, okra, tomatoes, pepper and sweet potatoes are usually cultivated in the compound lands. Further away is another zone planted with early and late millet, guinea corn, Bambara beans and cowpea. This second zone is fertilized with farmyard manure though this is often inadequate. The rest of the compound area, usually the largest, has no manure application and is cropped to guinea corn and late millet.

Onion cultivation is popular and represents one of the most important agricultural exports from the zone. Cereals produced are locally consumed and so, are not open to the commercial market. Shea nuts are bought and exported in small scale. Tomatoes and onions are produced for sale as cash crops and are exported to Southern Ghana.

4.9.2 Guinea Savanna Zone

Animal production is more important than it is in the rest of the Savanna Zone. However, food production dominates. Bullock is also used for ploughing although some farmers are not able to afford it. Tractor may be used but at a higher price (between C25,000 and C30,000 per acre for the bullock, and C35,000 for the tractor) In the Sudan Savanna Zone, farming systems practiced are bush fallow and compound farming.

The major cropping system is mono-cropping of early maturing maize within the compound. The following groups of cropping systems may be distinguished in the zone:

- Maize, sorghum, groundnut and cowpea with root crops, namely yam and cassava that occur in the central portion of the zone;
- Sorghum based but mixed with maize or cowpea and yam, occurs in the western part of the zone; and
- Yam, maize, sorghum, groundnut-based system, occur in the south-eastern part of the zone.

The choice of soil tillage is influenced by ecological and economic factors such as soil type, land use of the preceding year, crop that is actually to be sown or planted, and the available technological options. Tractor is used for heavier lowland soils whereas hoe and bullocks till sandy upland soils. Soil preparation is done by hoe. Soil nutrient stocks are replenished by fallowing, the use of organic manure, biological processes, rainfall, sedimentation and mineral fertilisation. The application of fertiliser and manure is still not a common practice and it fluctuates from year to year. The majority is applied to crops which show an elastic response to the fertiliser (maize, rice and vegetables).

Men and women have distinct roles with men usually carrying out land clearing and ploughing, while women gather and burn the cleared weeds and later plant all crops. Women do most of the marketing and are responsible for the daily cooking and childcare. Almost every farmer in the zone has some

livestock. About 90% of all women have 5 to 10 chickens, about 29% have 2 to 5 goats, about 89% of all men have sheep, particularly in the Dagbon area and 10% have cattle.

4.9.3 Forest Savanna Transitional Zone

In this zone, permanent mechanized cultivation of food crops is common. Many farmers have adopted technologies based on ploughing, permanent cultivation and use of chemical fertilisers. The transitional character of the ecosystems, the ethnic and cultural diversity resulting from migration led to a considerable diversity in farming systems and crops. The widest variety of crops are grown in the transitional zone. Mixed or sole cropping is used and the major cropping systems in the forest area are sole maize, maize/cassava, maize/cassava/plantain and /maize/pepper. In the Savanna area of the zone the cropping systems are sole yam, sole groundnut, rice/cassava and yam/cassava.

4.9.4 Deciduous Forest Zone

In this zone, the systems all have combination of food crops and at least one tree crop. For example, cocoa or oil palm is combined with food crops like plantain, cassava, cocoyam and some other minor crops. The farming system involves permanent cultivation of tree crops, and rotational bush fallow of food crops. The first crop usually planted is maize, which is planted in almost every part of the farm. Farm sizes vary from 1ac to 15ac with the most recurring farm size being 2ac followed by 1ac.

4.10 Livestock Production

4.10.1 Sudan Savanna and Guinea Savanna Zones

Livestock may be owned individually or by a family. Sheep, goats, fowls and guinea fowls are kept by many households. The animals are free during the dry season and tethered to a post in uncultivated patches of grass near the farm in the rainy season. Grazing lands are poor and are those obtained under natural conditions.

4.10.2 Forest Transitional Savanna Zone

In this zone, poultry, sheep, ducks and goats are kept in extensive and or semi-intensive management systems, whilst pigs are kept under an intensive system. Chickens are kept in coops during the night and left on free-range during the day. The animals are seen to be liquid assets, which can be sold easily on the local markets. Pigs are kept in the relatively urban settlements.

4.10.3 Deciduous Zone

As a result of the susceptibility of livestock to Trypanosomiasis and other diseases, the zone keeps very few livestock. It also results from a difficulty of integrating livestock with arable farming particularly where farmers have to walk long distances to farm. Small livestock are allowed to roam and graze around the village.

5.0 STAKEHOLDER IDENTIFICATION AND ANALYSIS

5.1 Stakeholder Mapping

A stakeholder mapping categorisation and analysis has been conducted to identify key stakeholder groups and organisations and the nature of their relevance and role to the issues linked to the program, based on the Consultant's experience in similar assignments. It was also based on review of the relevant legislation and institutional mandates which define the relevance of a stakeholder to the assignment and their areas of interest. Stakeholders were selected on the basis that they have an interest in or power over one or more of the various components of the program and, would have some useful knowledge to provide insights on issues and concerns related to sub-projects. With respect to resettlement, stakeholders identified would be suited to comment on land-take and access restriction issues and compensation for implementation of relevant sub-projects.

The relevant stakeholder groups identified included government agencies and research institutions, which have regulatory mandate, oversight responsibility or development promotion obligation. The other stakeholder groups included companies, individuals or associations that have interest in any of the sub-projects that could be displaced or affected by the development of a sub-project, or whose mandate fall within the sphere of influence of the Project intervention areas.

The key stakeholders identified have been listed under the respective categories in Table 5.1. In identifying the stakeholders, an initial prospective list was prepared by matching the main components of the project, as well as potential impacts and baseline areas with the various stakeholder groups in a Stakeholder Identification Matrix (SIM). Table 5.2 shows the SIM used to determine the relevance for involvement in the engagement process and to help highlight which areas to elicit inputs.

Table 5.1 Categorization of Stakeholders

National-Level	
Government Ministries/Agencies	Ministry of Food and Agriculture (MoFA) Ministry of Finance (MoF) Ministry of Lands and Forestry (MoLF) Ministry of Gender, Children and Social Protection (MOGCSP)
Development Promotion	National Food Buffer Stock Company (NAFCO) Women in Agriculture Development (WIAD) Animal Production Directorate (APD) Directorate of Agricultural Extension Services (DAES) Veterinary Services Directorate (VSD) Directorate of Crop Services (DCS) e-Agricultural Programme (e-AP) Regional Training and Application Centre in Agro-meteorology and Operational Hydrology (AGRHYMET)

Regulatory Institutions & Safety and Protection Agencies	Land Valuation Division (LVD) Africa Continental Free Trade Authority (ACFTA) Ghana Irrigation Development Authority (GIDA) Water Resources Commission (WRC) Meteorological Services Authority (MSA) Environmental Protection Agency (EPA) Food and Drugs Authority (FDA) International Water Management Institute (IWMI) National Disaster management Organisation (NADMO) Ghana Police Service (GPS) Customs Division of GRA (CD) Ghana Commodity Exchange (GCX) Ghana Standards Authority (GSA) Ghana Export Promotion Authority (GEPA) Plant Protection & Regulatory Services Directorate (PPRSD) Fisheries Commission (FC) Forestry Commission (FoC)
Planning Authority	Land Use and Spatial Planning Authority (LUPSA)
Research Institutions	Institute of Environment and Sanitation Studies (IESS) University of Energy and Natural Resources (UENR) Centre for Remote Sensing and Geographic Information Services (CERSGIS) Council for Scientific and Industrial Research (CSIR): Food Research Institute (FRI) Crop Research Institute (CRI) Water Research Institute (WRI) Institute for Scientific and Technological Information (INSTI) Industrial Research Institute (IRI) Soil Research Institute (SRI) Animal Research Institute (ARI) KNUST - Land Administration Research Centre (LARC)
Regional/District Level Planning Authority	Forestry Research Institute of Ghana (FORIG) Regional Coordinating Council (RCC)

	Northern Development Authority (NDA) Metropolitan, Municipal and District Assemblies (MMDAs)
Regulatory Institutions & Enforcement, Safety and Protection Agencies	Environmental Protection Agency (EPA) Regional Offices
Utility Agencies	Ghana Grid Company Limited (GRIDCo) Northern Electricity Distribution Company (NEDCo) Electricity Company of Ghana (ECG) Telecommunication Companies (TELCOs)
Trade Unions and Associations	Farmers Associations (FA): **o** Agogo Women Plantain Producers and Exporters Association (AWPPEA) **o** Peasant Farmers Association Ghana (PFAG) **o** Ghana National Association of Farmers and Fishermen (GNAFF) Water Users Association (WUA): **o** KIS - WUA
Civil Society/NGOs	Crop Life Ghana (CLG) International Fertilizer Development Centre (IFDC) Alliance for Green Revolution in Africa (AGRA) Global Agriculture Development Company (GADCO) Apex Farmers Organisation of Ghana (AFOG)
Community Level	
Relevant Community /PAPs	Farmers (F) Youth(Y) Traditional Authority (TA) Community Leaders (CL) including assembly men, opinion leader etc.
Vulnerable Groups (VGs)	Women (W) People with Disabilities (PWD) Women Farmers (WF) Pastoralists Youth
Gender	Women Men Children Youth Aged

	People with disabilities
Social Characteristics	Traditional Authorities Landowners Settler/Tenant Farmers Religious Groups Youth Associations Women Groups People with disabilities and other vulnerable groups

Table 5. 2 Stakeholder Identification Matrix

No.	**Stakeholder Categories** **Project Components and Activities**	**Sector Oversight**	**Development Promotion**	**Research Institutions**	**Regulatory Authority**	**Planning Authority**	**Enforcement, Safety & Protection**	**Trade Unions & Associations**	**Local Communities**	**Civil Society/NGOs**	**Utility Agencies**
1)	Land/flood plains restoration	MOLNR		IESS UENR	EPA	NDA MMDAs RCC LUSPA	EPA NADMO		PAPs		
2)	Watershed restoration	MOLNR		IESS UENR WRI	EPA WRC	NDA MMDAs RCC LUSPA	EPA NADMO		PAPs		
3)	Irrigation development	MOFA	GIDA DCS WIAD	FRI IESS DFSA WRI	EPA GIDA WRC	NDA GIDA MMDAs RCC LUSPA	IWMI GIDA EPA	FA WUA	PAPs	CLG GADCo	GRIDCo ECG
5)	Agro-sylvo pastoral farming	MOFA	DCS APD WIAD	FRI DCS CRI ARI	EPA PPRSD FoC	NDA MMDAs RCC	PPRSD EPA	FA	PAPs PWD		
7)	Livestock production	MOFA	DAES APD WIAD	ARI	EPA	NDA MMDAs RCC	EPA	FA	PAPs PWD		
8)	Poultry production	MOFA	DAES APD WIAD	ARI	EPA	NDA MMDAs RCC	EPA	FA	PAPs PWD		
9)	Roots and tube farming	MOFA	DCS DAES WIAD	CRI SRI	EPA PPRSD	NDA MMDAs RCC	PPRSD EPA	FA	PAPs PWD		

10)	Aquaculture	MOFA	DAES WIAD	DFSA IESS	FC EPA WRC	NDA MMDAs RCC	IWMI EPA	FA	PWD		
12)	Woodlot development	MOLNR		UENR FORIG	EPA PPRSD FoC	NDA MMDAs RCC	PPRSD EPA		PAPs	AGRA	
13)	Cattle grazing reserve and corridor	MOFA	DAES APD		EPA LUSPA	NDA MMDAs LUSPA RCC	EPA	FA	PAPs PWD		GRIDCo NEDCo ECG
15)	Resettlement	MOLNR MoF	PIU	LARC	LVD EPA LUSPA	NDA MMDAs LUSPA RCC	EPA		PAPs PWD TA CL	GADCo AFOG	
16)	Compensation	MOLNR MoF	PIU	LARC	LVD	MMDAs	LVD		PAPs PWD TA CL	GADCo AFOG	
17)	Grievance Mechanism	MoF MOGCSP	PIU		EPA LVD	MMDAs	TAs	FA WUA	PAPs PWD TA CL	GADCo AFOG	
18)	Monitoring and evaluation	MoF	PIU		EPA LVD	MMDAs	MMDAs		PAPs PWD		
19)	Ground and weather station upgrade		e-AP MSA AGRHYMET	AGRHYMET	MSA EPA				TA		
20)	Electronic agriculture management system	MOFA	e-AP DCS APD WIAD	CRI CERSGIS INSTI AGRHYMET	MSA			FA	PWD	GADCo	TELCOs
21)	e-extension services	MOFA	e-AP DAES WIAD	CERSGIS INSTI				FA		GADCo	TELCOs
22)	Waste management	MMDAs	DCS	DFSA	EPA	NDA	PPRSD	FA	TA	CLG	

			APD DAES	IESS CRI CRI CERSGIS	PPRSD	MMDAs LUSPA	EPA MMDAs	WUA	PAPs CL		
23)	Food processing	MOFA	DCS FRI WIAD	CRI FRI IESS IRI	EPA GCX	NDA MMDAs	EPA GCX	FA		GADCo AFOG	
24)	Food storage	MOFA	NAFCO	FRI IRI	GCX GRA	NDA MMDAs	EPA GRA	FA		GADCo	
25)	Food produce transportation	MOFA	NAFCO WIAD ACFTA GEPA	FRI	EPA GCX GRA ACFTA GEPA GSA	MMDAs NDA	GRA EPA GPS GSA	FA			TELCOs
26)	Seed production	MOFA	DCS	CRI SRI	EPA PPRSD	NDA MMDAs	PPRSD EPA	FA			
27)	Fertilizer, production and usage	MOFA	DAES DCS	CRI IESS IRI SRI	EPA PPRSD	NDA MMDAs	PPRSD EPA	FA	PWD TA	IFDC	
28)	Veterinary services	MOFA	APD DAES VSD	ARI	VSD	NDA MMDAs					
29)	Reclamamtion activities	MOFA		UENR IESS LARC	EPA LUSPA	NDA MMDAs LUSPA	EPA				
30)	Pest management	MOFA	PPRSD	CRI FRI	EPA	NDA MMDAs	EPA	FA	PAPs PWD TAs		
31)	Children and social protection	MOGCSP	WIAD			NDA MMDAs		FA WUA		GADCo AFOG	
32)	Screening		PIU		EPA	NDA MMDAs	EPA		PAPs PWD		

									TA		
33)	ToR for ARAPs/RAPs		PIU		EPA	MMDAs					
34)	Review of ARAPs/RAPs	WB			EPA						

5.2 Stakeholder Analysis

5.2.1 Stakeholder Interest Justification

The stakeholder analysis involved an assessment of the stakeholders identified with respect to their interests, and how these interests are likely to affect the planning and execution of sub-projects, or whether they are affected or likely to be affected by the project. With regards to institutions, this analysis involved the roles and responsibilities of relevant government agencies, and other organisations that have direct or indirect stake in the implementation of the FSRP2. The analysis considered the likely negative impacts at the sub-project level and how the respective roles and mandates of the institutions could help address such concerns.

5.2.2 Analysis of "Influence-Importance" Relations of Stakeholders

An assessment of the influence and power relations of each prospective stakeholder in the planning and execution process of sub-projects helped identify the respective stakeholder influence in the proposed undertaking and how these stakeholders would need to be managed. In the context of this analysis, "influence" is the power which a stakeholder has over the planning/implementation process. It is the extent to which people, groups or organisations could persuade or compel others into making decisions. "Importance" indicates the extent to which stakeholders' needs and interests will be influenced by means of the planning and subsequent implementation of the project. The relation between this influence and importance can be either high or low. The "influence-importance" relation, is scored accordingly, as presented in the matrix in Table 5.3 and subsequently explained in Table 5.4.

Table 5. 3 Stakeholder Influence-Importance Matrix

	IMPORTANCE	
	Low	**High**
High	**A** Development Promotion Agencies	**B** PAPs Planning Authority Regulatory Institutions Government Minsitries
Low	**C** NGOs/Civil Societies	**D** Trade Unions and Associations Utility Agencies Research Institute Project Community Vulnerable Groups

Table 5. 4 Explanation of the Influence-Importance Matrix

A - A good working relationship must be created with this group **B -**
This group will require special initiatives to protect their interest
C - This group may have some limited involvement in evaluation but are relatively of low priority

D - This group may be a source of risk, and will need careful monitoring and management

6.0 PREVIOUS STAKEHOLDER ENGAGEMENT ACTIVITIES

6.1 Engagement Planning and Stakeholder Consultations

6.1.1 Stakeholder Notification

The stakeholder mapping exercise identified those stakeholders that should be notified to participate in the engagement program and the methodology for engagement. A formal introduction was made by the PIU via voice calls to all the stakeholders introducing the ESMF and RPF consultants for the proposed program and requesting their involvement in the consultative engagement process.

The contact details of key persons for consultation were taken to enable follow up and confirmation of the suitability of the proposed meeting dates and time (Table 6.1). This enabled the preparation of the final engagement plan for execution.

Table 6.1 Key Contact Person for Various Stakeholders

Category of Stakeholder	Stakeholders	Main Contact Person	Position	Contact Details
Government Ministries and Directorates	NAFCO	Emmanuel J.K. Arthur	Senior Manager, Corporate Affairs	emmanuel.arthur@nafco.gov.gh info@nafco.gov.gh 0244669709
	WIAD	Paulina Addy	Director	addypolly@yahoo.com 0244422712
	APD	Edwin Bekoe	Director	eddbekoe@yahoo.com 0274747847
	DAES	Mr. Paul Siameh	Director	paulsiame@yahoo.com 0244641260
	DCS	Dr. Solomon Gyan Ansah	Head of Seed Unit	crowzee2000@yahoo.com 0208133029
	PPRSD	Eric Dzimado	Senior Agricultural Officer	agabusm2@gmail.com 0243413991
Regulatory Institutions and Enforcement, Safety and Protection Agencies	EPA	Joseph Edmond	Director	0501301396
	GIDA	Ing. Richard Boateng	Director	0244662243
	MSA	Francisca Martey	Deputy Director, Research and Applied Meteorology	0244130093
	WRC, Upper East Region	Andrew Asaviausa	A.B.O.	0244507141
	NADMO	Nyaaba Agambica	Deputy Regional Director	0242561474
Research Institutions	IESS	Dr. Benjamin Ofori.	Senior Research Fellow	bdofori@ug.edu.gh bdofori@staff.ug.edu.gh 0208134292
	CERSGIS	Mr. Foster Mensah	Executive Director	fmensah@ug.edu.gh 0243352468

	FRI	Prof. Charles Tortoe	Ag. Director	ctortoe@yahoo.co.uk 0243241801
	WRI	Dr. Ruby Asmah	Principal Research Scientist	rubyasmah@yahoo.com 0205424161
	UENR	Prof. Elvis Asare-Bediako	Vice- Chancellor	0554322941
Regional/District Level Planning Authority	NDA	Dr Emmanuel Abeere-Inga	Director, Infrastructure, Land and Natural Resources	asanamzoya@yahoo.com 0548314461
	AANMA	Eric Dwomoh	Director, MoFA	0244159369
NGO/Civil Society	CropLife	Rashad Kadiri	Program Manager	rkadiri@croplifeghana.org 0249689725
	GADCo	Henry Doe	Officer	0244624435
Farmer Asociations	AWPPEA	Nana Akosua Tawia	President	
	PFAG	Charles Nyaaba	Head of Programs and Advocacy	0203035672
	APFO	Alhaji Nashiru	President	0243665458
	WUA	Isaac Akpatie	Executive	0540727247
Existing Projects	KIS	Joseph Nartey	Manager	0244508060
	ESBS	Robert Dodoo	Head	0201046636/0548060609
	LBS	Lawrence Dartey	Farm Manager	0243132341

6.1.2 Engagement Plan

The engagement plan which guided the stakeholder engagement program carried out from March 23rd - 29th remotely either through voice calls or virtual zoom meeting is presented in Table 6.2.

Table 6. 2 Stakeholder Engagement Plan

Date	Stakeholders	Time	Engagement Tool
23/03	WIAD	7:00pm	Semi-structured interview (Phone call)
24/03	EPA	7:00am	Semi-structured interview (Phone call)
	CERSGIS	10:00am	Virtual semi-structured meeting
	FRI	4:20pm	Semi-structured interview (Phone call)
	NAFCO	11:30am	Semi-structured interview (Phone call)
	DCS	12:00noon	Semi-structured interview (Phone call)
	NDA	3:00pm	Semi-structured interview (Phone call)
25/03	APD	10:00am	Virtual semi-structured meeting
	DAES	11:00am	Virtual semi-structured meeting

	IESS	8:00am	Semi-structured interview (Phone call)
	WRI	9:30am	Virtual semi-structured meeting
	MSA	3:00pm	Virtual semi-structured meeting
	GIDA	1:30pm	Semi-structured interview (Phone call)
29/03	PPRSD	3:00pm	Semi-structured interview (Phone call)
	CropLife	4:30pm	Semi-structured interview (Phone call)
18/05	APFOG	2:00pm	Semi-structured interview (Phone call)
	PFAG	3:00pm	Semi-structured interview (Phone call)
19/05	KIS Male Farmers	11:00am	In-person semi-structured discussion
	KIS Female Farmers	12:00am	In-person semi-structured discussion
	KIS Community Leaders	1:00pm	In-person focus group discussion
	WUA - KIS and GADCo	2:30pm	In-person focus group discussion
08/06	AANMA	9:45am	In-person semi-structured interview
	AWPPE	10:30am	In-person semi-structured interview
09/06	ESBS	9:00am	In-person semi-structured interview
	LBS	5:30pm	In-person semi-structured interview
10/06	NADMO	9:30am	In-person semi-structured interview
	WRC	11:00am	In-person semi-structured interview

6.2 Highlights of Consultations

6.2.1 Format of Meetings

The general format for the engagement followed the following steps:

- Introduction of the ESMF and RPF Consultants;
- Self-introduction of participants;
- Purpose of meeting;
- Update on FSRP2;
- Discussion on involvement of stakeholder in FSRP2;
- Discussion on the potential impacts and mitigations; and
- Sharing of information towards addressing concerns for both the ESMF and RPF.

Institution-specific stakeholder issues were developed and delivered through semi-structured questionnaire to elicit initial stakeholder responses. The engagement issues/guides for the specific stakeholders are presented in Appendix 1.

6.2.2 Outcomes of Consultations

The highlights from the respective engagement with stakeholders has been provided in the Table 6.3 with the full responses in Appendix 2 This will inform the environmental and social assessment on a project-by-project level as well as apprise the ESMF and the RPF.

Table 6. 3 Major Highlights from Engagement

Stakeholder	Key Highlight	Responses
WIAD	• Lack of or abandoning the use of PPE exposes women to adverse conditions like extreme heat, smoke and sharp tools during food processing	• The use of PPEs has been encouraged to mitigate the risk that women in processing are exposed to.
EPA	A specialized registration and screening system can be developed in collaboration with the EPA so that all projects under the program can have a speedy initial environmental assessment. The assessment of the cumulative impacts of several operations under the project within a certain area can be done	• A screening checklist has been developed to provide guidance on the level of assessment for sub projects. • As part of the assessment process, cumulative impacts have been addressed.
CERSGIS	• Under the program, our existing facilities would be used so there would be no need to acquire additional land End of life e-waste is stored and either dumped or donated to schools if they are still in working condition	• This has significantly reduced land take impacts, if not eliminated totally. • E-waste impacts are of moderate significance
DCS	• The misuse of pesticides by farmers is a key environmental issue that needs to be addressed because it poses a risk to any nearby water body	• Pesticide use is a major impact and has further been addressed in the Integrated Pest Management Plan (IPMP) for the programme.
MSA	• E-waste from all meteorological stations are transported to the head office in Accra where they are later auctioned. • Significant quantities of e-waste will be generated including tablets and other computing devices	• E-waste impact are of moderate significance • Generated e-waste will be stored and auctioned to registered recyclers with the EPA
NAFCO	• Trucks transporting food are hardly involved in because drivers of such trucks are usually very experienced.	• Accident risks associated with food transport is minimal
WRI	• A negative impact of cage aquaculture is conflict with existing fishermen who may not have access to an areas where they once fished and also because feed put in the water for the caged fish attract fish from the wild but local fishermen would not be allowed to venture close to the cages to make a catch.	• The mitigation measure to allow fishermen to fish in restricted areas under supervision will be employed

NDA	• Within their area of jurisdiction, no intervention would require relocation of settlements or farms	• Land-take impacts have been significantly eliminated
GIDA	• The increase of the height of the irrigation dams may affect some nearby communities and farms due to the increase in the throw back of the reservoir. It is not yet known if the height of these proposed dams will be increased or not.	• During further engagements with MOFA and at the design finalisation stages, the significance of this would be ascertained
IESS	• Typically, land use along the lake at the southern portion of the lake and middle belt is farming	• Farmers and Farmer organisations would be engaged at the subproject level, so that their concerns are addressed
DAES	• On the project level assessment, it is necessary for extension officers to be consulted since they deal directly with the farmers. Their capacity will have to be built so they are in the best place possible to deliver adequate guidance to the farmers on all the new interventions as a result of the program.	• The Agric Extension Agents would have a major role in capacity building of farmers in new technology
APD	• The grazing reserve has the potential to eliminate clashes between migrating or resident Fulani herdsmen and crop farmers	he beneficial impact of the grazing reserves has been highlighted in this document
CropLife	• A Container Management Programme run by CropLife in the Eastern, Western and Volta Regions, involves positioning cages at vantage points for the collection of empty pesticides containers for recycling. • The Spray Service Provider (SSP) program, also run by CropLife (in collaboration with PPRSD and EPA), applies a criterion in selecting and training a group of people within a farming area/community to provide spraying services within their community. • Farmers lack adequate education on the application of agrochemicals. • CropLife's digitization programme involving over 50,000 farmers, provides directions on the responsible pesticide use through text messages and voice notes	The successes of this programme will be examined and adopted for implementation on FSRP2. • FSRP2 will collaborate with and enhance the capacities of Spray Service Providers to extend their services to all beneficiary districts and communities. • The ESMF and IPMP have made adequate provision to provide extensive education to all farmers. • FSRP2's digitization agenda as espoused in component 1 will take advantage of the successes of CropLife's digitization programme.
APFOG	• The Association advocates for farmer friendly policies to better the life of farmers; Finds and links members to local and international markets to get better prices for their produce; sensitizes members on pest management • There are about 2000 farmers across the country registered with the Organisation, who can also benefit from FSRP2	• FSRP2 will insist on the following: Proper checks on imported pesticides; Vigorous monitoring of fake pesticides on the market; and punishment of offenders. • The ESMF and IPMP have made adequate provision to provide extensive education to all farmers.

	• The farmers would be very happy to use technology but more education needs to be done to enable the farmers use these technologies	
PFAG	• PFAG consists of individual farmers and farmer groups, as well as, value chain actors numbering over 1,000,055 and 1,962 farmers Based Organisations (FBOs). Membership is spread across all the ten regions of Ghana • Misapplication of pesticides has dire consequences for human health • Over-application of pesticides poses serious threats to integrity of water bodies and health of consumers and farmers.	• Nationwide training of farmers will be provided to protect themselves with PPEs such as overall, goggles, nose masks, etc. before applying pesticides. • Public education materials will be developed by FSRP2 to demonstrate the proper application and wrong application of chemicals. It will also be broken down into infographics and the materials made available to farmers
AWPPEA	• Lack of agricultural extension officers to attend to the farmers, thereby leading improper farming practises hence, reduction in productivity. • Safety risk as robbers attack farmers who transport and sell produce to Burkina Faso.	• The incorporation of e-agric in the program would provide farmers with tips on farming • Electronic banking and other mobile financial services would be encouraged
NADMO	• Spillage from the Bagre Dam causes distraction such that farms are flooded and yield is lost.	• The program seeks to rehabilitate old dams.to provide farms with water which will prevent farmers from farming closer to waterbodies.
LBS	• Perennial fires during the dry season by game hunters which leads to shortage of feed for cattle and sheep	• The program seeks to introduce the bailing of straws to curb bush fires.
ESBS	• Waste from drenching is dislodged onto the ground as outlet for proper disposal is damaged. • Perimeter fencing of the station has been breached thereby, leading to theft and encroachment by the surrounding community.	• The ESMF has made provision for waste management and social impact (security issues)
WRC	• Annual floods as a result of the Bagre Dam spill • Development and restoration of irrigation so as to provide water for crops in dry season.	• The program seeks to rehabilitate old dams.to provide farms with water which will prevent farmers from farming closer to waterbodies

7.0 STAKEHOLDER ENGAGEMENT PROGRAM

7.1 Project Stakeholder Needs

During the life cycle of the project, the various identified stakeholders would be engaged through various means suitable to their needs. Table 7.1 shows the various categories of stakeholders, the project stage, engagement tool that would be used and the purpose of that engagement. The Environmental and Social Safeguards team/ personnel of the PIU would be responsible for carrying out the engagement but would collaborate with the ESIA and RAP consultants during the planning and pre-implementation phases.

Table 7.1 Stakeholder Engagement Needs

Project Stage	Stakeholder	Engagement Tool	Purpose
Planning	Government ministries	Discussion	Inform and consult
	Development promotion agencies	Discussion	Inform and consult
	Regulatory institution	Discussion	Inform and consult
	Safety and protection agencies	Discussion	Inform and consult
	Planning authority	Discussion	Inform and consult
	Relevant communities	Discussion	Inform and consult
	Vulnerable groups	Discussion	Inform and consult
Pre-construction/ pre implementation	PAPs	Interview	Inform and consult
	Utility agencies	Focus group	Inform and consult
	NGOs/civil society	Focus group	Inform and consult
	Research institutions	Interview	Inform and consult
	Relevant communities	Town hall meeting	Inform
Construction/ Implementation	PAPs	Interview	Inform
	Relevant communities	Town hall meeting	Inform
	Vulnerable groups	Focus group	Inform
Decommissioning	PAPs	Town hall meeting	Inform and participate
	Relevant Communities		Inform and participate
	Vulnerable Groups		Inform and participate

7.2 Engagement Plan

The stakeholder engagement program would also cover all levels and types of environmental assessment which will be done by the ESIA consultant and RAP Consultant. This includes:

- Initial Assessment (IA)
- Preliminary Environmental and Social Assessment (PESA)
- Scoping exercise to develop terms of reference for the ESIA
- Environmental and Social Impact Assessment (ESIA)
- Resettlement Action Plan (RAP)
- Environmental and Social Management Plan (ESMP)

The Stakeholder Engagement Plan outline in the Table 7.2 covers the following areas:

- Purpose of stakeholder consultation/ engagement
- Stakeholder identification
- Stakeholder analysis
- Stakeholder notification
- Stakeholder engagement schedule
- Communication of engagement outcomes
- Public disclosure/ public hearing

Table 7. 2 Stakeholder Engagement Plan Outline for E&S Assessment

SEP	IA	PESA	Scoping	ESIA/RAP/ESMP
Purpose of Stakeholder Consultation/ Engagement	• Inform stakeholders about proposed activity. • Obtain views of immediate neighbours. • Obtain information on existing and/or potential adjacent land use. • Obtain historical local knowledge about the area (e.g., flooding, security, fire, etc.)	• Inform stakeholders about proposed activity. • Obtain views and inputs of immediate neighbours. Discuss how their concerns could be addressed with them. • Build confidence and good rapport by bringing feedback on their issues.	• Identify all relevant stakeholders. • Inform stakeholders about proposed activity. • Ensure openness and transparency. • Avoid misinformation and potential mistrust. • Involve stakeholders to identify potential risks/impacts, conflicts, and opportunities. • Promote a sense of ownership. • Build cooperation and good rapport.	• Firm up and include all relevant stakeholders. • Follow-up on initial engagement at the scoping stage. • Conduct in-depth engagement. • Present feedback of their concerns and how to address them. • Engage them on feasible mitigation measures
Likely Stakeholders to Engage and Format for Engagement	• People affected by the Project. (interview) • Nearby facilities/houses. (interview) • Users of resources and facilities likely to be affected. (interview)	• People affected by the Project. (discussion) • People with interest in the Project or the Project area. (interview) • Nearby facilities/houses. (interview) • Users of resources and facilities likely to be affected. (discussion) • MMDAs (discussions) • Regulatory institutions (discussion) • Traditional authorities/opinion leaders (discussion)	• People affected by the Project. (discussion) • NGOs, CSOs, and others with interest in the Project or the Project area. (focus group) • Nearby facilities/houses. (Focus group) • Users of resources and facilities likely to be affected. (Focus group) • MMDAs (discussion) • Regulatory institutions (regional and national levels). (discussion) • Resource management and promotion institutions. (discussion) • Traditional authorities/opinion leaders (discussion) • women and other groups and associations and vulnerable groups. (Focus group)	Refer to Scoping stakeholders

Stakeholder Identification	Immediate adjoining neighbours and owners of facilities to the Project site as well as users of resources likely to be affected.	Immediate adjoining neighbours and owners of facilities to the project site as well as users of resources likely to be affected. Raw material sourcing or use and people who depend on them, and also those affected in the transfer/transport of materials	Prospective list of stakeholders matched against the main components of the Project and features of the Project environment in an Impact Identification Matrix.	Build on the Scoping phase stakeholder identification through field verification to update the list and ensure inclusiveness
Stakeholder Analysis	Not necessary at this phase since Project is screened as low-risk and also consistent with the planning layout for a given area.	Define roles and responsibilities of stakeholders based on Table 5.3	Define roles and responsibilities of stakeholders based on Table 5.3	Refer to Scoping Report and update (where necessary) based on EPA review comments
Stakeholder Notification	Not applicable	Not applicable	• Send formal letters of introduction to stakeholders • Send notification of engagement plan and meeting dates, venues, etc. • Post Scoping Notices in English at the respective Assembly, EPA Regional Office and the relevant Project communities informing stakeholders about the planned engagements on the Project.	• Reach out to stakeholders based on their preferred communication channel identified from the initial engagement. • The owner/tenants on the land must be formally notified at least a week in advance of the intent to enter, and be given at least 24 hours' notice before actual entry.
Stakeholder Engagement Schedule (Timelines)	Fill Section 5 "Concerns" in the Environmental Assessment Form 1, and provide evidence of consultation as an attachment (Planning phase)	One round of engagement (Planning phase)	One round of engagement with each stakeholders/stakeholder groups subsequent round(s) in the ESIA phase (planning phase)	• Follow-up engagement after 1st round during the scoping phase. (pre-construction/ implementation phase) • Compensation payment arrangement (pre-construction/ implementation phase).

				• Cut-off date agreement with PAPs (pre-construction/ implementation phase).
Communication of Engagement Outcomes	Engagement outcomes may be shared with stakeholders, but usually there is instant feedback.	Engagement outcomes can be shared with stakeholders.	Engagement outcomes will usually lead to further discussion (after issue analysis) in subsequent engagement during the ESIA phase	Engagement outcomes and feedback facilitate impact minimization, preferred alternative selection and mitigation and other decision-making options
Public Disclosure/ Public Hearing	Disclosure of project objectives and nature is required for stakeholders from whom information is sought.	Disclosure of project objectives, nature of intervention and purpose of PESA is required for stakeholders from whom information is sought	Disclosure of project objectives, nature of intervention and purpose of ESIA required for stakeholders from whom information is sought	• Public Hearing is held for certain Projects (as defined in the LI 1652) as another level of public information disclosure, prior to review of the Draft ESIA. • The Draft ESIA reports are circulated to relevant District Assembly, EPA Regional Office and EPA Head Office library, as well as relevant MDAs, and also advertised by EPA for public access and review opportunity for inputs to the review process. The advertisement is done through a 21-day public notice served in a daily newspaper. • The final ESIA report document is also disclosed electronically on EPA's website, with copies circulated to the same institutions above.

7.3 Information Disclosure

The World Bank's Environmental and Social Framework (ESF)'s Environmental and Social Standard (ESS) 10 - Stakeholder Engagement and Information Disclosure and the Ghana EA Regulations recognize the importance of open and transparent engagement with project stakeholders as an essential element of good practice. The ESS10 advocates effective stakeholder engagement to improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation.

Stakeholder engagement is described by the ESS10 as an inclusive process conducted throughout the project life cycle. When properly designed and implemented, it supports the development of strong, constructive and responsive relationships that are important for successful management of a project's environmental and social risks. Stakeholder engagement must be initiated at an early stage of the project development process to be effective as an integral part of project decisions on risks and impacts and planning.

Information dissemination and disclosure actions are required at all stages of projects financed by the World Bank. It is to promote effective engagement of all stakeholders including project implementers, regulatory agencies, bureaucrats, project affected persons and project beneficiaries. Effective consultation and information disclosure promote community ownership and participation and help to:

- Establish a systematic approach to identifying and engaging stakeholders to help build and maintain constructive relationships, particularly with project-affected parties;
- Assess the level of stakeholder interests and support to enable their views taken into account in project design and social performance;
- Promote and provide means for effective and inclusive engagement with project-affected parties throughout the project life cycle;
- Ensure that appropriate project information on environmental and social risks and impacts is disclosed to stakeholders in a timely and appropriate manner and format; and
- Provide project-affected parties with accessible and inclusive means to raise issues and grievances, which will be appropriately responded to and grievances managed.

The requirements for the engagement with workers in ESS2 and the special provisions on emergency preparedness and response are covered in ESS2 and ESS4 must be adhered to at all times. The requirements set out in ESS5, ESS7 and ESS8, which requires the application of special disclosure and consultation, for projects involving involuntary resettlement or cultural heritage must be followed. Consultation is critical in the preparation, implementation and monitoring of social safeguards for it to ensure that:

- PAPs provide their inputs and concerns about the project;
- Participate fully in the execution of the project; and
- Promote stakeholders support and sustainability of the project.

The 1992 Constitution and Right to Information Act, 2019 (Act 989) grants citizens right to information held by public institutions, subject to the exemptions that are necessary and consistent with the protection of the public interest. At every stage of the process, full and complete information about the prospective investment, its land requirements, and the implications for community and individuals will be made available to all parties in public meetings and other stakeholder engagements.

Local processes should be employed to ensure that project information is disseminated using the local language(s), ensuring that the community is fully aware of developments. During all consultations, the existence and conditions of access to a register will be widely disseminated within the community. The PIU would make available to the public, the existing GM, its procedures, the levels, and officers responsible for different types of grievances. It is essential that information on the GM should be disseminated to all relevant persons including the vulnerable and marginalized groups (such as women and persons with disability).

Information should also be disseminated through the project website, EPA website, notices on DA Notice Boards and in communities, posters, and outreach campaigns by PIU staff and facilitators. Relevant posters and video clips should be designed by the Communications Specialist within the first six months of project effectiveness. Messages conveyed to encourage people to use the GM would include:

- No fees for making complaints;
- Grievances help to improve the project's policies, systems and service delivery;
- Grievances lodged will be treated confidentially; and
- Complainants cannot be sanctioned for complaining.

Essential details about the GM for sub-projects will include:

- How to submit a complaint and where to access the Grievance Form;
- The standards and timeframes for complaint resolution;
- The options available to a complainant if the person is not satisfied with the grievance process or outcome; and
- Besides grievances, suggestions, recommendations, compliments and enquiries will also be welcomed.

Draft Environmental and Social Assessment Reports will be reviewed by EPA, with the opportunity for review input from the public. A 21-day public notice will be served through newspaper advertisement, indicating where copies of the report could be accessed and reviewed for EPA's attention.

Upon approval by EPA, copies of the final report will be circulated to the respective MMDA, and EPA library at the Head Office (Accra) for public access and information. The document will also be disclosed electronically on EPA's website.

Restrictions on physical meeting as a result of COVID-19 could prevent the use of some of the outlined information disclosure methods. In such cases, the most suitable method for engagement would be relied upon, based on the identified option during the initial engagement at the sub-project level.

8.0 Resources and Responsibility for Implementation

The successful implementation of the SEP will depend on the commitment of MoFA and various stakeholder including the EPA playing their expected roles. The implementation of the SEP will be integrated into the implementation of the different components of the project to ensure that stakeholders are engaged in all phases of the project. Table 8.1 will outline the various roles and responsibilities, resources and stage of implementation required for stakeholder engagement and the implementation of the SEP.

Table 8.1 SEP Implementation Budget

No	Activity	Responsible Entity	Implementation Phase	Breakdown and Rate ($)	Estimated Cost ($)
1	• Initial engagement with stakeholders and PAPs	Environmental Safeguards Expert Social Safeguards Expert ESIA Consultant RAP Consultant	Planning	DSA for 2 weeks for 4 personnel @ $300/day Fuel @ $50/day Vehicle hiring @ $200/day Stationery/printing etc	22,000
2	• Engagement towards site specific scoping	Environmental Safeguards Expert Social Safeguards Expert ESIA Consultant RAP Consultant	Pre-construction/ implementation	DSA for 2 weeks for 4 personnel @ $300/day Fuel @ $50/day Vehicle hiring @ $200/day Stationery/printing etc	22,000
3	• Engagement towards site specific assessment	Environmental Safeguards Expert Social Safeguards Expert ESIA Consultant RAP Consultant		DSA for 2 weeks for 4 personnel @ $300/day Fuel @ $50/day Vehicle hiring @ $200/day Stationery/printing etc	22,000
4	• Information disclosure including public hearing	Environmental Safeguards Expert Social Safeguards Expert ESIA Consultant RAP Consultant		DSA for 1 weeks for 4 personnel @ $300/day Fuel @ $100/day Vehicle hiring @ $200/day Stationery/printing etc	12,000
5	• RAP engagement	Environmental Safeguards Expert Social Safeguards Expert ESIA Consultant RAP Consultant		DSA for 2 weeks for 4 personnel @ $300/day Fuel @ $50/day Vehicle hiring @ $200/day Stationery/printing etc	22,000
6	• Follow-up engagement to address grievances	Environmental Safeguards Expert Social Safeguards Expert	Construction/ Implementation	DSA for 1 weeks for 2 personnel @ $300/day Fuel @ $50/day	4,550
8	• Follow-up engagement to address outstanding	Environmental Safeguards Expert Social Safeguards Expert	Decommissioning	DSA for 1 weeks for 2 personnel @ $300/day Fuel @ $50/day	4,550
9.	• Reporting	ESIA Consultant RAP Consultant	Planning	Professional fees for 2 experts for 4 weeks @ $600	36,600
		ESIA Consultant RAP Consultant	Pre-construction/ implementation	Professional fees for 2 experts for 4 weeks @ $600	36,600
	Total				**182.300**

9.0 GRIEVANCE MECHANISM

9.1 Introduction

The Grievance Mechanism is the formal and informal means of receiving and facilitating resolution (through dialogue, negotiation, mediation or arbitration) of complaints or disputes, of groups and individuals, whose rights may be affected through the implementation of project activities. It provides a means by which individuals or communities affected by project operations can raise questions, concerns, and problems with the project and get them addressed in a prompt and consistent manner. The Grievance Mechanism does not replace judicial or other non-judicial forms of remedy. However, when implemented effectively, grievance mechanisms offer the prospect of an efficient, immediate, and low-cost form of problem solving and remedy for both projects and communities. Strong and trusted grievance mechanisms can help address problems proactively as they arise, before they erode the local community's trust or become intractable. They can also be an effective way for projects to identify potential problems, and can offer valuable information on how to improve operations. This is made relevant under the **Bank's ESF 10 relating to Stakeholder Engagement.**

The Grievance Mechanism (GM) under the FSRP will provide avenues, define processes and corresponding institutions by which project-affected persons (PAPs) and institutions; and other community stakeholders affected by activities resulting from the implementation of the Project can lodge project-related complaints for redress. At the operational level, the GM will provide the means by which individuals, institutions or communities affected by the Project's operations can raise questions, concerns, challenges and issues problems with the implementing authorities and get them addressed in a prompt, fair and consistent manner. The GM is designed to ensure that the concerns of stakeholders are noted and addressed upfront during the project implementation. It also determines entitlements of compensation to the satisfaction of the complainant if it requires so, and to help minimize disputes or conflicts arising from the implementation of the project activities.

Special attention will be paid to accessibility of the GM to the disadvantaged and vulnerable individuals or groups who may be affected by FSRP activities during implementation. Generally, the scope of the GM varies with the magnitude and complexity of the project and how people are affected.

9.1.1 Objectives

The prime objectives of the grievance process are to ensure that appropriate and mutually acceptable redress actions are identified and implemented to the satisfaction of complainants by using Alternative Dispute Resolution (ADR) approach, and avoid the need to resort to judicial proceedings at the courts.

Specifically, the GM

- Provides affected people with avenues for making a complaint and/ or resolving any dispute that may arise during the course of the implementation of the project;
- Ensure that appropriate and mutually acceptable redress actions are identified and implemented to the satisfaction of complainants;
- helps community members build relationship of trust with the project staff and reduces social risk, and enables more responsive and responsible management.
- Ensures transparency in dealings amongst stakeholders including affected parties through a proper communication system.
- Provide avenue for vulnerable groups and victims of SEA/SH to have equal access to grievance redress process and support.

9.1.2 The Grievance Committees Structure and Process

A two-tier Grievance Committee (GC) will be established and applied. Grievance Committees (GCs) will be constituted at the regional and metropolitan/ municipal/district levels, with members from varied disciplines. Considerations will be made to ensure inclusion of women on all GCs. The membership of GCs at the two levels will be as follows;

a. Regional level: seven (7) members
b. Metropolitan/Municipal/District level: five (5) to nine (9) members

The Municipal/District Grievance Committee (DGC) will be set up in the 50 operational districts under Component 2 of the FSRP. Notwithstanding, the FSRP will have sub-projects outside the 50 operational districts, in which case, officers mostly Agricultural Extension Agents (AEAs) will be engaged and trained as Focal Persons to receive and transmit grievances to the DGCs. However, Focal Persons will be empowered through the training to respond to Level 1 cases that may come up. The Regional GC will be established in 10 regions of Ghana.

The GM implementation will follow clearly defined steps/processes. Individuals will bring forward grievances and disputes related to the project through the provided channels or in person to the Grievance Committees (GC) that have been established in the project Districts and Focal Persons. The entire process will be free of charge. The general steps of the grievance process comprise:

1. Receipt & recording of complaints
2. Assessment & Classification of complaint
3. Investigation of causes
4. Generation of options for solving the matter
5. Dialogue with the parties involved in the complaint/ claim
6. Resolutions of complaint
7. Drafting of report and follow-up
8. Alternative actions for unresolved complaints.

9.2 The Steps

This section indicates the steps that are to be followed from lodging of a complaint to the point of closure following implementation of agreed resolution. In order to accommodate all shades of opinion relating to the Project and the background of complainants, different means/channels are made available through which complainants will submit complains. These include: walk-in, letters, phone calls, WhatsApp, SMS, complaints boxes and a website (to be created). In addition, dedicated contacts phone lines and email addresses will be published on bulletin/notice boards in beneficiary communities for easy access to the grievance system.

Step 1: Receipt and recording of complaints

Receive grievance – FSRP designated official (Focal Person) receives a complaint/ grievance, which must be entered into a complaints log or stakeholder engagement database. Details to be recorded per grievance will include Grievance ID Number, Date of Receipt, Time Submitted, Name and Gender of Complainant, Contact Details/Address (including Digital Address/House Number), Nature of Grievance and Details of Grievance. The complainant has the option to remain anonymous. However, in order to provide feedback, contact details of the complainant will have to be obtained from him/her to enable feedback.

Step 2: Assessment & classification of complaint

The Focal Person will classify complaints/ grievance received into a category according to Levels 1 – 4; and the area/domain such as environmental, cultural heritage, land disturbance, health and safety etc. Levels of complaints is discussed in detail under Step 8. Focal Persons will respond to Level 1 cases that may come up, and assign the rest to the District Grievance Committee (DGC) established in the

50 operational districts or the District Department of Agriculture (DDA) (in districts where limited activities will be carried out)

Step 3: Investigation of causes
Investigate and resolve – DGC investigates to discover underlying causes, establish possible options for resolution and develop actions to prevent similar incidents from occurring in the future

Step 4: Generation of options for resolving the matter
The parties would be informed of the options available for resolution (dialogue, negotiation, mediation or arbitration)

Step 5: Dialogue with the parties involved in the claim or complaint
The DGC will discuss with the parties, the approach to be used in resolving the complaint.

Step 6: Resolutions of the complaint
Once the disagreement has been resolved, the DGC should make sure the parties signs-off.

Step 7: Drafting of report and follow-up
A report covering the approach towards the resolution and compromise reached is written and filed. The outcome is forwarded to the PIU and file closed.

Step 8: Alternative actions for unresolved complaints.
Further action – if either party is not satisfied, the DGC must initiate further investigation. The DGC may refer the settlement process to the Regional Grievance Committee (RGC) for determination, or may need to be passed on to a third party for mediation. When the issue is referred to the RGC, a time is scheduled for a meeting among the RGC members. At this stage the Chairman of the DGC referring the unresolved complaint appears before the RGC to brief them of the issue and how the DGC tried to reach a settlement. The RGC after the briefing then communicates to the parties involved of a date for resolving the issue. Upon successful resolution a report on the determination and outcome is compiled where the aggrieved parties sign to the report. If the impasse is not resolved, the aggrieved person is appealed to for another chance to resolve it. If no satisfactory resolution is reached, the complainant is advised by the RGC to proceed with an appeal which can be at the Court of Law. The interval of referral from the DGC to the RGC is 7 days. This is to enable the RGC Chairperson to reach out to committee members and schedule a date for determination.

In the case of unresolved complaints from DDAs (districts with limited activities) and with no RGCs, the Project Implementation Unit (PIU) will advise and/ or refer issue to the nearest RGC.

The PIU will sensitize the communities on the need to resort to the GM to address issues that may come up. As part of stakeholder engagement, community sensitization will be organized in all beneficiary communities. During this process through durbar/open fora, the communities will be informed of the details of the project. They will be informed of the application of Grievance Mechanism – what it is, establishment of DGCs, what they are to do and how individuals could access the DGCs with their complaints. The communities will also be briefed about how the process employs the ADR system in resolving issues that are related to the project. The community people will be made aware of the establishment of the DGCs at the MMDA level. They will also be informed of the availability of Focal persons that they can reach and file complaints with. They will be again informed of the various means/channels through which they can present complaints for the needed attention and resolution

Complaints received will be sorted into four levels as follows:

Level 1: Complaints and enquiries that can be responded to promptly, e.g. reason for road diversion, alternate road provided and length of time diversion will be in place;
Level 2: Complaints that border on disputes between communities and projects; public agencies

and Communities; investors and public agencies; amongst and within the communities as well as labour issues.

Level 3: Complaints related to valuation of project affected properties/items, and

Level 4: Complaints that border on integrity of persons including fraud or crime – corruption, rape, GBV, SEA/SH and and/ or forced labour issues.

After verification and classification of complaints by Focal Persons, those that fall within levels 2, 3 and 4 will be referred to the DGC. Levels 2 and 3 complaints will be investigated and attended to by the DGC. For Level 4 complaints, which border on crime/corruption, the complainants will be advised on the appropriate steps to get it resolved, since such complaints cannot be handled by the FSRP grievance system. Some examples of Level 4 complaints include stealing, extortion, sexual exploitation, abuse or harassment, forced labour etc. In the case of sexual abuse, exploitation and harassment, the complainant will be advised and referred to a desk that handles related issues at the Ministry of Gender, Children and Social Protection (MoGCSP) for counselling and further guidance, if the complainant so wishes. The Social Specialist (SS) at the PIU will liaise with the said outfit at the MoGCSP and collaborate with them for referrals and redress. Complaints that fall within Level 1 which requires simple explanations/ responses will be attended to by Focal Persons and discontinued.

9.3. Special considerations for children in Grievance Processes

Due to their young age, grievance cases that involve children under 18 are to be given special considerations and dealt with in accordance with the Child Act, 1998 (560) and MoGCSP Standard Operating Procedures (SOPs) for Child Protection and Family Welfare cases.

The grievance mechanism should be alerted:

- If a child below 14 is working in connection to project activities.
- If a child between 14 and 15 is found working in connection to project activities under conditions that are not qualified as light socializing work
- If a child below 18 is found to perform hazardous work
- If a child below 18 is suspected of being forced to work, or to be a victim of child trafficking.
- If child is victim of violence or abuse, including sexual abuse and sexual exploitation

Suspicion of forced child labour and/or child trafficking is justified if work is performed under the coercion of a third party, when the child is working as a direct result of the forced labour of his or her parents, when the child is from another country or region and is not with his or her primary caregivers and appears to be working under the pressure or coercion of a third party, when the employer appears to be taking advantage of the child's possible socioeconomic weakness, when the child's family has been exploited, and/or when an imbalance of power between the child and the employer has been abused.

If a case involving a child is reported to the project grievance mechanism, a preliminary assessment and classification is done to determine need for referral and remediation. If a child whose case has been reported to the grievance mechanism is found to be at non-sensitive (no severe socioeconomic vulnerability, the child goes to school, the child is above 15 and the case is not a criminal case) the child should be removed from the situation and case should be remediated and reported to District Department for Social Welfare and Community Development. If the case is a high risk case (e.g., a child who is severely socioeconomically vulnerable, experience multiple deprivations, and/or is under the minimum legal age for employment 15 years of age and is out-of-school), the case should be referred to the District Department for Social Welfare and Community Development. If the case is a suspected criminal case (e.g., child trafficking, forced child labour) the case should be reported to the Domestic Violence and Victim Support Unit and the Anti-Trafficking Unit of the Ghana Police Service.

- Higher risk cases and criminal cases require immediate reporting.

- All other cases should be reported within 48 hours and responded to within a week's time.

In all cases is the project, through the GRM responsible to ensure that the child's cases are appropriately remediated.

Table 1: SUMMARY OF GRIEVANCE MECHANISM PROCEDURE AND TIMELINES

Steps	Process	Actions/ Description	Time frame	Other information	Responsible Agency/ Person	REMARKS
1	Receipt & recording of complaints	Complaint (Project Affected Person/ Community) will be received through: (1) face to face, (2) phone (project DGC Offices, hotline), (3) letter/ e-mail, (4) during public/ community interaction	Day 1 (after receipt of complaint)	Recorded at the location or office and reported	Focal Persons/ DGCs	*1 AEA will be a member of the DGC
		Complaint recorded	Day 1 (after receipt of complaint)	Details of complainant taken (incl. contact details)	Focal Persons/ DGCs	
		Receiver forwards complaint to DGCs	Day 1 (after receipt of complaint)			
2	Assessment & Classification of complaint	Document complaint in Formal Logbook	2 – 3 Days after receipt of complaint		DGCs	

Steps	Process	Actions/ Description	Time frame	Other information	Responsible Agency/ Person	REMARKS
		Sort/ Classify complaint		Complaints will be sorted into levels 1, 2, 3, or 4		Level 1: explain to complainant immediately after sorting. Level 2 - 4: complainants will be informed on timelines for resolution
		Acknowledgement of complaint through appropriate medium		Inform complainant of processing of complaint for levels 2-4 complaints		
		Level 1 complaints responded to and resolved	5 Days (within a day to 5)	Level 1 complaints (question or grievance that can be immediately resolved) responded to	Focal Person/ DGC	Focal Person/ recipient may resolve/ address complaint if he/she has requisite information
3	Investigation of causes	DGC investigates the cause of complaint	8 – 10 Days	Identification of parties involved	DGC	
4	Generation of options for solving the matter	DGCs deliberates on suitable options for resolution of complaint	12 – 13 Day	Parties to the complaint are informed on options for resolution	DGC	
5	Dialogue with the parties involved in the complaint/ claim	Parties agree on options adopted (Levels 2 & 3)	11 Day (After investigation is done)		Recipient of grievance (i.e., DGC) /parties	

Steps	Process	Actions/ Description	Time frame	Other information	Responsible Agency/ Person	REMARKS
6	Resolutions of complaint	Redress action is implemented and communicated to complainant *(if the complainant is not present at time of redress*)	15 – 17 Days	DGC ensures compromised position is read to/ made known to, and accepted by all the parties. If the resolution is not accepted, the complaint should be escalated to a higher level.	DGC	
7	Drafting of report and follow-up	A detailed report on the resolution is prepared	20 Days (3 Days after the complaint is resolved)	The Committee's report is duly signed by all parties and shared with them. The complaint is consequentially closed. A copy of report filed and shared with the PIU.	DGC	
8	Alternative actions for unresolved complaints.	If satisfactory resolution is not reached, issue is forwarded to the Regional Grievance Committee (RGC) for resolution	27 – 30 Day	Detailed process used in resolving the complaint and the report is transmitted to the RGC and PIU informed	DGC	

Steps	Process	Actions/ Description	Time frame	Other information	Responsible Agency/ Person	REMARKS
		Documentation, tracking, reporting and monitoring	(7 Days after final meeting where resolution was not reached)	If the RGC is unable to resolve the complaint, further action taken by the complainant is monitored and documented.	RGC	

** FP – Focal Person | DGC – District Grievance Committee | PIU – Project Implementation Unit | RGC – Regional Grievance Committee*

9.3 The Grievance Committees

The Grievance Committees will be established to operate at two levels, i.e., the Regional and MMDAs. These will be assisted by Focal Persons (AEA). The RGCs will serve as a referral point where issues that are not resolved at the DGC level and the DDA (where applicable) are referred to for settlement. Individual complainants who do not obtain satisfactorily outcomes would have the opportunity to proceed to the Court of Law.

9.3.1 Regional Level

Regional Grievance Committees (RGCs) will be established in the ten (10) project beneficiary regions. These regions have been divided into three (3) target zones as follows:

- ***Northern Zone***: Upper East, North East, and Northern Regions
- ***Middle Belt***: Ashanti, Bono and Bono East Regions
- ***Southern Zone***: Greater Accra, Eastern, Central, and Volta Regions

The RGCs will consist of representatives from selected institutions/bodies. These institutions will be tasked to nominate their representatives to the RGC. These individuals will be trained prior to the start of work. The following institutions/bodies will have representation on the RGC:

1) Regional Coordinating Council (RCC) - Chairperson
2) MoFA Regional Directorate - Secretary
3) Regional Lands Commission
4) Traditional Leaders
5) Farmer/Value Chain Actor
6) Judicial Service (the Ghana Association of Mediators and Arbitrators)
7) Chairperson of a District Grievance Committee (where grievance was filed)

9.3.2 Metropolitan/ Municipal/ District Level

The Project has a large population across the country with many communities across the participating Districts. It would be cumbersome and impracticable to establish and manage many Community Grievance Committees. Grievance Committees will thus be set up at participating Metropolitan/Municipal/District Assembly (MMDA) level. The Metropolitan/Municipal/District Assembly (MMDAs) will serve as the location of these DGCs and for meetings when there are issues/complaints to be redressed.

A Metropolitan/Municipal/District Grievance Committee (DGC) will be constituted of five (5) members. Each of the participating MMDAs will be represented by members of institution/bodies listed below. These institutions/bodies will be officially requested to nominate their respective representatives to the DGC for training prior to the start of work.

However, in MMDAs with irrigation facilities or transhumance/major cattle rearing activities, the DGCs will have two (2) additional representatives respectively. The irrigation schemes will be represented by the Scheme Manager and a farmer/ value chain actor, whilst transhumance/ cattle rearing communities will be represented by a cattle farmer and an animal production/ veterinary officer within the Metropolitan/Municipal/District Agricultural Department.

The Structure
The proposed representation of a Metropolitan/Municipal/District Grievance Committee (DGC) is as follows:

1) The Metropolitan/ Municipal/ District Assembly
2) The Traditional Authorities
3) The Metropolitan/ Municipal/ District Directorate of MoFA
4) Farmer/value chain actors
5) NGOs/ FBOs
   To cater for irrigation facilities and/or major transhumance activities additional representations as follows as the case may be;
6) Scheme Manager
7) Irrigation farmer/ value chain actor
   Or
8) Cattle Farmer (cattle corridor)
9) MOFA – Animal Production Directorate (APD)
10) An Agriculture Extension Agent (AEA) in the district will be a non-voting member of the DGC. The AEA will double as key investigator in verifying issues reported from the field to the DGC.

The DGC will be the First Tier of the grievance system for processing and addressing complaints. After receiving a complaint filed by a complainant/aggrieved person through the Focal Persons/ DGC directly, the Focal Person/ DGC then categorizes the complaint into the Levels 1 – 4 for redress. The DGC then informs the party/parties involved and initiate an investigation process if required. A Grievance Logbook will be kept at all levels of the grievance system, i.e. by the Focal Person, DGC and RGC in which all complaints received at the respective level will be logged. Walk-in and phone call complaints will be received by the Focal person. If the investigations prove that the issue has to be processed, it does so by setting a date for the procedure. The DGC will then convene and handle the grievance so reported to have it resolved.

9.4 Governance

Committees once formed and trained will be sworn into office to handle issues or complaints that will be received. The established GCs will at their maiden meetings discuss and agree on modalities for conduct of their meeting, quorum, confirm the Chairperson (the nominee from the MMDA) and the Secretary (nominee from the District Directorate of Agriculture) etc. At a sitting to resolve a grievance or handle a reported issue, if the substantive Chairperson or Secretary is not present, the members present including the Secretary will select one of the members present to preside as Chairperson.

The grievance Committees (GCs) shall be governed by the principles of fairness, integrity, transparency, and timeliness. GC meetings will be a forum for the complainant and other parties to detail grievances and to explore (using mediation, negotiation, and other techniques) as redress action. From the moment reports and claims are received to when they are closed, the entire process can take at least a month. Nonetheless, the time required could vary depending on the complexity of the issue being dealt with. Confidentiality and anonymity of complainants will be ensured.

9.4.1 Focal Persons

Focal Persons will be selected to represent participating communities who will receive and submit/forward complaints from individuals to the appropriate DGC for redress. Notwithstanding, individual complainants will also have the opportunity to submit their issues directly to the appropriate DGC.

9.4.2 Grievance Committee Meetings

GC meetings will be a forum for the complainant and other parties to detail grievances and to explore (using mediation, negotiation, and other techniques) the redress action. The proposed redress action and the time frame in which it is to be implemented is presented in Appendix 1. The proceedings at GC meetings will be recorded by the Secretary of each composed panel. Thus, each panel composed shall select its own Secretary. A Secretary must be selected for each meeting, in the absence of the substantive secretary.

Fifty 50 districts GMCs is to be formed in all; out of which 40 districts GMCs will have memberships of 5 each and 10 districts with Irrigation Schemes and/or Transhumans (livestock) with 7 members each. Each district GMC is projected to meet twice a month. It is also projected that the GMC will move to site twice a month to ascertain complaints if necessary.
The 10 Regional GMCs are to be formed with a membership of 5 and each Regional GMC is expected to meet at least once a quarter.

9.4.3 Gender Based Violence and Sexual Harassment

To ensure that gender-based violence and SEA/SH are handled appropriately, GC composition will consider inclusion of GBV and SEA/SH knowledgeable persons where such resource persons are available to advice on such issues.

Closely linked to this is child labour. The GM and GCs will ensure attention is given to child labour issues within the project area. In Ghana, Child Labour issues are handled at the MMDAs by the Department of Social Welfare (DSW). To ensure that such cases are appropriately referred to the DSW, FSRP will liaise with the DSW in the Regions/MMDAs for their collaboration.

9.4.4 Sexual Exploitation and Abuse and Sexual Harassment

Sexual Exploitation and Abuse/Sexual Harassment (SEA/SH) risk of the project in Ghana is assessed as Moderate using the World Bank GBV Risk Assessment Tool. There are risks of project staff (including third party service providers), often mostly male, coming into contact with beneficiaries with a power dynamic that increases SEA/SH risks. This will be mitigated through training and strict application of the related safeguard measures consistent with the Ghana National Gender Policy. The Environmental and Social Management Framework will have a SEA/SH Risk Mitigation and Response Action Plan. This will be rigorously implemented, and the client will ensure that SEA/SH risks are adequately reflected in all safeguards' instruments (i.e., Project ESMP and Contractor's C-ESMP).

The site-specific Stakeholder Engagement Process will include adequate measures to sensitize stakeholders and project beneficiaries particularly women and girls on risks of SEA/SH. The site-specific Grievance Mechanism (GM) should have specific procedures for SEA/SH including confidential reporting with safe and ethical documenting of SEA/SH cases. If the GM receives a case on sexual exploitation and abuse related to the project, complaint will only be recorded after securing full consent of the complainant in line with survival centred approach. The Social Specialist will then refer the complainant to the appropriate SEA/SH service provider or relevant government authorities in line with the SEA/SH Risk Mitigation and Response Action Plan. As part of contractor's agreement, each contractor would be required to sign a code of conduct to mitigate potential risk of SEA /SH. In cases, where the perpetrator(s) is linked to project activities then the contractor will take appropriate actions as per the provision of the contractor's contract agreement and under the effective law in Ghana. The PIU will report activities and outcomes of SEA surveillance and management to the World Bank on a regular basis.

The procedure for SEA/SH mechanism (Figure 1) will include:

- Reporting of SEA/SH
- Investigation and referral of complaint to national authority; and
- Disciplinary measures

Reporting of SEA/SH

The PIU through the GC will make available reporting hotlines where victims or witness of SEA/SH will report cases involving staff/contractors and sub-contractors of the project to the GC. Reports will be taken in confidence, and where warranted, anonymously, and the identity of individuals contacting the GC will be protected. SEA/SH reports will be dealt with as priority and the Bank will be informed immediate upon receipt of a report or complaint.

Investigation

The DGC will initiate its own fact-finding investigation based on reports/complaint on SEA/SH. Also, the DGC will refer the case to the appropriate national authority, i.e., DOVVSU for criminal proceedings as appropriate and will collaborate with the national authority in investigation. The DGC and the PIU will not interfere with investigation and criminal verdict by the national authority.

Disciplinary Measures

Based on the investigation, if the culprit is found guilty, in addition to any criminal verdict pronounced from the legal proceedings and criminal prosecution, the DGC will take a disciplinary measure against culprit.

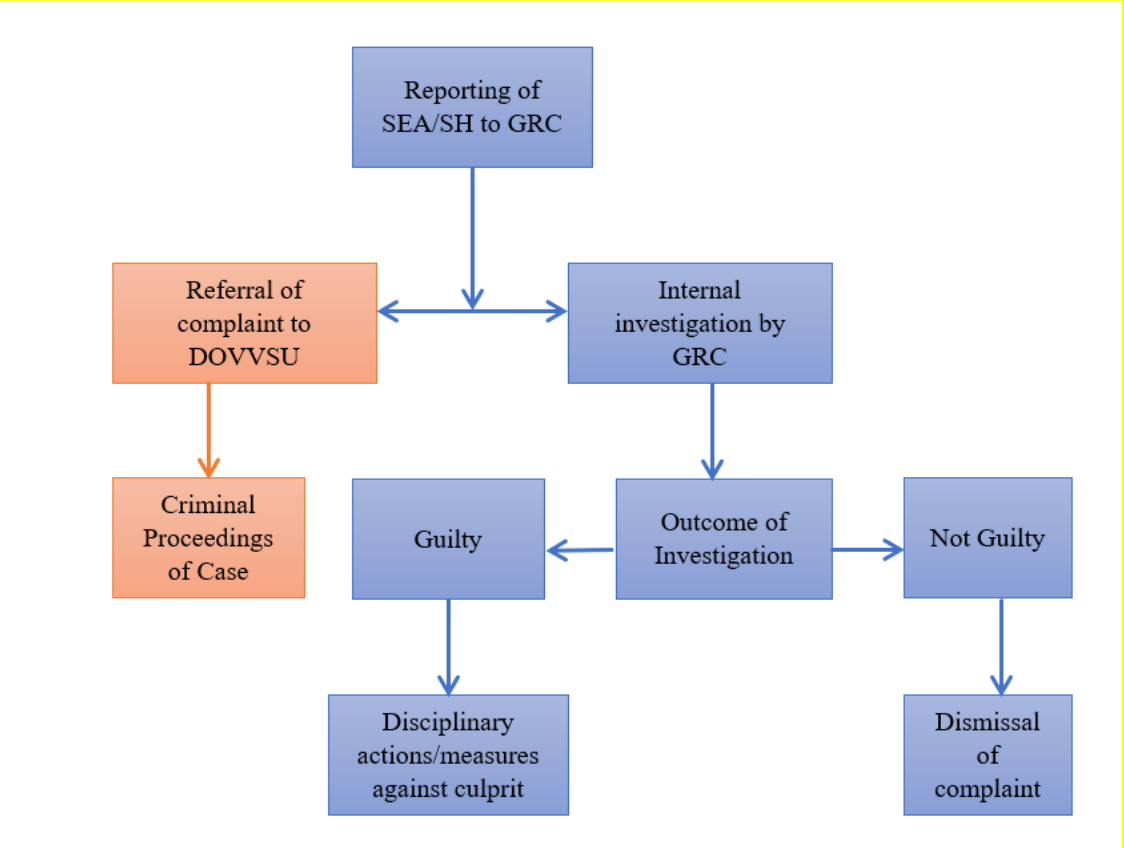


Figure 1. SEA/SH Mechanism

Reporting of child cases:

The PIU through the GC will make available reporting hotlines where cases of child abuse, child labour, child trafficking, forced child labour involving staff/contractors and sub-contractors of the project can be reported. Reports will be registered, assessed and referred as per Figure 2. In all cases is the project, through the GRM responsible to ensure that the child's case is appropriately remediated and this could mean supporting with resources for the remediation package, as and if needed.

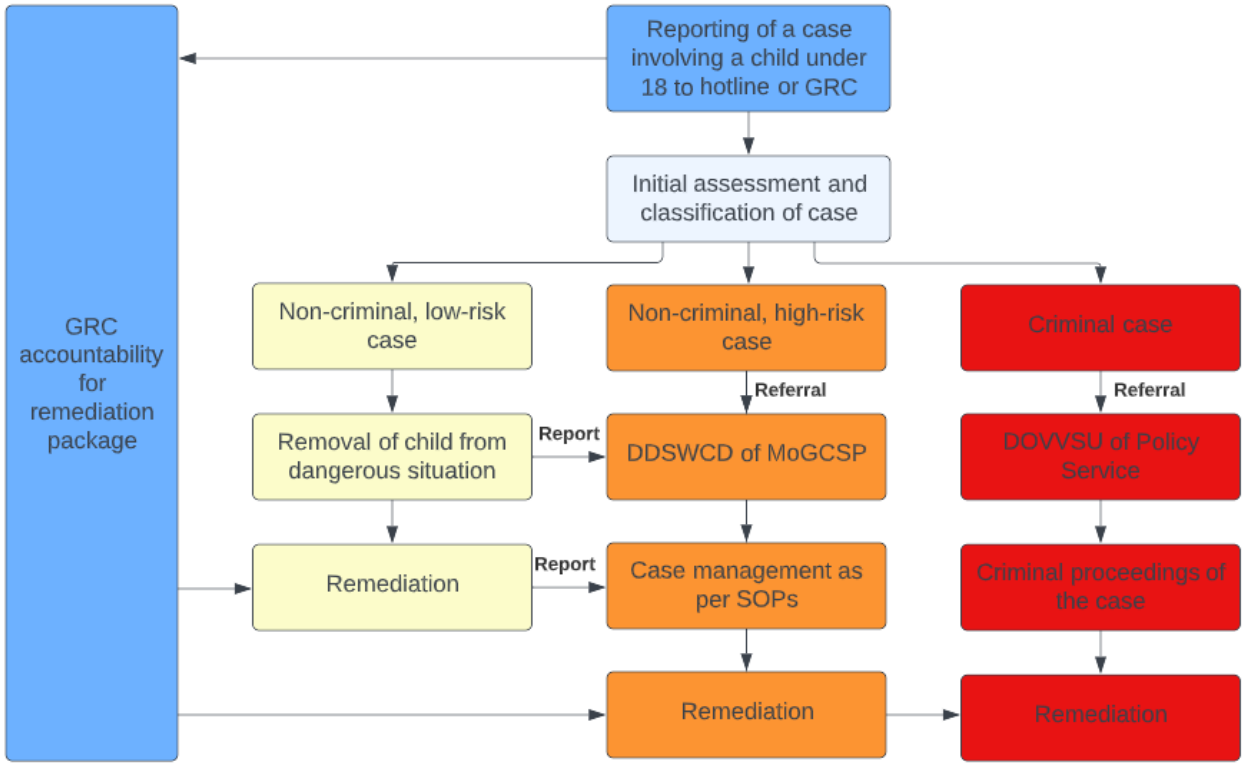


Figure 2. Mechanisms for dealing with child cases

9.5 Grievance Uptake Form

The complainant's name, date and nature of complaint, follow-up actions and their dates will all be logged for referencing and tracing. Once grievances are resolved, the Chairman of the committee will complete the Grievance Uptake Form (Appendix 1) detailing and confirming the resolution. The form will be signed by the complainant, and other parties. A complaint logbook will be opened for all complaints at the project level. All DGC minutes will be recorded and made available for review upon request.

9.6 Mode of Making and Receiving Complaints

A person or group of persons that are affected or have concerns with the Project activity will have access to initiate a complaint with the designated offices/officers at the community level or with the DGC. Where the complainant cannot write, the issue can be narrated to the receiving officer who will write the issues out. It will be read to the complainant to accept the content before recorded in the Complaints Log Book. Apart from direct submission of complaint/ grievance to a designated office/ officer, the complainant can have the issue of concern written and submitted through any of the receiving avenues listed as follows;

- Referral pathway – Online Form
- Contact Numbers
- E-mail system – separate email address for Grievance Mechanism
- Bulletin Boards/Notice Boards
- Complaint boxes at site specific locations

9.7 Settlement of Disputes

A number of methods are available to the GC and PAPs for use in resolving disputes and complaints. These include the following, which is also presented in a hierarchical order in Figure 1.1.

- Settlement by negotiation;
- Settlement by mediation;
- Settlement by arbitration;
- Settlement by court system as a last resort

9.7.1 *Settlement by Negotiation*

The parties to a dispute under the project may negotiate in good faith with a view to reaching a settlement of the dispute. This may be in accordance with any contract between the parties.

9.7.2 *Settlement by Mediation*

Where parties to a dispute choose to settle their dispute through mediation, the GC may mediate the dispute or other mediators may be identified by the parties. Where parties agree to settle the dispute by mediation and there is settlement, the terms of settlement shall be in writing which shall be signed by the mediator and parties to the dispute. The settlement agreement shall be binding on the parties, unless the agreement states otherwise. Where no agreement is reached at the end of the mediation, the mediator shall state so in writing and refer the matter to the DGC for further action.

9.7.3 *Settlement by Arbitration*

Settlement by arbitration shall be in compliance with the Arbitration Act, 1961 (Act 38). The Court System (arbitration) may appoint an arbitrator or arbitration panel to resolve the dispute, in which case the parties bear no cost. The parties have the right to appoint their own arbitrators, in which case they will bear the cost of the arbitration process. An arbitration award shall be binding on all parties. Where an external arbitrator is used, the external arbitrator shall communicate the award in writing to the DGC within 3 days after the award.

The grievance issue should be resolved within 2 weeks of receipt of complaints, unless it requires further investigation which could go up to 4 weeks. Should there be an unexpected delay, the DGC will make sure to inform the concerned parties about the delay and its impacts on the initial schedule. Depending on the nature and type of grievance, PIU staff and partner organizations (Lands Commission and EPA representatives, etc.) may visit the affected property site

or get in touch with the complainant to confirm that the redress action is carried out. Verification should be completed within a time specified by the parties.

9.8 Appeal to Court

It is hoped that the courts of law will be a "last resort", in view of the available options above. The Constitution of Ghana allows any aggrieved person the right of access to the Court of Law. If the complainant remains dissatisfied with the alternative mediation efforts, he/she has the option to pursue appropriate recourse via the judicial process in Ghana.

9.9 Sexual Exploitation and Abuse and Sexual Harassment

The program will recruit a Gender Based Violence (GBV) officer to support in confidential uptake and resolution of sexual exploitation and abuse and sexual harassment (SEA/SH) complaints, consistent with the Ghana National Gender Policy. Complaints of SEA/SH between project staff and PAPs/women/children/vulnerable groups should be reported to the GBV officer who will report to the Child Protection officer for necessary action to be taken.

9.10 GM Documentation and Reporting

All activities at the different levels shall be documented and records properly kept. Documentation will both be in hard and soft copies. Hard copy documents will include complaint forms, acknowledgement forms/letters, minutes of all committee meetings, monitoring reports, response letters and pictures.

The respective responsible officers at each level will be responsible for reporting on project-related grievance and complaints to the grievance committees at their respective levels. A quarterly grievance report will be generated and shared with the World Bank. The report will cover the following indicators:

i. Number of new complaints received within the quarter (disaggregated by type of cases).
ii. Number of open cases at the beginning of the Quarter
iii. Number of new cases during the period
iv. Number of resolved cases at the end of the Quarter
v. Open cases at the end of the Quarter
vi. Grievances by community and category of complaints
vii. Average response time from the lodging of complaint to the agreement on solutions with complainants
viii. Average response time from the lodging of complaint to the implementation of the agreed resolution
ix. Percentage of true and false claims
x. Number of grievances resolved by order of mechanisms

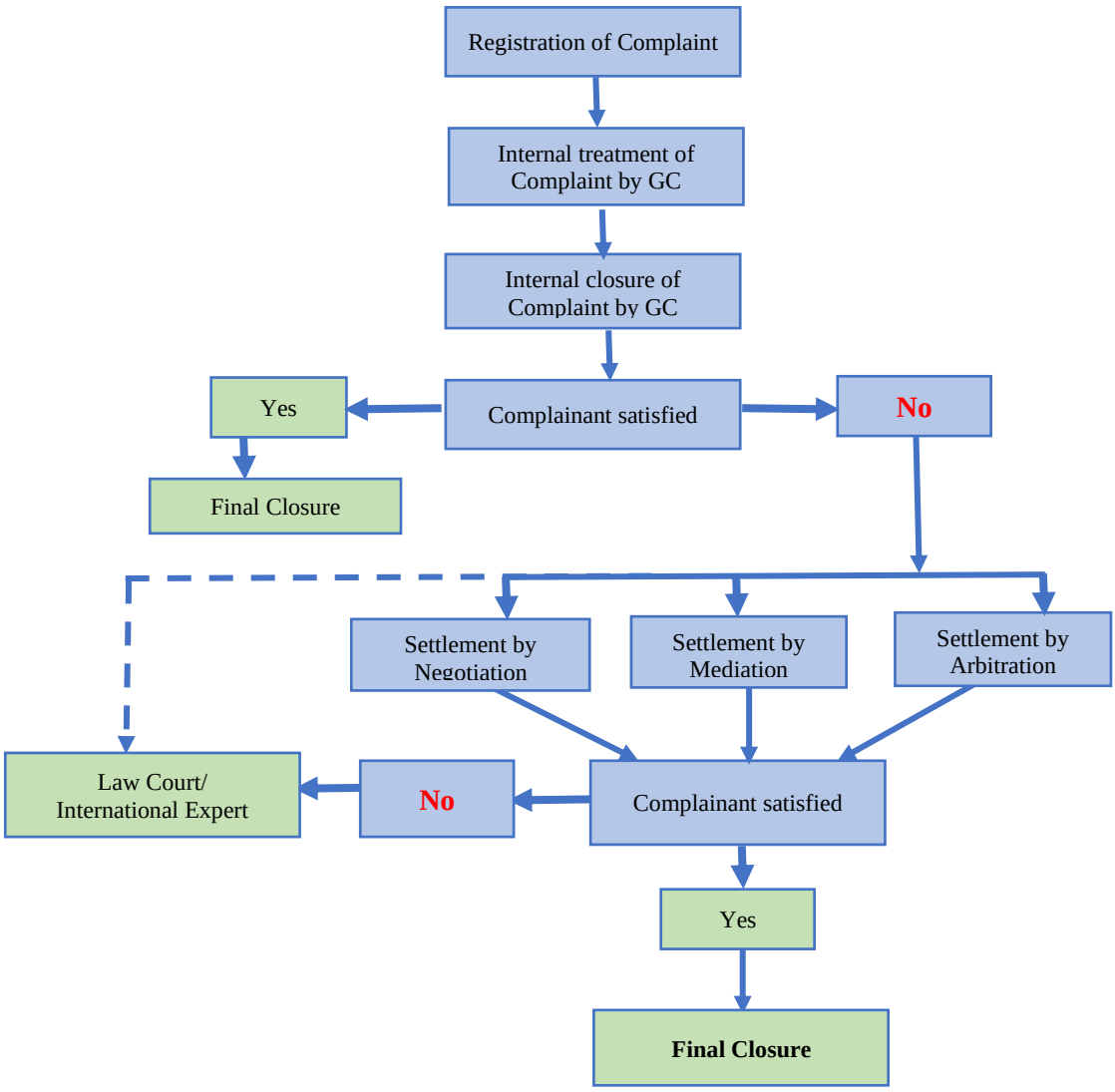


Figure 1: Grievance/Dispute Management Mechanism Flow Chart

9.11 FUNDING OF GRIEVANCE MECHANISM

The Grievance Mechanism activities will be supported based on an imprest (monies released and replenished upon accounting) system to the respective committees from the Project Zonal Offices. The PIU is national in character. The PIU will send operational monies to the Zonal Offices (under which the participating regions fall) for onward disbursement to the districts. The GM would be funded through the Zonal Offices. The initial amount to each district entity which would be replaced as and when the entity accounts for monies advance to it. A summary budget is presented in **Table 2**.

Table 2: Summary Budget for Funding Grievance Committees

Levels of Committee	No. of Districts/ Regions	Member ship	Total Member ship	No. of Meetings & Visits per Month	Transport fare to meetings	Lunch/ Snacks/ Water	Total Monthly Cost (GhS)	Annual Total
	(b)	(c)	(d) = (b) x (c)	(e)	(f)	(g)	(h) = (d) x (e) x [(f)+ (g)]	(i) = (h) x 12
Districts **without** Irrigation Scheme & Transhumans/ Livestock Activities	40	5	200	4	100.00	100.00	160,000.00	1,920,000.00
Districts **with** Irrigation Schemes & Transhumans/ Livestock Activities	10	7	70	4	100.00	100.00	56,000.00	672,000.00
Regional	10	5	50	0.25	100.00	100.00	2,500.00	30,000.00
Other Officers (District Directors)			20		100.00	100.00	4,000.00	48,000.00
TOTAL			**340**				**222,500.00**	**2,670,000.00**

(Details provided in **Section 9.4.2**)

A sum total of GHS 222,500.00 per month and GHS 2,670,000.00 annually. This on the average represents $54.53 per person per month

Appendix 1: Sample Grievance and Resolution Form

Grievance and Resolution Form

Name (Complainant): _____

ID Number: _____ (PAPs ID number) _____

Contact Information: _____ (Village: mobile phone)

Nature of Grievance or Complaint: _____

_____

_____

_____

Date	Individuals	Summary of Discussion
_____	_____	_____

Signature: _____ Date: _____

Signed (Complainant):

_____

Name of Person Filing Complaint: _____ (if different from Filer)

Position or Relationship to Filer: _____

Review/Resolution

Date of Conciliation Session: _____

Was Filer 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 below: (tick) ☐

If agreement was not reached, specify the points of disagreement below: (tick) ☐

_____

_____

_____

Signed (Conciliator): _____

Signed (Filer): _____

Signed: _____ Date: _____

Independent Obser

Appendix 2: Sample Complaint Acknowledgement Letter

Grievance and Resolution Form

_____ [Complainant's name or the name of the organization submitting the complaint if the complainant wishes to remain anonymous]
[Complainant's address or "No physical address"]

Submitted _____ [☐ in person ☐ mail/e-mail ☐ telephone]

Dear Mr./Mrs./Ms. [family name of complainant]:

Re: Complaint regarding [describe briefly]
_____
_____
_____

The FSRP Project acknowledges receipt of your complaint dated _____ [date]. The Project takes community concerns seriously, and we thank you for submitting your complaint. We will make every effort to ensure that your complaint is considered quickly and fairly.

The Project has a grievance mechanism process that we follow to consider and resolve complaints. Attached is a description of the process, so you can learn more about it. In accordance with our grievance mechanism procedures, we will determine whether your complaint is eligible for our grievance resolution process and consider next steps, as relevant. We will contact you during this period should we need more information.

You can expect to hear from us within 7 business days from the date of this letter.
Please refer to the attached grievance mechanism procedures for more information on what you can expect as we address your complaint, including timeframes, responsibilities, and your rights throughout the process.
Sincerely,

[Name of Grievance Mechanism Specialist]

Grievance Mechanism Specialist

The FSRP Project

Enclosure: (The relevant procedures on submitting grievances)

10.0 MONITORING AND REPORTING

10.1 Objective of Monitoring and Evaluation

Stakeholder engagement activity must be monitored and evaluated at all levels to ensure these are carried out in accordance with the relevant requirements of the SEP, and for follow up remedial actions, where necessary. The provisions for monitoring and evaluation (M&E) will ensure the proposed actions are implemented as intended and within the project stages established, and also that, the expected results are achieved. Where shortcomings or problems are found, M&E can initiate appropriate corrective action.

The monitoring of project activities related to stakeholder engagement must fit into the overall project M&E framework. The objective of the monitoring plan will be to ensure that all stakeholders are provided with timely and updated information with regards to the implementation of all sub projects. The focus of the M&E will include an assessment of the following:

- SEP implementation is in accordance with the national and international regulations;
- Whether SEP implementation has to be adjusted due to changes that have occurred;
- Whether complaints and grievances are being properly and effectively addressed; and
- Inform decisions to resolve problems encountered during SEP implementation.

Actions will be monitored and evaluated internally by a Monitoring and Evaluation Team (MET) to be constituted by the PIU.

10.2 Purpose and Responsibility of Internal M&E

The purpose of the internal M&E will be to verify that:

- Actions and commitments described in this SEP are implemented;
- Eligible people to be affected by the works receive their full compensation; and
- Complaints and grievances lodged by PAPs are followed-up and resolved.

Evaluation and monitoring are key components of the SEP. They have the following general objectives:

- Monitoring of specific situations or difficulties arising from the implementation, and of the compliance of the implementation with objectives and methods as set out in this SEP; and
- Evaluation of the mid- and long-term impacts of any project activity on affected households' livelihood, environment, local capacities, on economic development and settlement.

Monitoring aims to correct implementation methods during the course of a project, as required. Evaluation is intended at checking whether policies have been complied with and providing lessons learnt for amending strategies and implementation in a longer-term perspective. Monitoring will be internal and evaluation external.

10.3 Participatory Monitoring and Evaluation Plan Indicators

The Monitoring and Evaluation Team (MET) will be expected to develop and implement a Monitoring and Evaluation Plan (MEP). The main indicators the MEP will measure include:

- Impacts on affected individuals, households, and communities to be maintained at their pre-project standard of living, or better;
- Improvement of communities affected by the project;

- Timeliness and adequacy of information delivery;
- Involvement of vulnerable groups and
- Management of disputes or conflicts.

The PIU Coordination Office will undertake routine internal M&E of the implementation of the SEP so as to ensure that all the responsible units follow the schedule and comply with the principles of the SEP. The monitoring program will provide a continuous feedback on the implementation of the SEP. Monitoring teams will be constituted and will report regularly to the coordinating office. The team will include EPA, and appropriate departments under MoFA. Through the M&E, PIU will establish a reporting system for the project SEP that will:

- Provide timely information to the project about all stakeholder engagement activity and issues arising;
- Identify any grievance, especially those that have not yet been resolved at the local level and which may require resolution at higher levels;
- Document completion of project resettlement and compensation that are still pending, including for all permanent and temporary losses; and
- Evaluate whether all PAPs have been compensated in accordance with the requirements of the RAP and that PAPs have better living conditions and livelihoods.

Instrument of monitoring will include the following:

- Questionnaires with data stored in a database for comparative analysis (before-after and with-without); and
- Documentation and recording of PAPs situation, including subsequent uses of assets and any improvements

10.4 Reporting

The monitoring unit will submit periodic (preferably bimonthly) reports to the PIU and copied to MoFA. The report will cover activities regarding stakeholder engagement, the methods used, the issues raised, how those issues have been resolved and provision made for future engagement. This report will form part of the PIU's regular and agreed report to the World Bank.

APPENDICES

Appendix 1 Consultation Guide

Respondents (Name, Position, Tel. &/ E-mail):
Engagement Tool: **Date:** **Time:**

Engagement Issues - MSA

Issues
1) What is the size of land required for setting up ground station or weather station?
2) Who could be easily affected in the event of acquiring land for any of the stations?
3) How end-of-life EEE (e-waste) is current managed?
4) Quantities of end-of-life EEE (e-waste) generated?
5) How is the storage provision for the e-waste?
6) The Program is likely to increase the quantity (number and types) of the EEE for digital advisory services provision - what types of EEE are likely to be needed/supplied?
7) The increased EEE quantities (number and types) for the digital advisory services provision, would generation large quantities of end-of-life EEE (e-waste) - will land be required for storage of the WEEE?
8) What measure could be put in place to handle and manage the WEEE?

Engagement Issues - DAES

Issues
1) How much land on the average is required to set up the following industries? Seeds production? Fertilizers production? Pesticides production?
2) How likely is proposed land for development be occupied by some existing users?
3) What are the most likely land use forms such lands will be under?
4) Are women likely to be among the affected land users?
5) How are watershed areas proposed for restoration likely to be occupied by some existing users?
6) What are the most likely land use forms such watershed areas will be under?
7) Are women likely to be among the affected watershed area users?
8) What land use types are likely to be affected by the grazing reserve/corridor development?
9) What is the estimated proportion of the land use types (e.g. farming 60%, etc.)
10) How long and wide will the grazing reserve/corridor be?
11) How many districts is the grazing reserve/corridor likely to traverse or cross?
12) What happens to the grazing reserve/corridor in the rainy season?

Engagement Issues - CERSGIS

Issues
1) Will land have to be acquired for setting up ground stations and weather stations under the digital advisory services provision and infrastructure for agro-meteorological information to farmers (using multi-modal channels...)

2) Who (land use type) could be easily affected in the event of acquiring land for any of the stations?
3) How end-of-life EEE (e-waste) is current managed?
4) Quantities of end-of-life EEE (e-waste) generated?
5) How is the storage provision for the e-waste?
6) The Program is likely to increase the quantity (number and types) of the EEE for digital advisory services provision - what types of EEE are likely to be needed/supplied?
7) The increased EEE quantities (number and types) for the digital advisory services provision, would generation large quantities of end-of-life EEE (e-waste) - will land be required for storage of the WEEE?
8) What measure could be put in place to handle and manage the WEEE?

Engagement Issues - NAFCO

Issues
1) How common are accidents involving cargo trucks in transit?
2) How frequent do cargo trucks in transit breakdown?
3) How common do food produce cargo trucks get stranded due to vehicle breakdown?
4) How common do cargo trucks in transit get involved in accidents causing damage to the food produce cargo?
5) How often do food produce cargo trucks get stranded at international borders in the subregion?
6) How is damaged or unwholesome food produce (in transit due to delayed delivery) disposed of?
7) Would land be required/acquired for the disposal of such declared unwholesome food produce?
8) How could accidents and breakdown be avoided or minimized (during transit)?

Engagement Issues - MOFA/e-AP

Issues
1) How much land on the average is required to set up the following industries? Seeds production? Fertilizers production? Pesticides production? Veterinary products manufacture?
2) Where will such factories/industries be set up for each of them - e.g. peri-urban, remote, industrial areas, etc.)
3) Can the promotion and supply of agricultural inputs (seeds, fertilizers, pesticides, veterinary products, and technology support) with ready market for food produce and guaranteed pricing regime enhance productivity and agriculture generation to the point where people would convert - a. Forest and woodland areas into agricultural fields? b. Tree crop plantations (e.g. Cocoa, Rubber, etc.) into cash/food crop fields?
4) Would such a situation have consequences for Climate Change?
5) How could the situation be avoided to prevent Climate Change impact (if it is true)?
6) Would converting forest and woodland areas to agricultural fields involve land acquisition and displacement of other land users?

Engagement Issues - GIDA

Issues
1) What is the average land area for each of the irrigation projects?
2) What is the likely land use types in these areas?
3) Will the rehabilitation of the 8 small irrigation dams likely to displace people?
4) How many people could on the average be displaced?
5) What is the estimated land area likely to be affected on the average?
6) For the reclamation of the 3 irrigation schemes (Wheta, Tanoso and Techiman) are there any existing users/dependents on the scheme?
7) How many people (on the average) depend on the scheme currently?
8) What is their level of productivity on the irrigation schemes (average income)?
9) What role does the Agency play in irrigation projects?
10) Who is responsible for selecting the locations for irrigation projects?
11) Average land area for each of the irrigation projects?
12) What is the likely land use types in these areas?
13) What is the population in the area likely to be affected?
14) Will the rehabilitation of the 8 small irrigation dams likely to displace people?
15) For the reclamation of the 3 irrigation schemes (Wheta, Tanoso and Techiman) are there any existing users/dependents on the scheme?
16) 9. For the reclamation of the 3 irrigation schemes (Wheta, Tanoso and Techiman) are there any existing users/dependents on the scheme?
17) How are electronic waste going to be handled during the operation phase?
18) Capacity to participate in environmental impact assessment

Engagement Issues – IESS

Issues
1) What are the current challenges of the Volta Basin Area?
2) What are the social issues associated with irrigation, aquaculture and other activities under the program?
3) What mitigation/recommendation will be appropriate?
4) What is the average land take by irrigations projects?
5) What is the typical land use of areas along the Volta for irrigation?

Engagement Issues – FRI

Issues
1) What are the main E&S issues related to the food production, processing and transportation under the program?
2) What best practices can be adopted to manage impacts?

Engagement Issues – WIAD

Issues
1) What is the possibility of gender discrimination from the introduction of new technology and the program?
2) What form does gender-based violence and other forms of abuse take, within the value chain?
3) What mitigations can be used to address gender-based violence and other forms of abuse?
4) Are there any other occupation health issues faced by women in the value chain?
5) Are women unfairly treated during land acquisition processes? How?

6) Is forced labour an issue in the agriculture sector?

Engagement Issues - NDA

Issues
1) How much land on the average is required to set up the following industries? Seeds production? Fertilizers production? Pesticides production? Veterinary products manufacture?
2) Where will such factories/industries be set up for each of them - e.g. peri-urban, remote, industrial areas, etc.)
3) How likely is proposed land for development be occupied by some existing users?
4) Are women likely to be among the affected land users?
5) How are watershed areas proposed for restoration likely to be occupied by some existing users?
6) What are the most likely land use forms such watershed areas will be under?
7) Are women likely to be among the affected watershed area users?
8) What land use types are likely to be affected by the grazing reserve/corridor development?
9) What is the estimated proportion of the land use types (e.g. farming 60%, etc.)
10) How long and wide will the grazing reserve/corridor be?
11) How many districts is the grazing reserve/corridor likely to traverse or cross?
12) What happens to the grazing reserve/corridor in the rainy season?

Engagement Issues - EPA

Issues
1) What are the key social issues experience in similar past programs?
2) What were the interventions/mitigations recommended in past program?
3) What roles did the EPA play in similar programs?
4) Can the promotion and supply of agricultural inputs (seeds, fertilizers, pesticides, veterinary products, and technology support) with ready market for food produce and guaranteed pricing regime enhance productivity and agriculture generation to the point where people would convert - a. Forest and woodland areas into agricultural fields? b. Tree crop plantations (e.g. Cocoa, Rubber, etc.) into cash/food crop fields?
5) How end-of-life EEE (e-waste) is current managed?
6) Quantities of end-of-life EEE (e-waste) generated?
7) How is the storage provision for the e-waste?
8) The Program is likely to increase the quantity (number and types) of the EEE for digital advisory services provision - what types of EEE are likely to be needed/supplied?
9) The increased EEE quantities (number and types) for the digital advisory services provision, would generation large quantities of end-of-life EEE (e-waste) - will land be required for storage of the WEEE?
10) What measure could be put in place to handle and manage the WEEE?
11) What land use types are likely to be affected by the grazing reserve/corridor development?

Engagement Issues - WRI

Issues

1) What are the E&S issues related to integrated aquaculture and agriculture system?
2) What are the negative impacts of cage aquaculture?
3) What mitigations/ recommendations would you suggest to tackle conflict between local fishermen and cage aquaculture developers?
4) Are there land-take issues in integrated aquaculture and agriculture systems?

Engagement Issues - APD

Issues
1) What land use types are likely to be affected by the grazing reserve/corridor development?
2) What is the estimated proportion of the land use types (e.g. farming 60%, etc.)
3) How long and wide will the grazing reserve/corridor be?
4) How many districts is the grazing reserve/corridor likely to traverse or cross?
5) Which districts are these?
6) What happens to the grazing reserve/corridor in the rainy season?

Engagement Issues - DCS

Issues
1) How much land on the average is required to set up the following industries? Seeds production? Fertilizers production? Pesticides production?
2) Can the promotion and supply of agricultural inputs (seeds, fertilizers, pesticides, veterinary products, and technology support) with ready market for food produce and guaranteed pricing regime enhance productivity and agriculture generation to the point where people would convert Forest and woodland areas into agricultural fields? Tree crop plantations (e.g. Cocoa, Rubber, etc.) into cash/food crop fields?
3) Would such a situation have consequences for Climate Change?
4) How could the situation be avoided to prevent Climate Change impact (if it is true)?
5) What has been the impact of COVID on production?
6) What are the activities involved in rehabilitation of stations and what are the associated E&S issues?
7) Are there any other key E&S issues?
8) What is the current environmental management system used?
9) What interventions/ mitigations would you recommend dealing with E&S issues identified?

Engagement Issues - PPRSD

Issues
1) What are the environmental safeguards activities you have been involved in on previous programs?
2) What are the safeguards activities that the PPRSD would undertake under the FSRP2?
3) What are some of the treats to food production?
4) How would/ has Covid impacted your operations?

Engagement Issues - Female Rice Farmers

Issues

1) What is the waste management system in place?
2) Are there any health problems associated with irrigation activities?
3) Are there any concerns on the proposed project?
4) Why are children encouraged to help parents on farms?
5) Can the potential project cause gender-based violence?

Engagement Issues – Water Users Association

Issues
1) What is the water usage in the area?
2) Are there any suggestions?
3) What is the mandate of the association?
4) What challenges do you face?

Engagement Issues – Global Agriculture Development Company

Issues
1) What is the mandate of the association?
2) How are chemical containers disposed?

Engagement Issues – Agogo Women Plantain Producers and Exporters

Issues
1) Are there existing farmers associations?
2) What is the average farm size per farmer?
3) What is the waste management plan in place?
4) Are the services of agric officers sufficient?
5) What is the state of roads leading to farms?
6) Are there security issues while transporting produce?

Engagement Issues – NADMO

Issues
1) What is the state of food security in the northern part of Ghana?
2) What factors influence food security?
3) What are the effects of the Bagre Dam spill?

Engagement Issues – Animal Production Department, livestock Breeding Station, Pong Tamale

Issues
1) What activities are undertaken by the station?
2) How are parasites controlled?
3) What is the waste management system in place?
4) Are there any security issues?
5) What is staff strength?

Engagement Issues – Water Resource Commission

Issues
1) What is the mandate of the commission?

2) Are there any environmental challenges?
3) What are the effects of the Bagre Dam spillage?
4) Are there any irrigation systems in place?
5) Are you engaged as a stakeholder for projects?
6) Are there any social issues you face?

Engagement Issues - Ejura Sheep Breeding Station

Issues
1) What is the stations mandate?
2) How is the breeding station managed?
3) How is the health of the stock managed?
4) How is waste managed in the station?
5) Are there security issues faced?
6) What is the ratio of male to female staffing on the farm?

Appendix 2: Engagement Outcomes

National Food Buffer Stock Company

Engagement Tool: Voice call	**Date:** 24/03/2021 **Time:** 11:30am
Attendance: Emmanuel J.K. Arthur (0244669709), Senior Manager - Corporate Affairs	**Consultant Team:** Kojo Amoyaw-Osei

Engagement Issues

The engagement covered the following 7 key areas:

1) Land acquisition for expansion of storage facilities
2) Challenges faced by the company
3) Food haulage truck accidents
4) Measures to prevent robbery attacks
5) Breakdown of trucks in transit
6) Likelihood of food becoming unwholesome in transit
7) Disposal of expired food

Discussions/Suggestions and Comments

1) Land acquisition for expansion of storage facilities

The government, under the 1 district 1 warehouse program has promised to handover some of these warehouses so they can be used as storage facilities. We are supposed to take over the assets of Ghana Food Distribution so when that happens, we would have access to their warehouses. Some of these warehouses have been encroached by churches and other businesses so there might be a challenge getting control of all these properties. If all these are not enough then we would have to look for land and purchase especially in Kumasi where we would want to have enough storage in place to cater for the whole region.

2) Challenges faced by the company

Procurement of refrigerators and other equipment so we can store perishable goods

3) Food haulage truck accidents

These rarely happen as these truck drivers are very experienced. But there are other incidences (3 last year) like attacks from armed man. The likely areas are Northern, Savannah and Upper West.

4) Measures to prevent robbery attacks

- The use of drones to deliver food could be explore even though I am assuming food might be a bit heavier compared to medicine.
- Strategic siting of storage facilities to reduce travel time of delivery trucks. Like the STC or commercial buses we could explore the use of armed police officer to accompany the trucks

5) Breakdown of trucks in transit

Trucks break down but this is not often. The delivery services are outsourced to third party. Trucks from other countries like Mali and Burkina Faso don't breakdown when they enter the country to pick up food because they are in very good shape. It is standard operating procedure for transport companies to arrange for vehicles that go out to pick food in certain quantities to have another vehicle on stand-by in case of a breakdown so it can be dispatched to finish the trip. We have not had a situation where food has gone bad due to a vehicular accident.

6) Likelihood of food becoming unwholesome in transit

The food is transported with the expiry date and shelf life in mind, so this does not happen. We also cover them well especially grains like rice to protect them from the weather elements

7) Disposal of expire/unwhod food

These are destroyed by crushing and incineration in collaboration with the Food and Drugs Authority and the Ghana Standards Board so they cannot be used by anyone

Women in Agriculture Development (WIAD)

Engagement Tool: Voice call **Date:** 23/03/2021	**Time:** 7:00pm
Attendance: Paulina Addy (0244422712), Director	**Consultant Team:** Kojo Amoyaw-Osei

Engagement Issues

The engagement covered the following 6 key areas:

1) Possible gender discrimination from introduction of new technology
2) Gender based violence and other forms of abuse within the value chain
3) Remedies for gender-based violence and other forms of abuse
4) Other occupation health issues faced by women
5) Unfair treatment during land acquisition
6) Forced Labour

Discussions/Suggestions and Comments

1) Possible gender discrimination from introduction of new technology

Discrimination is unlikely, both women and man are engage in the food processing activities with majority being women. Where the women are illiterates, they can sometimes be cheated by the men they work with who manage their finances or rent out machinery to them.

2) Gender based violence and other forms of abuse within the value chain

Traders experience this from drivers when vehicles breakdown on the road. These women are sometimes exploited sexually or monies are extorted from them.

3) Remedies for gender-based violence and other forms of abuse

- The use of mobile money for financial transactions to prevent theft or financial exploitation and for keeping records
- Use of mobile phones to communicate their location during transits
- Use of tracking system by some trader associations so that in the event of vehicle breakdowns an emergency team can be used to follow-up on women

4) Other occupation health issues faced by women

- Snake bites in the bush when farming
- Cutlas wounds which are usually not treated
- Exposure to heavy smoke from oil extraction process

5) Unfair treatment during land acquisition

Women who work on their husband's family land may not receive any compensation during resettlement. Provision is usually not made for the communal benefit of some economic trees that women relay on especially in Northern Ghana

6) Forced labour

This is not an issue. As part of community development projects, the women may willing offer their services for free.

Animal Production Directorate (APD)

Engagement Tool: Virtual meeting	**Date:** 25/03/2021	**Time:** 10:00am
Attendance: Edwin Bekoe (0274747847), Director, Animal Production		**Consultant Team** Kojo Amoyaw-Osei

Franklin Yeboah, Deputy Director
Dr. Abdul Razak, Deputy Director

Engagement Issues

The engagement covered the following 7 key areas:

1) Nature of grazing reserves and mobility corridors
2) Land acquisition for grazing reserves and mobility corridors
3) Current land use of grazing areas
4) Potential conflict with Fulani herdsmen
5) E&S issues at the grazing area
6) E&S issues for poultry production
7) Mitigation/recommendation

Discussions/Suggestions and Comments

1) Nature of grazing reserves and mobility corridors

These will be done in the following districts: Fanteakwa (Eastern), Kintampo North (Bono East), Sekyere Afram plains and Sekyere Kumawu (Ashanti) and Adaklo (Volta)

The grazing reserves vary in perimeter:

- Adaklo - perimeter of 9km, 11km & 47km (15,000ha in total, can house 11000 cattle for 4 months)
- Fanteakwa - perimeter of 43km (5,000ha, which can house 10,000 cattle for 4 months)
- Kintampo North - perimeter of 150km (100,00ha, which can provide 1000Mg of feed for 128,000 cattle)
- Sekyere - perimeter of 89km (32,000ha which can house 150,000 cattle for 4 months)

Mobility corridors are 100m wide with varying lengths

2) Land acquisition for grazing reserves and mobility corridors

Feasibility studies have been conducted so these lands have been demarcated. The Chief and people have been consulted and have agreed for the project to take place. Compensation will be arranged by government when the project gets to that stage. As much as possible the corridors will be diverted from settlement so that relocation is prevented

3) Current land use of grazing areas

Some are being used as farms and some have farm settlements

4) Potential conflict with Fulani herdsmen

Because of conflict between crop farmers, migrating Fulani and resident Fulani, the grazing areas are being developed so it can eliminate these clashes

5) E&S issues at the grazing area

- Dropping of cattle and small ruminants can be an issue but they can be used as manure for the soil
- Pile up of dropping at sleeping areas of the animals
- Overgrazing can be an issue if the carrying capacity of the grazing reserve is not adhered to

6) E&S issues for poultry production

- Cleaning of the poultry house will produce some waste water
- Administering drugs to the poultry could result in overdose
- Droppings from poultry
- Feathers and waste from the gut can sometimes be difficult to dispose

7) Mitigation/recommendation

- Have a rendering plant so that guts and other parts can be processed
- Selling of poultry manure to crop farmers
- Capacity building on handling of E&S issues

Directorate of Agricultural Extension Services

Engagement Tool: Virtual Meeting	**Date:** 25/03/2021	**Time:** 11:00am
Attendance: Mr. Paul Siameh (0244641260), Director Shaibu Muniru - M&E Officer	**Consultant Team:** Kojo Amoyaw-Osei	

Engagement Issues

The engagement covered the following 4 key areas:

1) E&S issues expansion of farms and other services under the program
2) Child labour and issues affecting women
3) Role of extension services
4) Effects of COVID on the program

Discussions/Suggestions and Comments

1) E&S issues expansion of farms and other services under the program

- For large scale poultry, effective disposal of droppings. If not disposed of properly can end up in water bodies and cause eutrophication.
- For construction of the irrigation dam, earth material or gravel maybe transported from another community and this could change the environment or topography of that area. These dug holes are not refilled, and provision is not made to revegetate those areas
- Siting of irrigation dams without proper consultations with the community
- Protection of the catchment area of an irrigation dam especially for small dams. Legally secure catchment area to prevent farmers from farming there and also to prevent siltation
- Applying agrochemical and other chemicals without using PPE

2) Child labour and issues affecting women

Child labour issues have always been prominent in the agriculture sector e.g., Use of children in animal husbandry, use of children to scare off birds in rice farms. In cassava process, women and children are exposed to sharp objects like cutlases, those who are involved in the frying are exposed to high temperature sometimes with their babies on their backs. Children are also put in dangerous situations in the fishing industry.

3) Role of extension services

On the project level assessment, it is necessary for extension officers to be consulted since they deal directly with the farmers. Their capacity will have to be built so they are in the best place possible to deliver adequate guidance to the farmers on all the new interventions because of the program.

4) Effects of COVID on the program

More reliance on ICT, audio and audio-visual means to reach farmers rather than the traditional means of visiting farms so the contact time with farmers can be reduced

Directorate of Crop Services

Engagement Tool: Voice call **Date:** 24/03/2021	**Time:** 12:00noon
Attendance: Dr. Solomon Gyan Ansah (0208133029), Head of Seed Unit	**Consultant Team:** Kojo Amoyaw-Osei
Engagement Issues The engagement covered the following 6 key areas: 1) Activities involved in rehabilitation of stations and associated E&S issues 2) Other Key E&S issues	

3) Current environmental management system used
4) Some interventions/ mitigations recommended
5) Impact of COVID on production
6) Child labour issues

Discussions/Suggestions and Comments

1) Activities involved in rehabilitation of stations and associated E&S issues

Lands have already been acquired with all the necessary facilities procured. Nonetheless, there will be some refurbishment (painting, woodwork, changing old installations) since the facilities have not been in use for some period of time

2) Other Key E&S issues

Use of pesticides by farmers

Land preparation activities by farmers causing erosion

3) Current environmental management system used

We use only an Integrated Pest Management System (IPM) to manage and control pest since our environmental impact is limited. For the farmers on the on the other hand, pesticides use could pose a risk to nearby water bodies if pesticides are not managed properly. Waste generation is also not an issue during production, but for those involved in the processing it is a major issue.

4) Some interventions/mitigations recommended

Training and monitoring on the use of pesticides

Training farms in land preparation activities to prevent erosion

Encourage organic farming

Training farmers on how to use tractors by Agricultural Engineering Services Directorate

5) Impact of COVID on production

Covid affecting the implementation of the Planting for Food and Jobs during the lockdown as seeds were not able to get to the farmers on time. Some farmers were also afraid to go to their farms

6) Child labour issues

Child labour is not a major issue except for cocoa growing areas, nonetheless the provision of appropriate equipment like weeders which are not too sophisticated to use can help prevent the situation of parents using their children as labour since a lot more work can be done by fewer people using this farming equipment.

Plant Protection & Regulatory Services Directorate (PPRSD)

Engagement Tool: Voice call	**Date:** 29/03/2021	**Time:** 3:00pm
Attendance		**Consultant Team**
Eric Dzimado (0243413991)	Senior Agricultural Officer	Kojo Amoyaw-Osei

Engagement Issues

The engagement covered the following 4 key areas:

1) Environmental safeguards activities we have been involved in on previous programs
2) Safeguards activities under the FSRP2
3) Treats to food production
4) Impact of Covid

Discussions/Suggestions and Comments

1) Environmental safeguards activities we have been involved in on previous programs

• Management of pest and diseases on the farms

- Providing technical backstopping and training on Integrated Pest Management System (IPMS) and safe use of pesticide Management of empty pesticides containers
- Sensitization of farmers on all these various issues
- Developing manuals on pesticides safe use
- Creating documentaries on the safe use

2) Safeguards activities under the FSRP2

- Strengthen phyto sanitary systems across the country
- Establishing early warning system for Fall Army worm
- Strengthen the seed certification value chain (increased productivity and increased yield)
- Fertilizer quality control (ensure integrity of product/quality)

3) Treats to food production

- Fall army worms is a big treat to food production
- Indiscriminate use of pesticides and storage in inappropriate places

4) Impact of Covid

- Reduction in the labour force of the office at a particular time because of the shift system being implemented. This has impacted our delivery of service to farmers.
- With the new directives from the presidency, we will also not be able to conduct train the way we used to which was gathering everyone at a particular location.

Environmental Protection Agency (EPA)

Engagement Tool: Voice call	**Date:** 24/03/2021	**Time:** 7:00am
Attendance: Joseph Edmond (0501301206) Director		**Consultant Team:** Kojo Amoyaw-Osei

Engagement Issues

The engagement covered the following 3 key areas:

1) Key E&S issues experience in similar past programs
2) Some interventions/ mitigations recommended
3) Roles the EPA has played in similar programs

Discussions/Suggestions and Comments

1) Key E&S issues experience in similar past programs

- Mismanaged pesticides by farmers
- Disposal of chemical containers into the environment
- Excessive abstraction of water for irrigation causing a challenge on the ecosystem of an area
- Washing sprayers directly into water bodies
- Disposal challengers for asbestos from rehabilitation of old training centres
- Disposal challengers for hazardous and lab waste from laboratories that were built
- Cumulative impact of several farming operations within an area

2) Some interventions/ mitigations recommended in past programs

- Developing comprehensive waste management plans
- Performing a proper environmental assessment so all possible impacts and risks are known
- Use of an incinerator for Lab waste
- Sensitization of farmers on consequences of their actions on the environment and their health

3) Roles the EPA has played in similar programs

- Building capacity on proper use of pesticides, weedicides etc.
- Sensitization of farmers and other personnel in the value chain on effects of some negative activities on the environment
- Screening farms to determine the level of assessment required
- A specialized registration and screening system can be developed in collaboration with the EPA so that all projects under the program can be fast-tracked, so they don't go through a long process

Ghana Irrigation Development Authority (GIDA)

Engagement Tool: Voice Call	**Date:** 25/03/2021	**Time:** 1:30pm
Attendance: Ing. Richard Boateng (0244662243), Director		**Consultant Team:** Kwakye Kwabena Mamphey

Engagement Issues

The engagement covered the following 10 key areas:

1) Role of the Agency in irrigation projects
2) Responsibility for selecting the locations for irrigation projects
3) Average land area of irrigation projects
4) Likely land use for potential irrigation sites
5) Population in an area likely to be affected by irrigation project
6) Displacement of people from rehabilitation of the 8 small irrigation dams
7) Existing users/dependents of the 3 irrigation schemes
8) Effects of reclamation of the 3 irrigation schemes (Wheta, Tanoso and Techiman) on existing users/dependents
9) Electronic waste management during operation phase
10) Capacity to participate in environmental impact assessment

Discussions/Suggestions and Comments

1) Role of the Agency in irrigation projects

The Agency has a project development department that conducts survey and mapping for the project to design the irrigation system taking into consideration the topography and hydrology. We also model the project and give the cost the project and prepare a BOQ for the project. It also monitors and supervise construction of irrigation projects.

2) Responsibility for selecting the locations for irrigation projects

GIDA is responsible for selecting locations for irrigation projects. The selected areas are located in the Volta, Upper East, Ashanti, Savannah and Brong-Ahafo Regions. Some of these sites have been studied and the drawings for the irrigation system has been done. Some have also been constructed but do no have the irrigable areas in place.

3) A verage land area of irrigation projects

The dam area varies per project. For the existing projects, the existing irrigable lands are 100 ha or more. A hectare is allocated to each farm.

4) Likely land use for potential irrigation sites

Some of the lands are being used as farms. Most of the lands in the proposed areas belong to the chiefs and families. Due to the benefits the dam, the lands in Northern Region are going to be given out for free for the project.

5) Population in an area likely to be affected by irrigation project

Some dams have already been constructed but the irrigable areas have not yet been developed. For such areas, detailed studies will have to be conducted to determine whether the project will affect some farms or individuals when the irrigable areas are constructed.

6) Displacement of people from rehabilitation of the 8 small irrigation dams

Currently, some of the reservoirs have their irrigable systems developed and there has been not been any displacement. The reservoirs with their irrigable systems yet to be developed will require a detailed study to identify if it will cause displacement of properties or persons.

7) Effects of reclamation of the 3 irrigation schemes (Wheta, Tanoso and Techiman) on existing users/dependents

The increase of the height of the dams may affect some nearby communities and farm ways due to the increase in the throw back of the reservoir. It is not yet known if the height of these dams will be increased or not.

8) Existing users/dependents of the 3 irrigation schemes

Wheta, and Techima irrigation schemes are currently in operation. Tanoso irrigation scheme is not operating fully due to some technical challenges.

9) Electronic waste management during the operation phase

Electronic waste generated will be transported to the head-office storehouse where all electronic waste from all irrigation facilities is kept and later auctioned.

10) Capacity to participate in environmental impact assessment

The institution partakes in environmental impact assessment for irrigation projects. It also has a department that prepare environmental management plans for irrigations projects.

Meteorological Services Authority (MSA)

Engagement Tool: Virtual meeting	**Date:** 25/03/2021	**Time:** 3:00 pm
Attendance: Francisca Martey (0244130093), Deputy Director, Research and Applied Meteorology		**Consultant Team:** Kwakye Kwabena Mamphey

Engagement Issues

The engagement covered the following 4 key areas:

1. ***1)*** Land required for setting up ground station or weather station acquisition
2. ***2)*** Likelihood of resettlement when acquiring land for stations
3. ***3)*** Current management practice for end-of-life EEE
4. ***4)*** Quantities of end-of-life EEE generated

Discussions/Suggestions and Comments

1) Land required for setting up ground station or weather station acquisition

Land for setting up stations are mostly acquired from chiefs.

2) Likelihood of resettlement when acquiring land for stations

These stations usually require a smaller area and will not affect anyone when the land is acquired.

3) Current management practice for end-of-life EEE

E-waste from all meteo stations is transported to the head office in Accra where they are later auctioned.

4) Quantities of end-of-life EEE generated

The equipment used are regularly maintained preventing frequent breakdown. Just a few e-waste is generated yearly.

Institute of Environment & Sanitation Studies (IESS)

Engagement Tool: Voice call	**Date:** 25/03/2021	**Time:** 8:00am
Attendance: Dr Benjamin Ofori (0208134292), Senior Research Fellow	**Consultant Team:** Kojo Amoyaw-Osei	

Engagement Issues

The engagement covered the following 5 key areas:

1) Current challenges of the Volta Basin Area
2) E&S issues associated with irrigation, aquaculture and other activities under the program
3) Mitigation/recommendation
4) Average land take by irrigations projects
5) Typical land use of areas along the Volta for irrigation

Discussions/Suggestions and Comments

1) Current challenges of the Volta Basin Area

Monitoring of the buffer zone has been difficult in the past

Emergence of market centres along the lake

Climate changing affecting the raining seasons

2) E&S issues associated with irrigation, aquaculture and other activities under the program

Widespread application of agrochemicals

Encroachment into the Volta Lake buffer zone

Siltation is also a potential issue with the increase in development along the lake

3) Mitigation/recommendation

Encourage drawing of water onto farms which will be about 50-100m away from the buffer zone so that farms don't situate their farms at the banks of the lake

4) Average land take by irrigations projects

That will be difficult to say. It will depend largely on the amount of water storage

5) Typical land use of areas along the Volta for irrigation

Southern area - farming (pepper, onion & watermelon)

Middlebelt - farming (yams, maize, beans & groundnut)

Huge portions are unused

Centre for Remote Sensing & Geographic Information Services

Engagement Tool: Virtual meeting	**Date:** 24/03/2021	**Time:** 10:00am
Attendance: Mr. Foster Mensah (0243352468), Executive Director	**Consultant Team:** Kojo Amoyaw-Osei	

Engagement Issues

The engagement covered the following 4 key areas:

1) Type of EEE that would be procured
2) How end-of-life EEE is currently managed
3) Land required for activities under the program
4) Quantities of end-of-life EEE generated

Discussions/Suggestions and Comments

1) Type of EEE that would be procured

1 - Printer for printing maps 5 - GPS receivers

10 - Computers (workstations)

2) How end-of-life EEE is currently managed

They are kept in a storeroom and dumped or donated to schools

3) Land required for activities under the program

Our existing facility would be used so there would be no land acquired

4) Quantities of end-of-life EEE generated

Very little e-waste is generated because of how well they are maintained

CSIR, Food Research Institute (FRI)

Engagement Tool: Voice call **Date:** 24/03/2021 **Time:** 4:20pm

Attendance:
Prof. Charles Tortoe (0243241801), Ag. Director

Consultant Team:
Kojo Amoyaw-Osei

Engagement Issues

The engagement covered the following 2 key areas:

1) Main E&S issues related to our activities
2) Best practices being utilized to manage waste

Discussions/Suggestions and Comments

1) Main E&S issues related to our activities

- Managing the waste from the processing of maize, rice and cassava
- Effluent from the ethanol production from cassava and other processing activities
- Waste from packaging

2) Best practices being utilized to manage waste

- Milling husk and spreading on the farms as manure
- Using maize husk as packaging for food e.g., kenkey
- Harvest starch out of the effluent from cassava processing and recycling the left over water Planning the procurement of packaging material so that there is no waste

CSIR, Water Resources Institute (WRI)

Engagement Tool: Virtual meeting	**Date:** 25/03/2021	**Time:** 9:30am
Attendance: Dr. Ruby Asmah (0205424161), Principal Research Scientist	**Consultant Team:** Kojo Amoyaw-Osei	

Engagement Issues

The engagement covered the following 4 key areas:

1) E&S issues related to integrated aquaculture and agriculture system
2) Land-take issues in integrated aquaculture and agriculture system
3) Negative impact of cage aquaculture
4) Recommendation/mitigations for conflict with local fishermen

Discussions/Suggestions and Comments

1) E&S issues related to integrated aquaculture and agriculture system

E&S issues are significantly reduced for instance, when rice farming and fish cultivation is done together the waste from the fish enrich the water and soil for the rice plant. The fish can also feed on some of the insects that can affect the rice. There is a government policy in place which directs that 5% of all irrigated land or

irrigation systems should be dedicated to aquaculture but this has not been enforced. This system also improves water use since water from one system is reused in the other system. Fertilizer use is also reduced because of the nutrient rich water from the aquaculture system feed to crop farms.

2) Land-take issues in integrated aquaculture and agriculture system

Usually, additional land is not required

3) Negative impact of cage aquaculture

Conflict with existing fishermen because these fishermen may not have access to an area where they ones fished. For large commercial cage aquaculture, because of the feed put in the water, it attracts the fish from the wild who gather around the cages but fishermen in the area would not be allowed to catch. This might not apply to the program since this is meant for the community and is not for large commercial purpose

4) Recommendation/mitigations for conflict with local fishermen

The fear of the farmers is that, when fishermen are allowed close to the cages, they will throw their nets into the cages to steal their fish. This situation has been managed with controlled catch, were fishermen are given a particular time to come close to the cage to fish but under supervision.

Northern Development Authority

Engagement Tool: Voice call	**Date:** 24/03/2021	**Time:** 3:00pm
Attendance: Dr Emmanuel Abeere-Inga (0548314461), Director, Infrastructure, Land and Natural Resources		**Consultant Team:** Kojo Amoyaw-Osei

Engagement Issues

The engagement covered the following 3 key areas:

1) Sensitive areas to consider under the program
2) The role the NDA will play in protecting these sites
3) Likelihood of relocation of farms or settlements

Discussions/Suggestions and Comments

1) Sensitive areas to consider under the program

We have marked out these areas in a map through a survey and would be happy to share with you

2) The role the NDA will play in protecting these sites

We will be involved in the monitoring of the sites to ensure that no development takes place there

3) Likelihood of relocation of farms or settlements

Within our area of jurisdiction, no intervention would require relocation of settlements or farms

Kpong Irrigation Scheme (KIS) Male Rice Farmers

Venue: Asutuare **Date:** 19th May, 2021 **Time:** 11:00 am

Consultant Team:

Kojo Ofori Amoyaw-Osei

Kwabena Kwakye Mamphey

Pictures:

Engagement Issues:

1. Views and issues on irrigation schemes involved in.
2. Waste management.
3. Potential for project interventions to cause gender-based violence.
4. Children participating in farming activities.
5. Health problems associated with irrigation activities.
6. Concerns for the proposed project.

1. Views and issues on irrigation schemes involved in.

The irrigation has helped most of the farmers but there are some challenges faced by the farmers. These include:

- Lack of PPEs
- Lack of storage facilities
- Shortage of subsidised fertilizers in minor seasons.
- Lack of access to water due to choked channels. Also, fields further from canals do not get access to water leading to poor crop growth.
- Lack of machinery for land preparation and harvesting
- Absence of mechanisation centres within project areas
- There is no ready market for harvested rice. In the past, the rice was bought when harvested but when the buyer quit the business, the rice has to be processed before it can be sold to the market women. The market women also buy the rice for cheap or credit and end up cheating the farmers.
- Engineers do not take into consideration the concerns of the farmers during development of canals and irrigation system.
- Excavated spoils are disposed of indiscriminately by contractor claiming it would be reused. These heaped materials sometimes block access routes to farm preventing the farmers from accessing their farms. The farmers need to hire an excavator to move the heaps from access routes.

2. Waste management

Pesticide containers are not properly disposed of. Some are burnt, other also end up in the canal which contaminate the water affecting communities downstream (Asutware and Aveyime). The water serves as a source of drinking water to communities downstream.

3. Potential for project interventions to cause gender-based violence.

Gender-based violence is not an issue. The irrigation scheme is made up of both male and female farmers. Some females are also selected as block leaders and are involved in decision making.

4. Children participating in farming activities.

Children only help their parents in their farms during vacation. No farmer allows their children to visit the farm while school is ongoing.

5. Health problems associated with farming activities
    - Rice farms are usually water logged and muddy making movement in wellington boots difficult. The farmers turn out to enter their farms barefooted causing health issue such as skin irritation, insect bites etc.
    - Spraying of insecticides and pesticides on rice farms is a major. During this period, the rice plant is normally long and due to lack of proper PPE, the chemicals end up on the skin when moving through the farms since the plant rub the skin and PPE. This causes skin irritation and sometimes cause erectile dysfunction in men.
    - Fire ants (Charles taylor) is a major issue in the farming areas. They bite farmers in the farm causing skin irritation.
6. Concerns for the proposed project
    - Community members and farmers must participate in all stages of the project i.e., implementation to completion
    - Provision of management plan after project implementation. Identify who the farmers can

reach out to when there is an issue or engineering defect with the project. • There should be a ready market for the rice when harvested.

Kpong Irrigation Scheme (KIS) Female Rice Farmers

Venue: Asutuare	**Date:** 19th May, 2021	**Time:** 12:00
Consultant Team: Kojo Ofori Amoyaw-Osei Kwabena Kwakye Mamphey		

Pictures:

Engagement Issues:

1. Gender discrimination in the past
2. Views and issues on irrigation schemes involved in.
3. Waste management
4. Potential for project interventions to cause gender-based violence.
5. Why children are encouraged to help their parents on their farms.
6. Health problems associated with irrigation activities.
7. Concerns for the proposed project.

1. Gender discrimination faced in the past

    • The men hide issues in relations to farming activities from the women.

- The block leaders were selected by men
- Men use to cheat women in sharing of fertilizers. They take more and give the women few.

The women faced some of these issues because they saw themselves to be inferior and not important to partake in decision making. Some women also think because they are not educated, they cannot hold positions in their association.

2. Current gender issues

The introduction of the irrigation scheme has brought a lot of change in relation to gender issues. Currently women:

- are engaged in decision making
- are executives of farming groups and association
- are selected as block leaders in the scheme

Women have been educated on their position as women and are not to see themselves important or relevant.

3. Views and issues on irrigation schemes involved in.
   - Unavailability of quality PPE (boots, overall, gloves, etc.). The PPEs on the market are not durable.
   - The boots available are too heavy and the women find it difficult wearing them in their farms. Due to the swampy nature of the area, it makes movement in the boots is very difficult.
   - Skilled sprayers are very expensive to use for spraying farming lands.
   - Some seed growers in the scheme supply the farmers with bad seedlings. This normally occur when the seedlings are sourced outside the farming zone. This causes financial lose to farmers.
   - Harvested rice and paddy rice are all stored in the same space causing insects to infest and destroy the harvested rice.
   - Low profit margins due to high cost of harvesting rice.
4. Waste management

Sprayers engaged to spray farm lands dispose of chemical containers indiscriminately. Some of the containers end up in the canal which serves as a source of water for communities downstream.

5. Potential for project interventions to cause gender-based violence.

Its is unlikely there would be gender-bases violence since the women have been educated and male farmers have developed the habit of involving the female farmers in decision making and also as leaders. There male to female farm ratio is 10:6.

Single mothers and widows struggle a lot. They find do not get any form of support in their work.

6. Children involved in farming

Children are mostly not engaged in farming activities. They are only engaged during scaring period. This is mostly when they are on vacation. Children help their parents on the farm by scaring birds away to prevent them from eating their crops. Children who come to farms during school hours are sacked to go back to school.

The main reason why children are engaged is because, hiring labourers is very expensive. Parent and farmers turn to use children on farms.

7. Health problems associated with irrigation activities.

Fire ants is a major issue faced by farmers. They are found on farm lands and bite farmers during farming activities. This causes skin irritation and discomfort.

8. Concerns for the proposed project.

- Provision of certified seedlings
- Each farming zone should grow their own seedling to prevent mix-up of seedlings.
- Female leaders should be involved in sharing fertilizers

Water Users Association (WUA) and Global Agriculture Development Company (GADCO)

Venue: Asutuare	**Date:** 19th May, 2021	**Time:** 2:30 PM
Consultant Team: Kojo Ofori Amoyaw-Osei Kwabena Kwakye Mamphey	**Attendance:** Henry Doe - GADCO - 0244624345 Isaac Akpatei - AKC/WUA - 0540727247 Regina Ayoko Mensah - AKC/WUA - 0247129445	

Pictures:

Engagement Issues:

1. Mandate of the association
2. Mandate of GADCO
3. Water usage in the area.
4. Waste management
5. Challenges
6. Suggestions

1. Mandate of the association.

The association is made up of all farmers and water users (communities) within an irrigation area. There are 17 groups which comes together to from the water federation.

2. Mandate of GADCO

GADCO supports farmers with inputs i.e., fertilizers, insecticides and pesticides. The organisation works with not all farmers. We work with some particular farmers that have been with us in the past. The initiatives of the GADCO are:

- To train farmers on safe use of chemicals.
- Give technical support and advice to farmers

3. Water use in the area

The farmers use the water for their farms and the communities also use it for domestic purposes. When the taps are not flowing, community members depend on the canal for water. Some people wash and do other insanitary activities closer to the canal and end up contaminating the water affecting the people downstream.

Children sometimes swim canals and end up drowning. Currently some part of the canal is under construction, water from the canal has been blocked so the children do not get access to the water. The last drowning case was recorded in 2019.

4. Chemical container management

Empty chemical containers are burnt or buried after use.

5. Challenges
    - There are not stairs to access water in the canal. Some farms use a rope tired on a bucket to fetch water from the canal. Others also place wooden ladder in the canal and their children go in to fetch the water. this is very risky and needs to be solved.
6. Suggestions
    - There should be boreholes in communities to prevent them from using the canals when the taps are closed
    - Stairs should be constructed in the canals to allow easy access to water.

Engagement with the Agogo Women Plantain Producers and Exporters, and District Agriculture Officers

Venue: Agogo Plantain Market **Date:** 8th June 2021 **Time:** 10:30 am

Consultant Team:

Kojo Ofori Amoyaw-Osei
Kwabena Kwakye Mamphey
Felix Agyekum Obeng

Pictures:

Engagement Issues:

1. Farming activities in the district
2. Existing farmers association
3. Objectives of the association and their function
4. Average farm size
5. Waste management
6. Agric officers in the district and lack of logistics
7. Effect of climate change on agriculture
8. Nature of roads leading to farming area
9. Security issues faced by farmers in transporting their crops

1. Farming activities in the district

The district has majority of its population engaging in farming activities cultivating plantain, cocoa, onion, casava, yam, pepper and garden eggs. The female to male farmer ratio is 7:3. Plantain is the major crop grown in the district transported to Accra, Tema and Kumasi to sell. It is also exported to Burkina Faso and Togo as well.

2. Existing farmers association

The Agogo Women Plantain Producers and Exporters Association is the farmers' association based in the district with 310 registered members.

3. Objectives of the association and their function

The association aims to promote agriculture to the youth so they also involve themselves in it to increase the agriculture produce from the district. Some of the farmers of the association have won prestigious awards such as the best female farmer of the year 2014 and 2020, first runner up - best plantain farmer in the country. The members of the association serve as role models to the educated youth and encourage the youth to engage in agriculture and apply what they learn in school to help boost the sector. The association also performs various functions including:

- Management of the plantain market;
- Facilitate exportation of plantain to Burkina Faso and Togo;
- Support farmers; and
- Settle dispute amongst farmers

4. Average farm size

The association is currently complying a data base of farmers and their farm sizes. Averagely, the association members' farm rage from 30acre to 1050 acres.

5. Waste management

The main waste types generated on the farms are chemical containers and plantain stalk. The is a chemical containers cage located at vantage points where these containers are disposed of. Some farmers also burn their containers. The plantain stalk s collected and dumped by the DA.

6. Agric officers in the district

There are few Agric Officers in the district. 1 Officer serves 1,700 farmers which sometimes cause conflict between farmers since they all want the officer to visit their farms. Lack of Officers result in improper farming practices reducing productivity. The Officers in the district are really doing well and helping farmers to increase their produce by teaching them best practices. MoFA has recruited over 30,000 Officer but most of these officers have moved to the cocoa sector due to high renumeration rates.

There is only 1 vehicle in the district used by Officers in visiting the farms. Due to the large number of farmers in the district, it makes it difficult for the officers to serve all these farmers.

7. Effect of climate change on agriculture activities

This year due to climate change, there was minimal rainfall leading to reduction in produce. The Bontre stream flows through the major farms in the district which serves as source of water for farmers. This year, the stream dried up and there is no water supply to the farms leading to drastic reduction in farm produce this year.

8. Nature of roads leading to farms

The roads leading to the farms in the district are in a very poor state and needs to be constructed. It makes transportation to and out of the farms very expensive and leads to frequent breakdown of vehicles visiting the farms.

9. Security issues faced by farmers in transporting their crops

In transporting plantain to Burkina Faso, the farmers are sometimes attacked by armed robbers at Bolga. Also, after selling farm produce, since the farmers are being paid in foreign currency, they do not have any Ghana bank there to safely deposit their money. They end up at black markets where they are being cheated or duped by the Burkinabes. Sometimes in returning, the famers are attacked by armed robber at Bolga.

The farmers would like for the Government to get a Ghana market in these counties where they go to sell. Farmers do not get access to markets outside the country therefore end up selling by the road with the plantain in a truck. Some of these sometimes get stolen in the cause of selling. The farmers are protected when they arrive in Burkina by the security officers to their point of sale.

10. Issues faced by farmers
    - Duty paid for exporting is expensive and must be reduced
    - Due to more farmers in the district, the market cannot accommodate the farmers and a bigger market is needed
    - Foods go bad early due to lack of storage facilities in the district.
    - The government should use produce from local farmers in the school feeding program and reduce importation because the imported products are also cultivated in the county and be used in the program to enable farmers earn more and prevent their produce from going bad. These produces can also be sold to hospitals and prisons.
    - The chemical used now are not as effective as before. Weedicides used on farms use to prevent weeds from growing for about 3 months. Currently the imported fertilizers from China are not effective.
    - The district would require a factory to process their farm produce into juice, tomato paste, plantain powder etc.

11. Lack of scholarship for children of farmers

The farmers in the district do not get any support when it comes to educating their children. There is a government scholarship for cocoa farmers and other farmers but farmers in the Agogo District do not have access to these scholarships. The farmers would request the government to come to their aid when it comes to educating their children.

Engagement with NADMO - Upper East Region

Venue: NADMO Upper East Office	**Date:** 10th June 2021	**Time:** 9:30 am
Consultant Team: Kojo Ofori Amoyaw-Osei Kwabena Kwakye Mamphey Felix Agyekum Obeng	**Participants:** Nyaaba Agambia, Dep. Regional Director - 0206342113 Asigre Sulemana Kamal Abugre Edward Selina Awuni	

Pictures:

Engagement Issues:

1. Food security in the northern part of Ghana
2. Factors affecting food security
3. Bagre dam spillage
4. Intersectoral challenges

1. Food security in the northern part of Ghana

Food security is a major issue in the northern part of Ghana. The area has only one raining season and therefore

2. Factors affecting food security

Some factors that affect food security in the country is the invasion of farms by elephants. During harvesting periods of maize, elephants from Burkina Faso move through the lands along the Red Volta into the country. They destroy farms along these areas leading to food loss. Naaba lands are fertile and good for maize production. Every year, farm lands along the Red Volta are destroyed by these elephants.

The Bagre dam spillage affects a lot of farms.

Army worm, Anthrax and other pest also pose a threat to food security. These pests (mostly army worm) affect some farms every farming season in the north. Due to lack to knowledge and technical knowhow, some farmers use pepper, onion and washing powder (omo) on their farms in fighting these pests. This usually occur right before the raining season.

Climate change or the change in rainfall pattern has an effect on food security. Normally, right before the raining season, farmers grow early millet and are harvested before they grow their maize. Currently due to a change in rainfall pattern, farmers are unable to grow early millet to make some income. The early millet also planted during this period are also affected by army worms. This has made most of the farmers scared to invest their monies in growing early millet. Also, poverty levels have increased by 20% in the northern part of Ghana.

Some animals feed on weeds affected with anthrax and end up dying. Some individuals eat these dead animals and end up contaminating their farms with the anthrax and end up losing their crops.

3. Bagre dam spillage

When the water levels are high in the Bagre dam, water is spilled to prevent the dam from collapsing. The spilled water does not cause any issue or challenges in Burkina but when it gets to Ghana it causes a lot of trouble. This may be due to lack of well-engineered storm drains. Maize, guinea corn and rice farms are affected by the spillage.

The White Volta is filled with silt and when water is spilled, it cannot contain the quantity and speed (100km/hr) of the water. this leads to destruction of farms along the White Volta and nearby communities. In Sandema where the tributaries of the White Volta are found, farms along these areas are also affected by the spillage.

There are some engineering defects in the drains in Bolga. Some bigger drains are channelled into smaller drains which leads to flooding. Also, the drains are filled with debris and silt. The spillage leads to flooding which ends up destroying farms and properties.

4. Intersectoral collaboration in solving issues

There is also the lack of intersectoral collaboration in solving issues. There should be collaboration of institutions in solving issues. Also, major stakeholder i.e., the indigens and locals must be in solving issues. Stakeholder engagements are held in solving issues while these individuals who experience the problem are not involved. The local knowledge is absent and thereby the problem is not properly solved.

5. Cultural practices

The Zewedem Akadema tribe in upper east is located upstream. Their culture does not permit them to burn mats used in burying the dead. These mats are disposed of into the nearby water bodies which is then moved by the water downstream. These mats end up contaminating the water bodies affecting communities downstream. These waterbodies serve as source of drinking water for animals. The animal end-up dying after taking these contaminated waters.

Some communities also bath their babies with herbs to strengthen them. These herbs after being used are disposed of into the storm drains.

6. Storage and processing facilities

Farmers are unable to store their farm produce when harvested. Their crops end up going bad and are disposed of.

There is a tomato factory which use to buy tomatoes form farmers for processing. Over the past years, this factory has not been working. The farmers are compelled to sell their products for cheaper prices to prevent them from going bad. Some farmers also are unable to sell their products and they go bad.

These farmers lose money and are unable to pay back loans.

Engagement with Animal Production Department (APD), Livestock Breeding Station, Pong Tamale

Venue: Animal Production Department, livestock Breeding Station, Pong Tamale	**Date:** 9th June 2021	**Time:** 5:30 pm

Consultant:

Kojo Ofori Amoyaw-Osei
Kwabena Kwakye Mamphey
Felix Agyekum Obeng

Participants:

Lawrence Dartey - Farm Manager Esther Amano-Kraah - Assit. Farm Manager (Nutrition) Prospoer Adekide Akulia - Assit. Farm Manager (Breeding)

Pictures:

Engagement Issues:

1. Activities undertaken by the station
2. Control of parasites
3. Waste management
4. Security issues
5. Staff strength
6. Challenges faced by the station

1. Activities undertaken by the station

The station is a multi-specie station that keeps and breed the Ghana Shorthorn cattle. The station is also int the breeding of sheep and pigs. The station produces genetic superior males that are sold to farmers. Weight is used a parameter for selective breeding. The station is also into livestock education, pasture development and agro bio products for food resource.

2. Control of parasites

Acaricide is used in controlling ectoparasite on farm animals. Parasites and other animal diseases are not common in the station but is a major issue for animal farmers in the area. Swine flu is a major challenge in the area amongst pig farmers.

3. Waste management

The droppings of the breeding animals are used as manure by the station on their farms and some are also collected by the workers of the station. Empty chemical containers are burnt. Medical waste from animal treatment is either burnt, buried or dumped in waste bin.

4. Security issues

Security is a major challenge for the station. The land was not properly acquired by the government and due to this the nearby communities (farms closer to the site) encroach the area. The station is not fenced allowing theft of farm animals when grazing. Since January, 20 cattle have been stolen and it's the heights recorded.

5. Staff strength

The station has a staff strength of 29 of which 50% are locals and also the men are 25 and women 4.

6. Effect of bush burning on the station

Burning is a major issue in the area. During the dry season, some members of the community set fires into the surrounding environment for rat hunting. The fires end up extending to area of the station. This leads to lack of feed for the cattle and sheep.

Education through opinion leaders in the area should be used to prevent fires. Also, price should be placed on vegetation i.e., a straw market should be established where bay leaves are sold to farmers to feed their animals to reduce burning.

7. Challenges faced by the station
    - Water is a major challenge for the station. Boreholes have been sunk at the station but due to the low water table, the yield is unable to provide water for the station. The pipelines leading to the station is old and chocked preventing water access. This makes it difficult to provide the staff and animals with clean water during dry season. Also, a stream close by that could serve as a source of water is being polluted by animals that feed closer and drink from it. Some cattle die due to lack of water.
    - The area is a 64km^2 occupied by the Vet College, Laboratory, Tsetse and Animal Production Department. The area is not demarcated which makes it difficult manage the facility.

Engagement with Water Resource Commission

Venue: Water Resource Commission **Date:** 10th June 2021 **Time:** 11:00:

Consultant:

Kojo Ofori Amoyaw-Osei -
Kwabena Kwakye Mamphey - 0558341865
Felix Agyekum Obeng - 0209672066

Participants:
Andrew Asaviausa - ABO
Comfort Atia

Pictures:

Engagement Issues:

1. Mandate of the commission
2. Environmental challenges faced
3. Bagre Dam spill effect
4. Irrigation in the area
5. Stakeholder consultations
6. Social issues

1. Mandate of the commission

The commission is responsible for the water catchment area which includes the Upper East, North East, and Savannah regions. The Northern region does not fall under the commissions responsibility but is considered since their water source is originates in our area.

2. Environmental challenges faced

Climate change poses the biggest threat as the rainfall pattern in the area has changed over the years. This has affected crop production. Usually around this time of the year, early millets would have been harvested and available on the market but today, the land has not been prepared for cultivation. There is a lot of land in the area but arable land is scarce. Soil fertility is low. This condition has caused farmers to farm close to waterbodies which has more fertile land.

3. Bagre Dam spill effect

The dam is spilled every year and tends to cause flooding in this part of the country. These effects may not be directly as a result of the spill. Farmers tend to clear vegetation along the banks of the river for farming purposes. This also leads to silting of the river, thereby, reducing the water channel. There is also poor drainage in the area leading to runoffs. Real estate development has also led to concretisation and thereby contributing to poor drainage

4. Irrigation in the area

Some farmers cultivate crops in the dry season. There are a lot of water storage or reservoirs in the area but have their irrigation delivery systems broken. The Talensi area has a functional irrigation system but the locals rather indulge in galamsey activities.

5. Stakeholder consultations

There are instances where we are consulted before the commencement of a project but during the project, there is no form of engagement.

6. Social issues

Women in the area cannot own lands so they can only work with their husbands. Husbands sell produce and determine how much to pay wives and thereby leaving these women poor.

There was a case where an aquaculture establishment saved their profits with a bank. This bank collapsed leading to loss of funds, hence, the close down of the establishment.

Engagement with Ejura Sheep Breeding Station

Venue: Ejura Sheep Breeding Station	**Date:** 9th June 2021	**Time:** 09:00:
Consultant: Kojo Ofori Amoyaw-Osei Kwabena Kwakye Mamphey Felix Agyekum Obeng	**Participants:** Ezekiel Sowah Bekoe - Agric Officer Louis Opoku-Mensah - Assistant Agric. Officer Hannah Portia Danquah - Assit. Agric Officer Winnie Magdalyne Allotey - Assit Agric Officer	
Pictures:		

Engagement Issues:

1. Mandate of the station
2. Running of breeding station
3. Daily activities carried out at the station
4. Managing health of the stock
5. Waste management at the station
6. Security issues on the station
7. Employment ration on the farm
8. Pasture management on the station

1. Mandate of the station

The mandate of the station is to breed to improve upon the West African Dwarf sheep while providing training sessions for interested individuals.

2. Running of breeding station

The Station has a stock unit that uses scientific methods to select the best calves from the litter for breeding. The litter is weighed over a period and the topmost 10% is selected to be introduced into the breeding program. The next 40% is sold to other farmers for breeding while the remaining is sold to markets for food. There is evidence of improvement in the breeding program as birthweight recorded in the station range between 1.8-2.2 kg while other farms record 0.18kg. At age 1, weight of sheep on the farm ranges between 22-27kg while other farms record a weight of 20kg.

3. Daily activities carried out at the station

Daily activities at the station includes observing the sheep for general health. Stock men guide the flock into ranges to feed. Priority groups which include Rams and fresh births are fed in paddocks. This is to prevent the rams from mating the ewes rather than feeding to and gain weight while fresh birth is fed in paddocks to eliminate the risk of getting lost from the flock.

4. Managing health of the stock

The flock is dewormed periodically. Drenching is done every 2 to 4 weeks depending on the weather to control the infestation of ectoparasites. Vaccinations are done against Peste des petits ruminants (PPR) virus on a schedule. Pens are cleaned once every quarter with soap and water and disinfected with chemicals. There's also the need to put in measures to prevent flea infestation.

5. Waste management at the station

Droppings from the sheep is used on farms of the staff as fertilizer. Veterinary waste is burnt or buried in a designated area. Sheep lost to diseases are also buried in designated areas. Waste water from drenching is dislodged onto the ground since outlet for proper disposal is broken. Disposing of containers that contained chemicals has been a challenge for the station as improper disposal could lead to exposure of health hazards. Sheep that die from infections are buried in a designated area.

6. Security issues on the station

The station has security issues as the perimeter fence has been damaged. Members of the community tend to encroach on the stations land which also provides a front to enable them steel from the station. Between 2019 and 2020, over 200 sheep were lost to theft

7. Employment ration on the farm

The station employs 24 staff of which 4 are females. There are 6 senior officers, 4 sub professionals and 16 laborers from the community.

8. Pasture management on the station

In managing pasture at the station, Stylosanthes are cultivated to improve the quality of feed. Seeds are either planted in rows or broadcasted dependent on what the goal is for the establishment. Seeds of Stylosanthes are harvested and sold to the public who have an interest in establishing pasture. Trees have been planted within the pastures to provide shade for the sheep. In weed control, weedicides are applied. This poses a challenge to staff as inadequate PPEs are provided. There is a burning sensation when skin gets in contact with the weedicides used.

Appendix 3: Attendance Sheet

Agogo Women Plantain Producers and Exporters

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GHANA COMMERCIAL AGRICULTURE PROJECT

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Ejura Sheep Breeding Station

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GHANA COMMERCIAL AGRICULTURE PROJECT

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Kpong Irrigation Scheme Female Rice Farmers

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Kpong Irrigation Scheme Male Rice Farmers

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Kpone Irrigation Scheme Associations (Water Users Association & Global Agriculture Development Company)

Associations

West African Food System Resilience Program Stakeholder Engagement

NAME	DESIGNATION	CONTACT	SIGNATURE
Hen- Doe	GAADCO	0244624345	
Isaac Akpakli	AKC/I WUA	0540727247	
Regina Ayoko Mensah	" WUA	0247129445	

Water resource Commission (Pong-Tamale)

GHANA COMMERCIAL AGRICULTURE PROJECT

ACTIVITY DESCRIPTION: .....

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ATTENDANCE SHEET

DATE: 10-6-21

NO.	NAME	ORGANIZATION	DESIGNATION	SIGNATURE
1.	ANDREW ASAVIGA MSA	WRC	ABO	
2.	Comfort Atia	WRC		

Appendix 4: Grievance Log (for non-SEA/SH complaints)

Case no.	Date Claim Received	Name of Person Receiving Complaint	Where/how the complaint was received	Name & contact details of complainant (if known)	Type of Claim Add content of the claim (include all grievances, suggestions, inquiries) *Please note if the complaint was related to the project. If not, note it here and refer complainant to PIU for further processing	Was Receipt of Complaint Acknowledged to the Complainant? (Y/N - if yes, include date, method of communication & by whom)	Expected Decision Date	Decision Outcome (include names of participants and date of decision)	Was Decision communicated to complainant? Y/N If yes, state when, by whom and via what method of communication	Was the complainant satisfied with the decision? Y/N State the decision. If no, explain why and if known, will pursue appeals procedure	Any follow up action (and by whom, by what date)?