SAFEGUARDS IMPLEMENTATION AND MONITORING REPORT

SEFWI WIAWSO – BIBIANI HIA

CLIMATE CHANGE DIRECTORATE

(NATIONAL REDD+ SECRETARIAT)

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LIST OF ABBREVIATIONS

AfDB	African Development Bank
APR	Annual Progress Report
CFU	Colony Forming Unit
CIF	Climate Investment Funds
COCOBOD	Ghana Cocoa Board
CORIP	Cocoa Rehabilitation and Improvement Project
CRI	Crops Research Institute- CSIR
CREMA	Community Resource Management Area
CRMC	Community Resource Management Committee
CSIR	Council for Scientific and Industrial Research
CSO	Civil Society Organisation
DA	District Assembly
DPCU	District Planning Coordinating Unit
EA	Environmental Assessment
EMP	Environmental Management Plan
EMT	Executive Management Team
EPA	Environmental Protection Agency
ESAP	Environmental and Social Assessment Procedures
ESIA	Environmental and Social Impact Assessment
ESS	Environmental and Social safeguards
FC	Forestry Commission
FGRM	Feedback and Grievance Redress Mechanism
FIP	Forest Investment Programme
FORIG	Forest Research Institute of Ghana- CSIR
FP	Focal Point/Focal Person
FR	Forest Reserve
GoG	Government of Ghana
GSWG	National REDD+ Gender Sub-Working Group
HFZ	High Forest Zone
HIA	Hotspot Intervention Area
HMB	Hotspot Intervention Area
IUCN	International Union for the Conservation of Nature

JCC	Joint Coordinating Committee
LBC	Licensed Buying Company
LEAN	Landscapes and Environmental Agility across the Nation
LULUCF	Land Use, Land Use Change and Forestry
MDAs	Ministries, Departments and Agencies
MESTI	Ministry of Environment, Science, Technology and Innovation
MOFA	Ministry of Food and Agriculture
MMDA	Metropolitan, Municipal District Assembly
MLGRD	Ministry of Local Government and Rural Development
MPCU	Municipal Planning Coordinating Unit
MTDP	Medium Term Development Plan
NEAP	National Environmental Action Plan
NEP	National Environmental Policy
NGO	Non-Governmental Organisation
PCIs	Principles, Criteria and Indicators
PEP	Productivity Enhancement Programme
PHC	Population and Housing Census
PMU	Project Management Unit
RCC	Regional Coordinating Council
REDD+	Reducing Emissions from Deforestation and Forest Degradation, the role of conservation, sustainable management of forests and enhancement of forest carbon stocks
SA	Social Assessment
SEA	Strategic Environmental Assessment
SAP	Safeguards Action Plan
SESA	Strategic Environmental and Social Assessment
SHEC	Sub-HIA Executive Committee
SIS	Safeguards Information System
SRI	Soil Research Institute- CSIR
SWMA	Sefwi Wiawso Municipal Assembly
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
WB	World Bank

WRC	Water Resources Commission
WRI	Water Research Institute- CSIR

1.0 INTRODUCTION

1.1 Background

The Ghana Cocoa Forest REDD+ Programme (GCFRP) is the premier emission reductions programme fully developed from a 25-year Ghana REDD+ Strategy (GRS) by the Government of Ghana through the Forestry Commission and Ghana Cocoa Board (COCOBOD) with funding support from the Forest Carbon Partnership Facility (FCPF) of the World Bank. The programme seeks to significantly reduce carbon emissions resulting from cocoa expansion into forests through the promotion of appropriate climate-smart cocoa production approaches, including intensification and yield enhancement. The programme spans a mosaic landscape that produces commodities of international and national importance - cocoa, timber, palm oil, and food crops. However, the dominant crop in the landscape and also of national importance is the cocoa from which the programme derives the name "Ghana Cocoa Forest REDD+ Programme".

Cocoa is Ghana's most important agricultural commodity, accounting for roughly 57 per cent of all agricultural exports and supporting the livelihoods of about 2.5 million rural farmers and their dependents. Cocoa production is predominant in the High Forest Zone (HFZ) of Ghana. However, Ghana's forests have come under severe threat from agricultural expansion, which is the major cause of forest loss, mainly driven by cocoa production. This makes cocoa production the single biggest driver of deforestation in the landscape[1]. Underlying causes for this include limited financial and technical support for sustainable cocoa production leading to expansion into forest areas; legal disincentives to maintaining trees on farms; a lack of land use planning and landscape management; and a lack of collaboration amongst cocoa stakeholders.

In line with the goal of GCFRP, on-the-ground implementation of GCFRP is routed through Hotspot Intervention Areas situated within the GCFRP operational area. The Sefwi Wiawso HIA is one of the designated landscapes where GCFRP implementation is underway with the support of a consortium made up of Forestry Commission, COCOBOD, World Cocoa Foundation (WCF), Rainforest Alliance (RA) and Olam and Partnership for Forests (P4F). The partnership adopts a jurisdictional approach which ensures that all stakeholders across the cocoa sector commit to and collaborate on achieving Climate Smart Cocoa which is tied to Ghana's Emission Reduction Programme. Key activities implemented in the HIA include restoration (Enrichment Planting,

[1] Partnership for Productivity Protection and Resilience in Cocoa Landscapes (3PRCL) – Touton https://3prcocoalandscapes.com/about/intro-background

Modified Taungya System, Tree On Farm), livelihoods improvement interventions and Climate Smart Cocoa. All these interventions are primarily aimed at helping farmers with the necessary ecological and economic investments to ensure sustainable optimum cocoa production.

The United Nations Framework Convention on Climate Change (UNFCCC) requirements as stipulated in the Warsaw Framework for REDD+ recognizes that safeguards are a key part of REDD+ implementation and link the Cancun safeguards to results-based payment. This requires that countries implementing REDD+ should demonstrate how they have addressed and respected safeguards through the implementation of their REDD+ interventions. One of UNFCCC's key priorities is ensuring that social and environmental safeguards are adhered to, throughout the REDD+ process. In addition, since the Carbon Fund via the World Bank will be purchasing the ERs generated from the GCRFP, environmental and social risks associated with the GCRFP activities would be mitigated and addressed using the World Bank safeguards policies and procedures. To comply with the World Bank's safeguards requirements, Ghana has carried out a Strategic Environmental and Social Assessment (SESA) to better understand the environmental and social concerns of the programme, and to better define the necessary mitigation mechanisms and safeguards compliance issues associated with activities to be implemented in the GCFRP. Specifically, it details the risks and opportunities, and identifies the World Bank Safeguards policies triggered. The SESA report resulted in an Environmental and Social Management Framework (ESMF) to guide the implementation of the proposed ER programme. The National REDD+ Secretariat (NRS) of the Forestry Commission (FC) ensures that mitigation measures and recommendations in the ESMF applicable to the ER Programme area are implemented.

Table 1: World Bank Operational Procedures triggered by the GCFRP

World Bank Safeguard Policy	**Potential to be Triggered under REDD+ in Ghana**
OP 4.01: Environmental Assessment	GCFRP will engage in activities such as tree planting and animal rearing, that use forest resources in the HIAs and potentially impact other environmental areas. These activities may have environmental impacts on a limited scale, but a safeguards screening checklist has been prepared to screen activities under the

	programme and ESMPs subsequently prepared to guide in addressing or mitigating potential impacts.
OP 4.04: Natural Habitats	Some of the HIAs contain critical ecosystems (flora and fauna within and around the forest reserves). GCFRP will enhance the quality of the management of these critical ecosystems and reduce risks associated with cocoa and other agroforestry practices. The ESMP provides guidance on avoiding or mitigating impacts on natural habitats.
OP 4.36: Forests	Forest policy and management are the primary focus of this project, in addition to trees in the agroforestry landscape. The screening done provides guidance on managing forest ecosystems and their associated resources as reflected in the ESMF.
OP 4.09: Pest Management	The project will not directly finance the use of pesticides but will promote integrated pest management (IPM) and climate-smart practices and resilient 'shade' cocoa. The project-specific Pest Management Plan has been prepared. The ESMF provides identification of IPM activities linked to cocoa enhancement activities. In addition, key environmental and social issues and risks associated with chemical applications in cocoa have been analyzed in the ESMP.
OP 4.11: Physical Cultural Resources	The ESMF and Process Framework incorporate screening to ensure that the project would not have any negative impact on sacred sites. Screening of sites for pilot activities will include specific screening under the ESMF.
OP 4.12: Involuntary Resettlement	No involuntary resettlement is expected. However, as part of plans for ensuring that forests are protected and well managed, there will be efforts to reduce encroachment due to the expansion of cultivated areas. These restrictions of access will be negotiated with farmers. Inputs and incentives will be offered to increase agricultural productivity within the historical boundaries of admitted farms. Process Framework will be used to guide and ensure participatory processes during implementation.

This Safeguards Implementation and Monitoring Report has been developed to demonstrate how environmental and social safeguards requirements of the World Bank, as well as the relevant national laws and regulations, policies and institutional requirements, are being

adhered to throughout the implementation of activities/interventions in the Sefwi Wiawso - Bibiani HIA.

2.0 GENERAL DESCRIPTION OF SEFWI WIAWSO - BIBIANI HIA

2.1 Basic Administration

Located in the Western North Region of Ghana, the Sefwi Wiawso - Bibiani HIA landscape encompasses three administrative districts namely: Sefwi Wiawso, Bibiani-Anhwiaso-Bekwai and Sefwi-Akontombra. The landscape covers 244,000 ha (Figure 1).

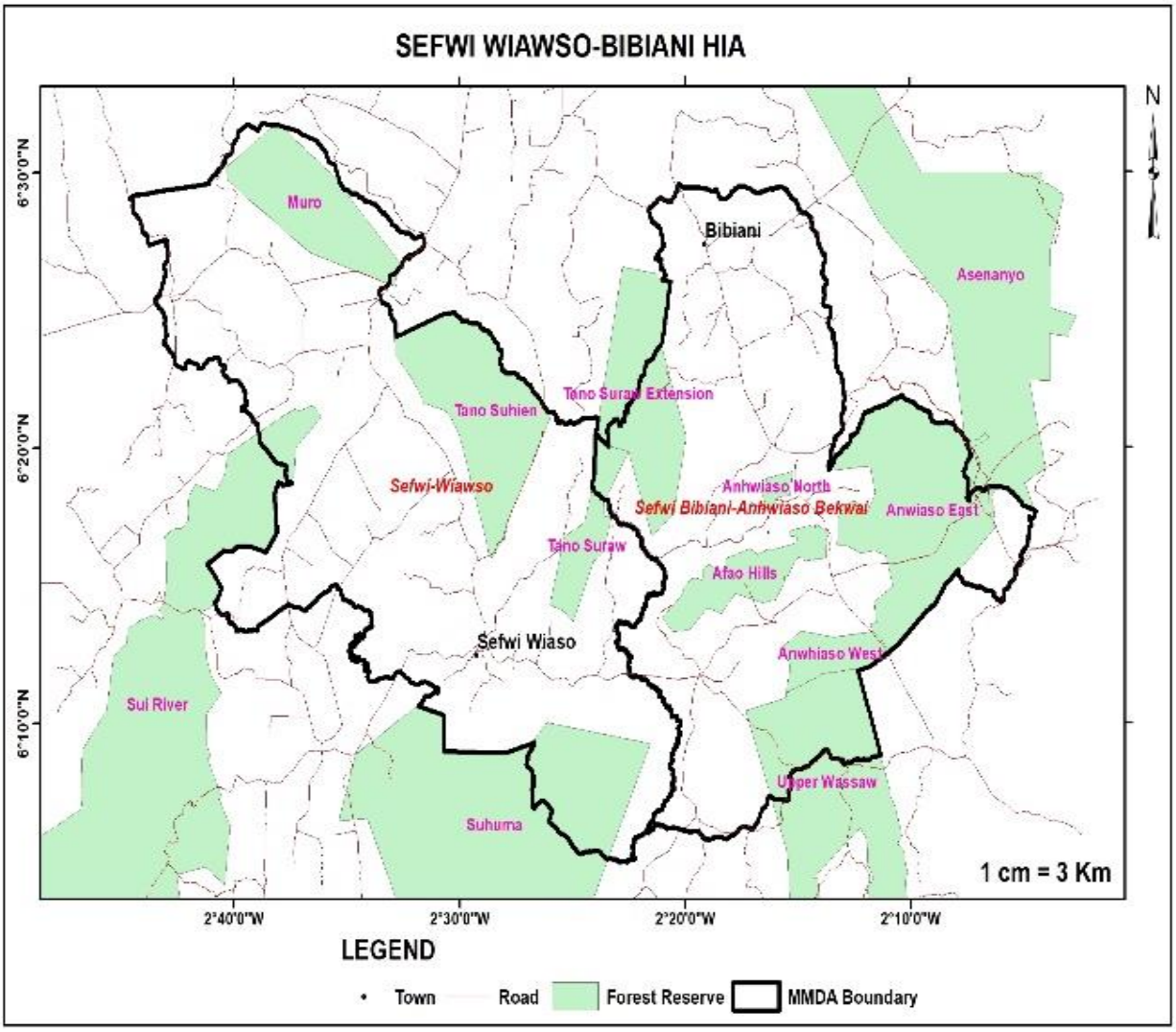


Figure 1: Map of Sefwi Wiawso - Bibiani HIA

Sefwi-Wiawso Municipal District is one of the nine districts in Western North Region, Ghana. On November 23, 1988, under PNDC Law 207, the Legislative Instrument (L.I) 1386 creating the Sefwi Wiawso District was passed. It was later replaced by the Local Government Act 493, 1993. Until the southwest portion of the district was divided off to form Sefwi-Akontombra District on February 29, 2008, the remaining portion of the district was known as Sefwi-Wiawso District. In March 2012, Sefwi-Wiawso Municipal District was established after being elevated to municipal

district assembly status under Legislative Instrument (L. I) 2015 (effective June 28, 2012). The municipality is located in the northeast part of Western North Region and has Wiawso as its capital. The district forms part of the twenty-two (22) MMDAs in the Western North Region. Municipal Assembly is made up of Six (6) Zonal Councils. These Municipal administrative structures are symbols of community participation. They form a basis for the effective distribution of infrastructural services at the Municipal level. There are forty-five (45) Assembly members made up of thirty-one (31) elected members and fourteen (14) government appointees.

The Bibiani-Anhwiaso-Bekwai Municipal Assembly was established in 1988 by the Local Government (Bibiani-Anhwiaso-Bekwai District Assembly) (Establishment) Instrument, L.I. 1387, in accordance with the then-applicable Local Government Law, 1988 PNDC Law 207. It was upgraded to municipal status in 2012 by LI. 2284, and it was formally inaugurated on March 15, 2012. It is one of the nine districts in Western North Region, Ghana. The municipality is located in the northeast part of Western North Region and has Bibiani as its capital town and has Bibiani as its capital. The District Coordinating Director is the Administrative Head of the District bureaucracy and Chief advisor to the District Chief Executive (DCE). He is also the Secretary to the Assembly and ensures the effective implementation of the policies and decisions of the District Assembly. Politically, the district has one constituency with an Assembly of fifty-four (54) members which includes the Honourable Member of Parliament for the district and the DCE. The Executive Committee is responsible for the performance of the Executive and Administrative function of the Assembly. It is made up of eighteen members and the District Chief Executive as the Chairman. There are also five statutory sub-committees under the executive committee, namely, the development planning, works, finance and administration, social services and justice and security. In addition, Area/Town Councils/Unit Committees assist in the performance of key roles. There is also effective traditional leadership and vibrant Youth Development Associations to facilitate efficient and effective mobilization of local resources. The district is further subdivided into Eight (8) Area Councils and One (1) Town Council.

Sefwi-Akontombra District is one of the nine districts in Western North Region, Ghana. It was formerly a part of the then-larger Sefwi-Wiawso District, which was formed in 1988 from the

former Sefwi-Bibiani District Council. However, on February 29, 2008, a portion of the district was divided off to form the Sefwi-Akontombra District, leaving the remainder of the district as Sefwi-Wiawso District, which was later elevated to municipal district assembly status in March 2012, The district assembly is located in the northeast part of Western North Region and has Akontombra as its capital town. The Assembly has membership of 24 comprising 15 elected members and 7 Government appointees, a Member of Parliament and the District Chief Executive. The Presiding Member chairs during sittings. The District Assembly consists of 2 Area Councils, (Akontombra Area Council and Nsawora – Edumafua Area Council) with 15 Unit Committees (UCs).

Table 2: Administrative districts

Region	Districts	District Capital
Western North	Sefwi Wiawso	Wiawso
	Bibiani-Anhwiaso-Bekwai	Bibiani
	Sefwi-Akontombra	Akontombra

2.2 Socio-economic, geographic and environmental profile

2.2.1 Sefwi Wiawso Municipal District

In the northern-eastern corner of the Western Region, between latitudes 60 and 60 300 N and longitudes 20 450 and 20 150 W, is where the Sefwi Wiawso Municipality is located. Along with the Juaboso District to the west, Aowin Municipality to the south, Bibiani-Anhwiaso-Bekwai Municipality to the east, and Wassa Amenfi West Municipal to the south-east, the Ahafo Region has a border with it to the north. The municipality covers a land area of 1,280 sq. km. The Municipal capital is Sefwi Wiawso which also doubles as the regional capital of Western North Region.

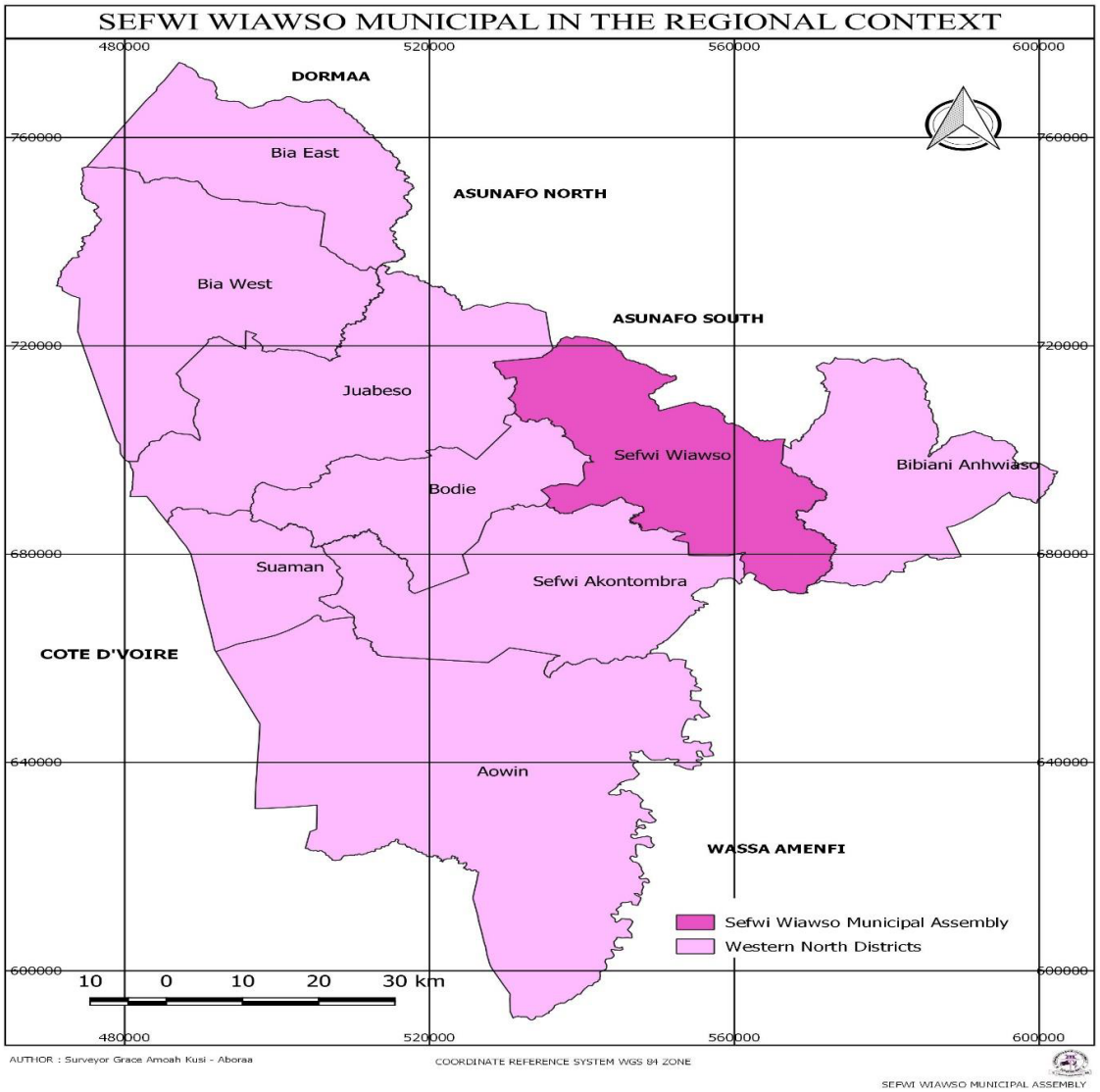


Figure 2: Map of Sefwi Wiawso Municipal district (Source: Municipal Planning Coordinating Unit (MPCU), 2021)

Demographics:

According to the 2010 Population and Housing Census (PHC), there were 139,200 people living in Sefwi Wiawso Municipality, with 69,753 men and 49.9 percent of women (69,477). In comparison to the regional sex ratio of 100.0, the Municipality's sex ratio is higher at 100.4 men for every 100 females. According to projections, the Municipality's total population will be 169,415 in 2021 with a population growth rate of 1.8 percent and a gender distribution of 50.1 percent (84,875) for men and 49.9 percent (males) for women (84,540). The population of the Municipality is young, with the biggest proportions of 13.9 percent, 13.2 percent, and 11.1 percent, respectively, within the age categories of 5 to 9, 10 to 14, and 15 to 19, as opposed to less than 2 percent among the 60 and older age groups. Additionally, 14.2 percent of men and 13.8 percent of females aged 0 to 4 years are observed. Males aged 5 to 9 make up 14.0 percent

of the population, compared to 13.8 percent of girls in the same age range. 49,825 people, or 35.8% of the 139,200 total population, live in urban areas, while 89,375 people, or 64.2%, lived in rural regions. Urban areas are where around 52 percent of women and 48.5% of men live. Sefwi Wiawso Municipality is one of the least inhabited Districts in the area, with a population density of 108.7 people per square kilometre as opposed to the regional density of 80.5. Within a 20 km radius of the main highways that pass through the Municipality, almost 60% of the population is concentrated. In comparison to 3.7 percent of those 65 and older and 41.2 percent of people under the age of 15, the population aged 15 to 64 accounts for more than half (55.1%) of the total population. Compared to adult dependency, which is 6.8, the child dependency ratio is the highest at 74.8. Accordingly, there are 75 children and 7 adults who are reliant on every 100 people who are of working age.

Climatic Conditions:

According to the municipal assembly's Medium-Term Development Plan for 2022–2025 (MTDP), Upper Birimian and Hornblende rocks make up the majority of the municipality's geology. These are volcanic rocks that were once molten and have now solidified (lava). The municipality's undulating characteristics are due to the occasionally occurring granite intrusions, which are a component of the extensive hill ranges known as the Sefwi Wiawso range. These are frequently steep and sharply divided. At the Kokokrom, Paboase, and Akoti regions, there are gold resources. The majority of the Northern and Western parts of the Municipality are covered with the forest Ochrosols, which is the most pervasive. The municipality's strong yields of cash and food crops like cocoa, palm, cola, coffee, cashew, plantains, cocoyam, cassava, and maize are supported by the rich soils known as forest Ochrosols and Oxysols. The Sefwi Wiawso Municipality falls within the moist semi-deciduous forest zone of Ghana. The forest type consists of the Celtic triplochiton association. Common species found are Onyina, Odum, Wawa, Mahogany, Sapele, Emire, Asamfina, Red cedar, among others. The Municipality falls within the tropical rainforest climatic zone with high temperatures throughout the year between 25C -30C and moderate to heavy rainfall between 1524mm-1780mm per annum with double maximum characteristics in June-July and September-October as peaks. Humidity is relatively high, which is about 90% at night falling to 75% during the day.

Forests, Agriculture and livelihoods Activities:

According to the Sefwi Wiawso Municipal Assembly, the municipality has a primarily rural economy. Agriculture, which employs about 80% of the working population and is the primary source of household income in the municipality, is the major economic activity in the municipality in terms of employment and income generation. In the municipality, there are three (3) main categories of farming activity. These include farming for cattle, food, and cash crops. The most common cash crop output in the municipality is cocoa, which is grown by a larger proportion of farmers. The municipality has the capacity to grow and is one of the biggest producers of cocoa in the Western Region. Compared to cultivating income crops, raising livestock is done on a smaller scale. According to the 2010 PHC, out of a total of 185,738 animals, chickens account for the majority of all livestock (67.6%), followed by sheep with 10.8%. The least common creatures raised in the area include snails, grass cutters, doves, and ostriches. The logging and lumbering industry, the information and communication industry, the public and civil service, petty trading, the hotel and catering industries, finance and insurance, as well as the fields of auto mechanics, dressmaking, and hairdressing, are other economic activities that provide employment to 26% of the labor force.

2.2.2 Bibiani - Anhwiaso - Bekwai Municipal District

Bibiani- Anhwiaso-Bekwai Municipal is located between latitude 6° N, 3° N and longitude 2° W, 3° W. The Municipal is bounded on the North by the Atwima Mponua District in the Ashanti Region, South by the Wassa Amenfi Central in the Western Region, West by the Sefwi Wiawso Municipal Assembly in the Western North Region and East by the Upper Denkyira West and Amansie East districts in the Central Region and Ashanti region respectively. The total land area of the district is 873 km square.

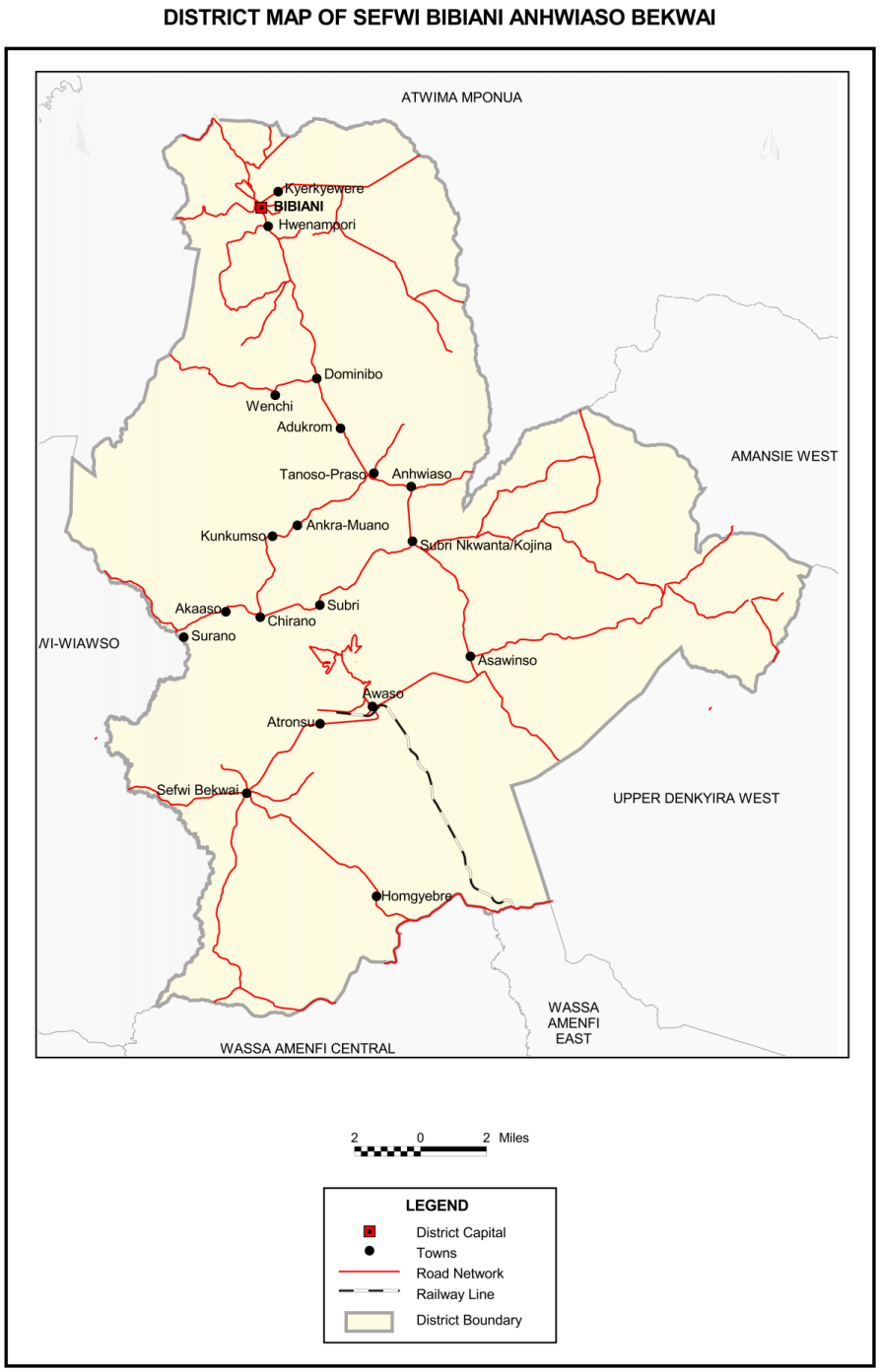


Figure 3: Map of Bibiani - Anhwiaso - Bekwai Municipal District(Source: Ghana Statistical Service, GIS)

Demographics and Climatic Conditions:

The Municipal had a population of 123,272 in 2010 based on the Population and Housing Census and with a growth rate of 1.8% per annum, the projected population for by December, 147,583 in 2020 with Male representing 72,906 (49.4%) and Female 74,676 (50.6%).

According to the Bibiani - Anhwiaso - Bekwai Municipal Municipal Assembly, the lowest and the highest points in the district are 350m above sea level and 660m above sea level respectively. This highest point is also the highest in the Western Region at Attanyamekrom (Adiembra), near Sefwi Bekwai. Over lower Birimian rocks lies a pleasantly sloping terrain. The landscape is rough and hilly over the Tarkwaian rocks rather than smooth and flat or gently sloping. River Ankobra is a significant river in the region. Awa, Krodua, Atronsu, Subriso, Kroseini, Suraw, Chira, and Akataso are other tributaries that form. These receive significant rainfall, flow roughly north to south, and eventually empty into the sea. As a result, water flows through them on a regular basis. It is important to note that the rivers are close to the forest, are sufficiently large, and can be used as resources to create irrigation systems and produce drinkable water for the district's residents in the future. The 2010 PHC reports that the district is located in the equatorial climate with the annual rainfall average between 1200mm and 1500mm.The pattern is bimodal, falling between March – August and September- October. The greatest months of the dry season are June and October, and it is noticeable from November through January. Over the course of the year, the temperature hovers around 26°c. The relative humidity is high, ranging from an average of 75% in the afternoon to 95% at night and in the early morning. The inference is that the region's climate is ideal for cultivating most conventional and non-conventional crops for export. Cassava, yams, plantains, cocoa, palm trees, and palm nuts are a few examples of traditional crops. Also among the unconventional crops are pineapple and cashew. The district is located in the zone of the Equatorial Rain Forest. The predominant kind of vegetation is the Celtic-Triplachiton Association, which is a moist-deciduous forest. Odum, Mahogany, and Sapele are just a few of the tree species that grow here and are the cornerstone of the thriving Ghanaian timber industry. As a result, the district is a good location for forestry businesses. The geology for the district is dominated by the Precambrian Metamorphic rocks of the Birrimian and Tarkwain formation. The district is endowed with rich forest ochrosols and forest oxysols. This is conducive for the cultivation of both food and industrial crops.

Forests, Agriculture and livelihoods:

The 2010 PHC reports agriculture as the main economic activity of the people in the Municipality employing 76% of the population, with cocoa as the main crop. Only 45.5 percent (39829ha) of the available arable land, or 62 percent (54240ha), is currently being farmed. In the Municipality, rice, maize, plantains, and vegetables are also grown. Fish farming, raising of sheep, goats, pigs,

and cattle, as well as commerce, are other economic activity. Palm oil processing and other forms of industrial activity are flourishing in the municipality. Out of the district's total of 27,961 households, 74.9 percent are agricultural households. 82.5 percent of agricultural households are in rural centers, whereas 57.4 percent live in cities. Chicken (63.8%) is the most common form of livestock raised in the area, followed by goat (11.7%) and sheep (11.1%), and fish farming accounts for only 3.7 percent of total animal production. The district has roughly 20 animals per caretaker on average.

2.2.3 Sefwi Akontombra District

Demographics:

The Sefwi Akontombra district lies in North-Eastern part of the Western Region between Latitudes 60 N and 60 30' N and Longitudes 20 45' W and 20 15' W. It covers an area of 1,117 sq.km, representing 3% of land area of the Western Region. The district capital, Akontombra, is practically on the far western edge of this roughly rectangular shape. The distance between Sefwi Wiawso and Sefwi Akontombra, the district seat, is 69 km by second-class (gravel-dressed) road, while the distance between Sekondi/Takoradi, the regional capital, is 306 km. It is bordered to the east by Bodi District, to the north by Suaman, to the south by Wassa Amenfi, and to the west by the Sefwi Wiawso Municipal Assembly.

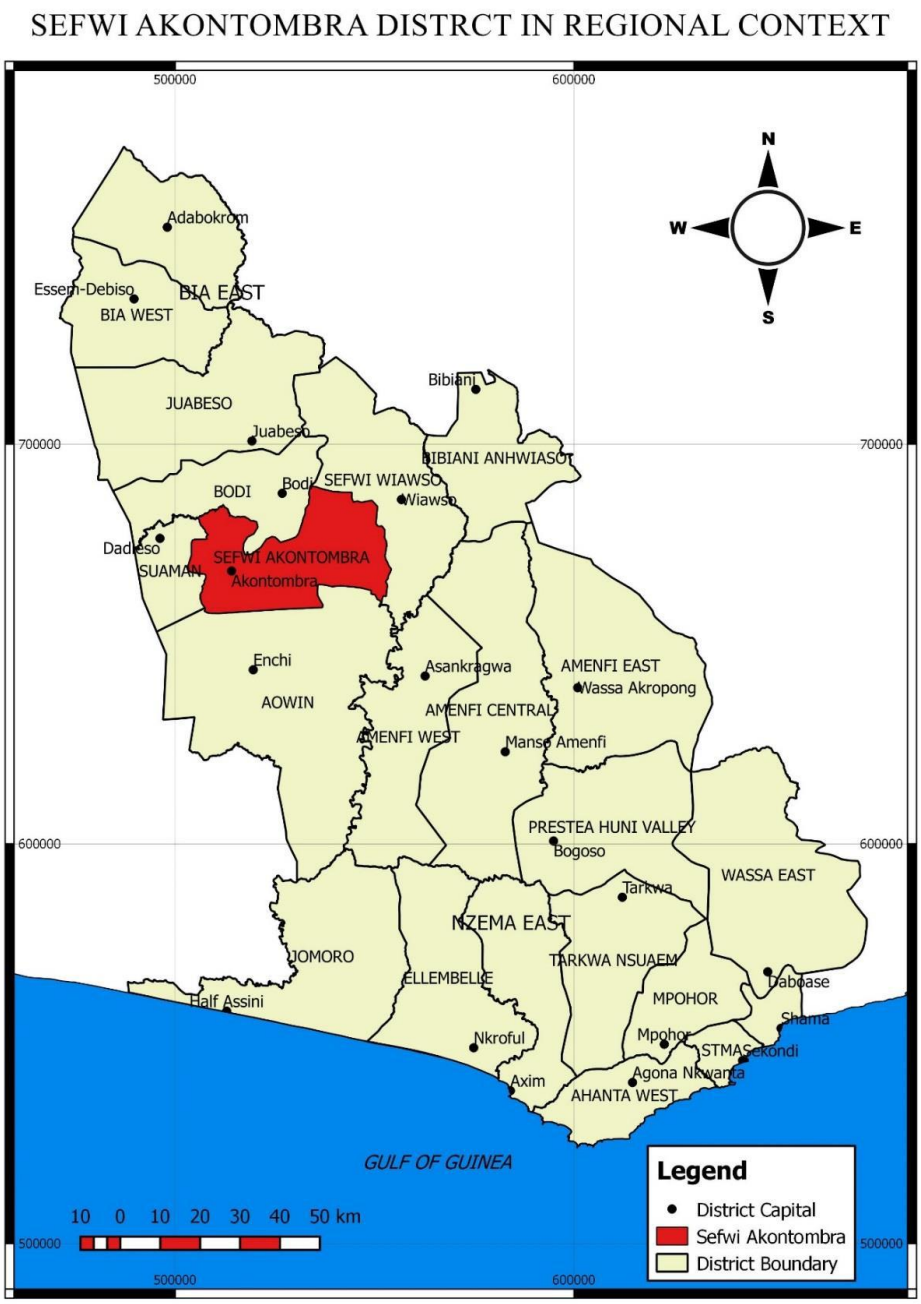


Figure 4: Map of Sefwi Akontombra district (Source: Sefwi Akontombra district assembly)

The district capital, Akontombra, is practically on the far western edge of this roughly rectangular shape. The distance between Sefwi Wiawso and Sefwi Akontombra, the district seat, is 69 km by second-class (gravel-dressed) road, while the distance between Sekondi/Takoradi, the regional capital, is 306 km. It is bordered to the east by Bodi District, to the north by Suaman, to the south by Wassa Amenfi, and to the west by the Sefwi Wiawso Municipal Assembly. The district has a relatively young population, with 43% of people under the age of 15. 13,003 children under the age of 5 exist today, whereas 22,291 women are of childbearing age. 3,715 children under the

age of one are projected to be born, about 4% of the population (source: Akontombra GHS APR, 2016). The elderly, or people 60 and over, make up barely 4% of the population.

Climatic Conditions:

According to the district assembly, most part of the district is generally undulating and lies between 152.4m and 610m above sea level and cut through the East by the Tano River Basin, this is mostly below 152.4m above sea level. The highlands, which rise above 305m, lie in a Northern direction of the district capital. The main drainage feature is the Tano River and its tributaries. The Tano River cuts roughly in a Southern direction and enters the sea in La Cote d' lvoire. The major tributaries include the Suhien, Kunuma, Sui and the Yoyo. The Lower and Upper Biri types, with the Lower Birrimian formation in the far Eastern and North Eastern portions, are the principal geological formations that cover the District. These are volcanic rocks that were once molten and have now solidified (lava). These are frequently steep and sharply divided. Akontombra and Nsawora/Nkwadum regions have gold resources. To the north of Akontombra, close to Bopa, there are only a few solitary diamonds. These haven't yet been used for anything. The District falls within the tropical rainforest climate zone with high temperatures throughout the year between 250 C – 300 C and moderate to heavy rainfall between 1524 mm – 1780mm per annum with a double maximum characteristic in June – July and September – October as peaks. Humidity is relatively high, which is about 90% at night falling to 75% during the day. The rainfall distribution pattern as indicated above is quite important for Agriculture activities. The dry season is marked by relatively low humidity and hazy conditions occurring from December to February because humidity is relatively higher during the dry season, the District experience fewer bush fire outbreaks. There are three main soil types found in the District namely: a) Forest Ochrosols, b) Forest Oxysols and c) Forest Ochrosols – Oxysols intergrades. The most widespread is the forest Ochrosols, which covers most of the Northern and western parts of the district. The forest ochrosols and oxysols re rich soils, which support the cultivation of cash and food crops, such as cocoa, palm tree, cashew, plantain, cocoyam, cassava and maize. The majority of the Ashanti, Western, Brong-Ahafo, and Eastern Regions of Ghana are covered by the moist semi-deciduous forest zone, which includes the Sefwi Akontombra District. The Celtic triplochiton connection makes up the forest type. Onyina, Odum, Wawa, Mahogany, Sapele, Emire, Asamfina, and Red cedar are a few examples of common species. The district is home to the Tanoehuro, Santomang, and Sui River Forest Reserves.

Forests, Agriculture and Livelihood Activities:

The Sefwi Akontombra District is a predominantly rural economy, with agriculture and its ancillary activities being the main live stay of the people. With a staggering 86.5 percent of the labor force between the ages of 15 and 64 employed, agriculture, forestry, and fisheries make up the main industry. Workers in craft and allied trades make up 3.9 percent of the workforce, while workers in services and commerce make up 4.3 percent. In the field of agriculture, men and women differ slightly from one another. Between the ages of 15 and 64, around 87.8% of men and 83.2 % of women are employed in agriculture, forestry, and fishing, respectively (2010 PHC). It should be noted that one important cash crop in the District is cocoa. The area dedicated to rice farming is many hectares. Logging and lumbering, public and civil service, petty trading, finance, as well as auto repairs, dressmaking, and hairdressing, are further economic activity that employ less than 5.99 percent of the labor force.

2.3 Traditional structures, Socio-cultural values and beliefs

The Western North Region has six (6) paramountcy. These are Sefwi Anhiawso Traditional Area with Ogyahoho Yaw Gyebi II as its paramount Chief, Sefwi Bekwai Traditional Area, headed by the Odeneho Gyapong Ababio, Sefwi Wiawso Traditional Area headed by Katakyie Kwesi Bumagamah II, The rest are Sefwi Chirano Traditional Area Headed by Okogyeaman Kwaku Gyambra III, Aowin Traditional Area with Beyeman Brentum III, as its paramount Chief and Suaman Traditional Area with Odeneho Bentum IV as its paramount chief.

The traditional governance structure of the people of Sefwis, Brusas and Anyins are not different from any of the Akan communities in the country. The Abusuapanyin, a member of the Sub-Divisional Council at the village level, led by the Odikro, is the head of the extended family, commonly referred to as Clans. These Odikros also make up a portion of the Chief-led Divisional Council at the town level. In that hierarchical sequence, the Chiefs of the several towns also make up the council of the Paramount Chief. The chiefs carry out judicial, legislative, and executive duties at each level of the chieftaincy organization. In the past, chiefs would mobilize their people for battle and defend their realms from outside aggression.

The Sefwi Wiawso Municipality has one traditional council, that is, the Sefwi Wiawso Traditional Council, which is headed by the Paramount Chief of the Traditional Area (Omanhene), with the title 'Kogyeabour'. The entirety of the political districts of Juaboso, Bodi, Akontombra, Bia East, and West are also included in the Traditional Area. There are 65 Chiefs that are members of the

traditional council. It is a matrilineal system of inheritance. In terms of ethnic composition, the Sefwi (Akan) make up around 78.6%. The remaining 21.4 percent is made up of minority groups such the Mole-Dagbani, Krobos, Ewes, and Nzemas. In the Municipality, Christianity makes up the majority of the religious population (81.7%), followed by Islam, traditionalism, and no religion (18.3%).

The Sefwi-Anhwiaso-Bekwai Municipality has three (3) Traditional Councils, each headed by a Paramount Chief. These include the Anhwiaso Traditional Area, Sefwi Bekwai Traditional Area and Chirano Traditional Area with their overlords (*Amanhene*) residing at Anhwiaso, Sefwi Bekwai and Chirano respectively. Next to the *Amanhene's* authority are Divisional Chiefs in major communities followed by Sub-Divisional Chiefs and *Adikrofo* in minor settlements and hamlets in that order. To organize the populace at the local and community levels for growth, traditional rulers employ the decentralized Traditional Councils as their means of administration. An attitude of peace and unity among the locals has been fostered by this hierarchical system, which is necessary for the district to develop. The majority of the population are Sefwis, although pockets of other tribes, including the Ewes, Brongs, and a variety of other ethnic groups, many of which are from the North of the country, are dispersed across the District for economic reasons.

The Sefwi Akontombra District has its traditional council under the Sefwi Wiawso Traditional Council, which is headed by the Paramount Chief of the Traditional Area (Omanhene), with the title "Kogyeabour"**.** The inheritance system is matrilineal. Akans and Sefwes make up the majority of people in the District (77.5 percent of the total population). Additional minority groups include the Mole-Dagbani-Kusasi (11.5%), Ewe (4.0%), Guan (2.8%), and others (4.2 percent). Christianism is the most popular religion, accounting for 81 percent. Pentecostals make up 27.1% of this group, followed by Catholics (20%), Protestants (16%), and other Christians (17%). Islam is the second most popular religion in the world after Christianity with 10.1%, Traditionalists with 1.5%, and the remainder with 9.2%.

The cultural practices of the people of the Sefwi Wiawso - Bibiani HIA are not different from the rest of the Akan speaking communities in the country. In the traditional political structure, the chief and his elders serve as the central figure or group of figures. Lineage serves as the foundation of the Region's traditional political structure. The lineage is a grouping of patrilineal or matrilineal families. This means that in order to be considered a member of a lineage for the

purposes of succession or inheritance, a person must be descended from a common ancestor or ancestress. Abusuapanyin is designated as the family's oldest male with the most wisdom. The Abusuapanyin is assisted in running the lineage on a daily basis by Obaapanyin, the oldest surviving female member of the family. The Abusuapanyin is regarded as the ancestors' agent who talks and acts on their behalf. He conducts rites, pours libations, and preside over family celebrations since he is regarded as the senior priest of the family.

There is the conventional moral code that governs conduct. The ancestors are said to support this moral code, and it is feared that they will punish anyone who disobeys the code severely. The residents of the Region are devout and adhere to a certain faith. Christianity is the most common religion, followed by non-Christians and people who do not identify with any religion, according to the 2010 Population and Housing Census.

Gods of Nature

The people of Sefwi believe in gods of nature such river gods, stone gods, tree gods etc. These belief makes them revere them and obey the priests who serve as a mediator between them and the people. For instance, when the annual “Aluelue” Festival is about to be held, the chief priests who believes in the gods of dogs has to pierce a live dog and insert his hand into it and bring out the heart of the dog to the gods.

Ancestors (The Righteous Dead)

They have a connection to the Supreme God through their belief in their deceased relatives. They offer libations and other sacrifices to their ancestors on significant events like festivals, weddings, and burial ceremonies because they believe in them. They think that not all deceased family members can be considered ancestors. Before passing away, a person must age and must not commit suicide or commit an accident. Once again, the person must refrain from engaging in illegal activities like rape, incest, having sex in the woods, etc.

Witchcraft

In the Western North Region, witchcraft is also a prevalent belief. Witchcraft is referred to as a supernatural power, the craft or practice that people use intentionally or unintentionally to damage others out of jealously, to gain an edge over others, to stop others from progressing or from competing successfully against them, or any combination of these.

Due to this idea, people tend to blame witchcraft for their misfortunes and turn to soothsayers to interpret these unfortunate circumstances. In contrast to Northern Ghana, where there exist witch camps, the Western North Region lacks a dedicated location where the accused witchcraft practitioners are confined.

Festivals

The main festival of the Region is Yam Festival called "Aluelue" (Ellue) which is celebrated annually on convenient dates by both the Paramount and the Divisional Chiefs. As side this festival, there is another occasion observed very three weeks (on Thursdays) called "Abiedue Huhue". This festival is to pacify the royal stools and to perform ritual to appease the ancestors.

In addition to the customary ceremonies, the occasion is used to consider the welfare of the citizens, resolve conflicts, and assess the job they have accomplished over a specific period.

There are rituals proceeding the festival. After the Paramountcy of Sefwi Wiawso has celebrated its festival, the flood gate is then open for the various towns in the Traditional Area to also celebrate theirs. The last town to do the celebration is a town known as Kesekrom. In kesekrom the celebration take a unique shape. As part of the celebration there is an aspect known as "Bomtrou". The women in the kesekrom would dress in cloth and paraded the town and when one meets them and mention "Bomtrou", they remove their cloth showing their nakedness to the men. It is however done with a token of money. This aspect of the festival attracts tourists and on lookers from far and near.

Traditionally, the celebration "Aluelue" in Kesekrom marks the closure of the celebration of the festival in Sefwi for that particular year. If a town wishes to observe the event for any reason, it must first ask the Chief and the Kesekrom elders for the necessary rites.

2.4 Land tenure

In the past, when their ancestors migrated and arrived at their current site (Sefwi), they went to the supreme chief who showed them a piece of land to work to support their family, said Okyeame Yeboah (the Chief Linguist of Sefwi Wiawso Traditional Council). Families expanded as the settlement expanded from hamlets to villages to towns through several generations. A family

member is granted a piece of land to farm when he reaches legal age and marries, so he can provide for his family.

Initially, there was no formal agreement entered with the settlers who now classified themselves as indigenes of the land. However latter settlers from other tribes in Ghana such as the Ewes, the Akuapims, and the Fantes, a formal agreement is entered some of them are as follows;

Cultivate and Let Share

In this arrangement, a piece of land is shown to the settler farmer for him to cultivate and plant the crops and the crops are mostly cocoa, plantain, cocoyam, cassava etc. and a demarcation made between the farmer and the land owner. This arrangement is for a particular number of years normally for thirty to forty years.

Abunu

Under the Abunu tenancy, the proceeds from the harvest or the farm may be divided equally between the tenant and the landowner. Before this division, the harvest from cover crops such as plantain and cocoyam are shared equally, usually after sales, between the landowner and the farmer. During the division of the proceeds, the landowner has the first choice of the products as divided. This old practice that goes back to the pre-independence era, places an initial economic burden on the *Abunu* farmer as he/she is solely responsible for all the labour and cost associated with land preparation and cultivation. This agreement is time bound. The continuous improvement in the producer price of cocoa from the early 1990s incentivised cocoa production and this saw a rapid expansion of the Abunu system (Hill, 1963, Ruf, 2011) with natives and non-native farmers practicing it.

Abusa

In Abusa system the ratio of the tenant farmer's acreage to that of the landowner is two to one. Again, it is the landowner who has first choice, and in a large number of cases he takes care of the farm and harvests the crops himself. In some cases, however, the tenant farmer is employed to harvest the crop and take care of the farm for one-third of the harvest. In other cases, an entirely new person may be hired to take care of the farm under similar terms. While this arrangement allows those with fewer resources or social networks to move into cocoa production, it does make sharecroppers vulnerable to the whims of their landlords.

Okyeame Yeboah claims that families work together under the "nnoboa" method to clear land and cultivate crops for a family member. The clearing is divided among the family members in a rotating fashion until everyone has received their fair share. For a price, there is also professional labor available to help with the weeding. Others turn to work within the nuclear family. Some farmers today clear their farmland with weedicide. Large tracts of land have been leased by land owners for agricultural purposes to relatives, migrant workers, and other private sector organizations. These transactions are made on behalf of the Sefwi Wiawso Paramountcy since they have the approval of the traditional council.

2.5 Settlement pattern, livelihoods and markets

The Sefwi Wiawso Municipality is predominantly rural with 64.2% of the population living in the villages and hamlets. The Aboanidua-Wiawso-Benchima roads, which make up the principal thoroughfares, are located within 20 km of where around 70% of the population is concentrated. There are currently 102 settlements in the Municipality as a whole. It consists of 97 rural communities and 5 urban towns (Sefwi Wiawso, Edwinase, Boako, Asafo, and Asawinso). There are now 19 large communities with a population of above 1500 in the Municipality (SWMA MTDP 2022-2025).

According to the 2010 PHC, in the Sefwi Wiawso Municipality, 71.3 percent of the population 15 years and older are economically active, whiles those economically not active constitute 28.7 percent. In the Municipality, 97 percent of people who are economically engaged are employed, and 3.2% are jobless. The occupations with the highest population percentage are skilled agricultural, forestry, and fisheries workers (67.1%), of which 68.5 percent of men and 65.7 percent of women are employed. Managers and administrative support staff make up just 1.2% of the population aged 15 and above (0.9 percent). The proportion of women working in service and sales is higher (17.7%%) than the proportion of men (4.1 percent). The proportion of men (6.8%) compared to women (0.2%) in factories, machine operators, and assemblers is significantly higher. It's possible that this is the case since males are thought to possess the necessary physical strength and specialized knowledge for such a job. The percentage of people who are self-employed with no employees makes up the biggest percentage of the population of people aged 15 and over, which totals 56,478. (67.2 percent). However, the percentage of women is higher (68.6%) than the percentage of men (65.9 percent). The proportion of females

among self-employed people who also have employees is higher than that of men (3.2% against 0.9%). (2.8 percent). This is because most of the women who are in trade like dressmaking, sales and services and the food industries usually require more hands to work effectively. A proportion of 18.1 percent of females are contributing family workers as compared with 8.4 percent of their male counterparts.

The 2010 PHC reports that out of the households of 30,074, 74.1 percent are engaged in agriculture. Majority (98.8%) of households in the Municipality are engaged in crop farming, whiles only few (0.8%) of the households are engaged tree planting. In both urban and rural areas, most of the households are crop farmers. In the rural areas a higher proportion of households (86.1%) are engaged in agriculture as compared with 55.2 percent in the urban areas. Also in livestock rearing, 25.7 percent of the households are in the rural areas as compared with 12.5 percent in the urban areas. This is because most of the livestock rearing is done in the rural areas, where the environment is conductive and there is enough space for the animals. Additionally, some of these animals are given grass, which is simple to come by in rural settings. In both localities, only 0.3% of households engage in fish farming, compared to 0.1% in urban regions. Out of a total of 185,738 animals, chickens account for the majority of livestock (67.6%), followed by sheep with 10.8%. The least common creatures raised in the area include snails, grass cutters, doves, and ostriches.

About 50.0 percent of the number of keepers (7,278) rear chicken, which is most common occupation among the keepers; 23.1 percent are goat and, 18.8 percent are sheep keepers. The average number of animals per keeper is 618 for inland fishing, fish farming (278) and turkey rearing (131). The least average number of animal per keeper is seven for silk worm and 10 for goat and pig.

Cassava, oil palm, coconut, and sugar cane are still among the agricultural products that are processed to some extent. While palm oil/palm kernel oil is taken from the palm nuts, coconut oil is extracted from the coconut, and sugarcane is processed into a regional gin, cassava is turned into flour, dough, and gari (akpeteshie). However, the technology used in all of the aforementioned instances are modest, leading to modest conversion rates. The local economy as well as the earnings of farmers and processors are adversely affected by this.

One of the biggest producers of timber in Western and all of Ghana is this district. The municipality is home to a number of notable species, including Sapele, Wawa, Emire, Mahoghany, and Red Ceder. Suhuma Timber Company, A.G. Timbers, Bomplex, Bibiani Logging and Lumber Company Limited, Western Veneer, Buadac Timber Company, Bosion Timber

Company, and A-List Timber Company are a few of the logging and lumbering businesses that operate in the municipality.

The Bibiani-Anhwiaso-Bekwai District is predominantly rural. The 2010 PHC shows that the urban population makes up 28.5% of the district's population, with 48.3% of men and 51.7% of women living there. This estimate is based on the district's anticipated population of 139,532 for 2017 based on the 2010 PHC number of 123,272. Additionally, 71.5 percent of the population lives in rural areas, with 50.2% of women and 49.8% of men. This is a justification based on the fact that most people work in agriculture, which explains why there are so many people living in rural areas. The rural nature of the district coupled with scattered settlements, poses serious development challenge with regard to distribution and provision of basic services to the people. With the present population density of 160 persons per square kilometre per the district's projected population for 2017 based on the 2010 PHC, the district is not all that sparsely populated as compared with the regional average of 99.3 persons per square kilometre. There are at least 345 communities with about 65 having a population above 500 persons (2010 Population and Housing Census) making the district predominately rural. This shows that majority of the inhabitants live in isolated hamlets and cottages preferably on their farms. Thus, the general settlement pattern of the district can best be described as dispersed type. This dispersed settlement pattern makes it difficult to provide essential social services to most people in the district.

According to the 2010 PHC, in the Bibiani-Anhwiaso-Bekwai Municipality, 72.4 percent of the population 15 years and older are economically active whereas the economically not active constitutes 27.6 percent. The economically active population consists of the employed and the unemployed. The economically not active on the other hand, are those who did not work and were not seeking for work.

The majority (62.8%) of the district's workers are competent in agriculture, forestry, and fisheries. Service and sales workers come in second with 12.2% of the total, and craft and allied trades workers come in third with 9.5 percent. Plant and machine operators and assemblers are the fourth highest occupation, accounting for 5.4 percent of all jobs. However, the proportions of managers, professionals, technicians, and associate professionals, clerical support staff, elementary occupations, and other vocations are below 5%. Among the male population, skilled agricultural forestry and fishery workers have the highest proportion (62.7%). This is followed by plant and machine operators and assemblers (10.6%), craft and related trades workers (10.4%)

and professionals (5.3%). When it comes to female employees, skilled agriculture, forestry, and fishery workers have the highest percentage (62.8%), followed by sales and service employees (19.5%), and craft and allied trade employees (8.7%). 66.5 percent of those who are employed and over the age of 15 work for themselves without hiring anyone else (s). The contributing family workers, who make up 12.9% of the workforce, are next, followed by the employees (12.7 percent). Among the employed males 15 years and older in the district, 63.6 percent are self-employed without employee(s), followed by employees (20.0 %.) and contributing family workers (8.2%). Among the employed females, 69.2 percent are self-employed without employee(s). This is followed by the contributing family workers (17.4%). Besides agricultural and mining activities there are services such as petty trading, hairdressing, barbering, tailoring and transport services in towns such as Bibiani, Sefwi Bekwai and Sefwi Anhwiaso. The District Assembly generates a lot of revenue through market tolls.

The proportion of agricultural households is 74.9 percent out of the total household of 27,961 in the district, as reported in the 2010 PHC. 82.5 percent of agricultural households are in rural centers, whereas 57.4 percent live in cities. The majority of households (98.2%) are active in crop farming, followed by livestock rearing (33.1%) and tree and fish farming (0.2%). At the neighborhood level, households in rural regions had a higher percentage of households involved in crop farming (98.7%) and livestock rearing (35.1%) than those in urban areas (96.2%) and (26.3%), respectively. The main type of livestock reared in the district is chicken (63.8%), followed by goat (11.7%), sheep (11.1%) with fish farming accounting for just 3.7 percent. On the average, the district has about 20 animals per keeper. The number of keepers corresponds with the number of livestock with chicken recording the highest (50.3%) number of keepers, followed by sheep (20.6%), goat (20.0%). Fish farming recorded the highest average animals per keeper (251) followed by snail rearing (200).

There are two important marketing outlets in the district, namely, Bibiani and Bekwai. Fridays and Wednesdays are the market days for Bibiani and Bekwai respectively. Crops in the rural areas are conveyed to these markets on the market days for sale. Traders from all over Ghana patronize these markets. These markets create avenues for sale of agricultural produce. Despite these ready market places for sale of agriculture produce, much of the produce goes bad especially perishable ones due to lack of access and roads in the District. Other traders from outside the district bring other goods and services to the markets to trade in.

Generally, the settlement pattern of the Sefwi Akontombra District is scattered or sparse populated. In the District, populations are clustered and linear along the main highways that runs through the District. Along the Akontombra-Nsawora-Wiawso and Akontombra-Dadieso highways, about 20% of the population resides. The District lacks both a spatial layout and planning strategies. The leaders and landowners, however, create the old towns in accordance with the layout. Families are the owners of land. However, there are few planned developments at the new locations. This disorganized development can be blamed on the lack of a technical officer or town and country planning unit. There are roughly 137 settlements in the Akontombra district. The urban settlements in the District include Akontombra, Nsawora, Bopa, Kojokrom, Ackaakrom among others. The District is predominantly rural with urban population accounting for 8.8 percent and rural population (less than 1500 persons) representing 91.2 percent.

According to the 2010 PHC, the economically active population (employed and unemployed) account for 79.0 percent of the population 15 years and older while the economically not active constitute 21.0 percent. 98.5 percent of those who are economically active are employed. Of the 1.5 percent of people without a job, 43.9 percent had employment in the past and are looking for employment and are available for employment, while 56.1 percent are looking for employment for the first time and are available for employment. Students make up the majority of the economically inactive group (57.2%), followed by those who perform housework or other domestic duties (28.7 percent). The least number of people are pensioners or retired (0.6 percent). In comparison to men, more women than men performed household chores. This can be a result of the social norm that females often take care of the home. Skilled agricultural, forestry and fishery workers constitute the highest proportion (86.5%), followed by service and sales workers (4.3%), craft and related trades (3.6 percent) and clerical support workers form the least (0.3%). For the male population, skilled agriculture, forestry and fishery occupation have the highest proportion (88.3%), followed by craft and related craft 2.8 percent. The female population in these same categories recorded 84.3 percent and 4.5% respectively for skilled agriculture, forestry and fishery and craft and related trades.

The biggest share (85.8%) is in agriculture, forestry, and fishing, followed by wholesale and retail: motorbike and automobile repair (4.7 percent). For both sexes, the industry that employs the majority of men (87.7%) is that of agriculture, forestry, and fisheries, followed by wholesale and retail (4.0 percent). Manufacturing, transportation, and storage account for only a small share (2.0%) of all employed individuals. There are no females in the transportation and storage sector; this is an indication of male dominance in the sector. The employed female population are found

in four major industries namely, agriculture, forestry and fishing (83.2%) and wholesale and retail (5.4 percent). The rest are manufacturing (4.4%) and other service activities (2.9%). The total number of households in Sefwi Akotombra District is 17,592 out of which 15,228 representing 86.6 percent of households are engaged in agricultural activities. In the urban areas, 1,100 households representing 69.0 percent of urban households (1,595) are engaged in agriculture while 88.3 percent (14,128) out of a total of 15,997 rural households are into agriculture. A high proportion of agricultural households (99.3%) in the district are engaged in crop farming, 25.7 percent are engaged in livestock rearing, 0.4 percent in tree planting and a smaller proportion in fish farming (0.2%). Only 0.9 percent and 0.2 percent respectively of urban and rural agricultural households engage in fish farming activities. There are 126,534 livestock and 5,686 keepers in the district. The average animal per keeper is 22.3. Chicken is the most commonly kept bird accounting for 64.1 percent of the total livestock. Sheep have the most (4,293) of the four-footed animals, accounting for 11.3 percent, with an average of 11.8 per owner. In the district, there are 12,019 goats, or around 9.5 percent of all the animals. There are 8.9 goats on average kept by each owner. An average of 32.1 cattle are kept by each livestock owner, making up 2.2 percent of the total herd. However, they are raised in very limited numbers. The district also raises other species. 20 keepers (0.4%) engage in fish farming and have an average of 436 fish in their care. There is essentially no snail farming.

The district can boast of two market centres in Two major towns; i.e. Akontombra and Nsawora. The Akontombra market is observed on Fridays while that of Nsawora is on Thursdays. During market days, the people in the district who are mostly farmers bring their foodstuffs and other agriculture produce to the market centres for sale. Other traders from outside the district also bring goods and services to the markets for sales.

2.5.1 Tourism

Although the region has many potential tourism attractions, they are sadly underdeveloped. It benefits from ecotourism, which is supported by festival events. Some of these tourist attraction sites include the following;

Waterfall at Bopapre

There is a waterfall at Bopapre in the Bopa/Kofikrom Electoral Area in the Sefwi Akontombra District. The community is about 15km from Sefwi Wiawso. However, the waterfall is not developed to attract tourists and thus patronage is very low.

Giant Squeaker Frogs

Giant Squeaker Frogs are found in the protected Yawkrom Forest Reserve in the Akontobra District. These Giant frog are delight to watch especially when they make short high noise.

The Tree of God (Nyame Dua)

The tree of God is located at Nyamebekyere, a distance of about 5km from Sefwi Wiawso. It is said that about 150 years ago, a farmer struck a machete into the stump of the tree and this is still visible in the trunk of the tree. The tree has continuously been growing ever since, and today the trunk of the tree is completely surrounded by the machete.

Abombirim Sacred Tortoise Forest

It is a sacred forest preserved in which a giant tortoise lives. When one sees the tortoise and picks it, there it turns to be total darkness in the forest. Until such a time that the tortoise is left for light to re-appear, one will not be able to find a way out of the forest. It is located at Sefwi Boako, a 21 km distance from Sefwi Wiawso

Ancestral Hole

The ancestral hole is at Sefwi Bosomoiso, about 4km from Sefwi Wiawso, the Regional Capital. It is believed that the royal family of Bosomoiso community originated from this hole. It is believed to be a bottomless hole. It is surrounded by trees but no leaves fall into it and the hole is alleged to have healing powers.

Again, the Biggest Tree in the Western North Region is found in Aowin Municipality at Apuja Yakasi. The Municipality can also boast of the Ablakanu Rocks at Nyankomam, and the Sutreso Rapids at Yiwabra.

In Bibiani-Anhwiaso-Bekwai Municpality, the following Tourist attraction sites and events can be found;

- Natural Forest Reserves ideal for Eco-Tourism at Bonkaso, Kanayerebo and Tano-Surano.
- Atta Nyamekrom Mountain at 660 metres, the highest peak in the Western Region

- Mining sites at Bibiani and Chirano
- Mountains scenery at Bekwai
- Manmade Lake at Bibiani
- Ankobra River (Salt)
- Conveyer belt of the Ghana Bauxite Company at Awaso
- Mud fish pond at Bekwai
- Traditional "Allue" Festival.
- Bibiani 6th March Festival.

The source of the river Ankobra located in the Merewa forest reserve is also a potential site for tourist attraction.

2.6 Forests & threats

2.6.1 Forest Reserves

As a result of bad farming methods and logging, a significant portion of the native forest in the Sefwi Wiawso municipality has been greatly reduced. Because of this, 612.22 km of the forest have been designated as reserves. The municipality has three (3) forest reserves, including Tano Suhien in Punikrom, Suhuma in Old Adiembra/Amafie, and Muro in Boako (167,8 km2) (84.6km2).

According to the Sefwi Wiawso Municipal Assembly, in the last decade, a combination of intense uncontrolled illegal farming, chainsaw activities and to a lesser extent illegal mining have degraded more than 50% of forest reserves e.g. Sui River Forest Reserves. Other forest reserves, like Muro, have nearly entirely lost their forest cover in the last thirty years due to human habitation and agricultural growth. Only the Santomang forest reserve in the municipality still functions effectively as a forest. The current situation at Sui River Forest Reserve, where the rate of deforestation changed from 0.3 percent in 2001-2009 to 1.1 percent in 2010-2019, serves as an example of the hotspot and trajectory of deforestation in Sefwi-Wiawso. The Sui Forest Reserve has seen illegal farm boundary extensions (encroachment) by neighboring farmers and communities, which has resulted in deforestation.

Name of Forest District	Name Of Forest Reserve and Size in Ha.	Size of Degraded Area (Ha)	Size of Degraded Area (Ha)	Size of Potential Area (Ha) Available for Restoration	Total Number of Trees Planted	Number of Men Involved in Restoration or Tree Planting in Forest Reserves	Number of Women Involved in Restoration or Tree Planting in Forest Reserves
Sefwi-Wiawso	Sui River	1,090	976.1	114	1,500,877	550	1,700
	Muro	1,010	969	41	1,200,559	150	375
	Suhuma	100	47.1	53	600,281	35	80
	Tano Suhien	375	202	173	300,442	91	152
	Total	**2,575**	**2,194.21**	**381**	**3,602,159**	**826**	**2,307**

Figure 5: Status of Forest Reserves in the Sefwi Wiawso Municipality (Source: SWMA, MPCU, 2021)

Deforestation outside of reservations started more than 30 years ago. Despite being crucial for restoration planning, neither at the community nor municipal levels, there are any official records on the size of degraded lands outside of forest reserves. In most locations, agriculture techniques involve removing the tree cover to an average of less than 10%. In Sefwi-Wiawso, most cocoa farms have only between 15-30% timber tree canopy cover on cocoa in more than 80% of cocoa farms. The Assembly therefore in its quest to deal with climate change planted 1260 trees out of which 961 survived at the end of the year. The Assembly through NADMO and Forestry Department also organized sensitization programs/durbars at Ahwia on the use of LGP as an alternative to the use of wood where a total of 535 (364 Males & 171 Females) from 10 communities participated, facilitation of alternative livelihood support schemes for fringe communities along with protected areas, education on climate-smart agriculture was also conducted of which 734 people (333 Males & 401 Females) from 14 communities benefitted as well as enforcement of environmental laws. Also, NADMO in collaboration with Fire Service organized a radio programme climate change and, flood prevention and bush –fire. Also, as part of the efforts to ensure degraded forests are restored and prevent the Municipality from losing its forest cover, plantation development is being pursued vigorously to achieve the Municipality's objective of enhancing climate change resilience and also reduce greenhouse gases (SWMA Annual Progress Report, 2021). The data below indicates the level of implementation of plantation development, Communities involved, area planted for 2021 under Modified Taungya System, and Youth in Afforestation.

Forest Reserve	Communities	Area Planted
Suhuma	Yawkrom	118
Tano Suhien	Punikrom	56.30
Muro	Anyinabriim	36.00
Sui river	Abrabra	38.40
Santomang	Dench	**404.90**
Total		**653.60**

Figure 6: Modified Taungya System in the Municipality for 2021 (Source: FSD, SWMA, 2021)

Forest Reserve	Communities	Area Planted
Suhuma	Adiembra	2.40
Tano Suhien	Bopa Nkwanta	53.40
Muro	Ayinabrim	15.60
Sui river	Abrabra	65.90
Santomang	Dench	6.10
Total		**256.60**

Figure 7: Youth in Afforestation (YAP) (Source: FSD, SWMA, 2021)

The Sefwi-Anhwiaso-Bekwai Municipal district has eight forest reserves totalling roughly 264 square kilometers in size. In the future, these areas, which include the Merewa forest reserve, might be converted into tourism destinations for the region. The Afao Hills Reserve, Anhwiaso South Reserve, Anhwiaso East Reserve, Anhwiaso North Reserve, Samtwitwi Reserve, TanoSuraw Reserve, and TanoSuraw Extension Reserve are further reserves in the area. The district features six sizable forest reserves that are legally protected from human occupation, accounting for over 30% or 264 square kilometers of the total surface area.

Location	Area (sq.km)	Area (Ha)
Anhwiaso East	79.09	12,124.00
Anhwiaso North	14.61	345.00
Anhwiaso South	22.07	2,243.00
Afao Hills	42.77	3,582.00
Tano Suraw Extension	85.92	7,508.00
Sumtwitwi	6.60	362.00
Tano Suraw	35.11	2,942.00
Upper Wassaw	79.13	10,075.00
Total	**365.30**	**39,181.00**

Figure 8: Forest Reserves in the District (Source: FSD, Bibiani, 2017)

The eight forest reserves are productive reserves where timber harvesting is done. Occasional bushfires, overexploitation and encroachment of land are threatening the existence of the reserves. The type of climate has positive impact on the heavy rainfall experiences in the district. However, mechanized farming cannot be practised extensively in the district due to the dense forest cover.

The District has large tracts of forest and economic trees. According to the municipal district assembly, the high levels of exploitation of timber for logs and lumber by both registered timber firms and illegal chainsaw operators has contributed significantly to deforestation in the district. Unchecked farming practices including cocoa farming has also compounded the situation through encroachment on the virgin forest and forest reserves. The development of some settlements within and around the forest which depend on the forest for their livelihoods also impacts negatively on the forest. The heavily dependent of the people on firewood and charcoal for energy has seriously affected both secondary and virgin forests in the district. This situation has serious implications such as threat to livelihood, soil degradation, forest depletion, adverse climatic conditions and endangered species in the district. Sand winning is done haphazardly in the district, which destroys the environment and the vegetative cover. This poses a threat to animal, plant and human life.

The Sefwi Akontombra District has three (3) forest reserves. The forest reserves were created with the intention of protecting and preserving certain tree species against the ill practices of sawmill operators.

Reserve	Location	Area(km)
1. Tano Ehuro	*Chorichori/Bopa/Asanteman*	173.71
2. Santomang	*Wasampobriampa*	21.20
3. Sui River	*Nsawora*	167.48
Total		362.39

Figure 9: Forest Reserves in Akontombra (Source: DPCU, SADA, 2012)

The original forest has been greatly diminished. There are almost 20 timber enterprises in the area. The depletion can be linked to the lack of a forestry division and a patrol team along the forest. All types of operators who cut down trees in the forest are not subject to any checks. The fact that there are no afforestation operations on the forest might be highlighted once more. As a result, a sizable area of the forest, measuring 362.39 km2, has been set aside.

2.7 Activities/Interventions in Sefwi Wiawso – Bibiani HIA

2.7.1 Rain Forest Alliance Landscapes and Environmental Agility across the Nation (LEAN)

LEAN is a four-year project funded by the European Union's flagship GCCA+ initiative that aims to conserve biodiversity, build climate resilience, and reduce emissions from land-use changes in the savannah, high forest, and transition zones of Ghana—and all while helping local farmers to improve their livelihoods. The project seeks to address three structural barriers that have historically hindered efforts by governments, civil society organizations, and the private sector to halt land degradation and deforestation through the uptake of landscape approaches. First, most stakeholders while interested in conserving natural capital and helping to improve livelihoods, have only had the capacity and knowledge to act within their direct sphere of influence or economic interest and not at broader scales. Secondly, even though there is growing recognition of the importance of working at a landscape level to address sustainability, there has remained a lack of effective tools, resources, and incentives to drive aligned action at such a scale. Lastly, although some multi-stakeholder governance structures have been encouraged, Ghana doesn't have an example to date of one sustainable or self- sustaining landscape governance model for scale up. The project will be implementing Integrated Landscape Management (ILM) models in three priority landscapes across the savannah, high forest and transitional ecological zones of the country through functional and sustainable landscape governance structures, market incentives and diversified income-generating activities. By using

the landscape sustainability measurement framework (LandScale), an evidence-based ILM model will be produced for national and regional scale-up.

2.7.2 Rain Forest Alliance-Olam Partnership for Livelihoods and Landscapes

Rainforest Alliance and Olam Ghana are working closely with Partnership for Forest, the Ghana Cocoa Board and the Forestry Commission to demonstrate how partnerships with civil society, government, local communities, and the private sector can deliver sustainable change, through self-governing, multi-actor collaboration at the landscape level.

The four-year project, funded by UK aid from the UK Government, aims to conserve and sustain the agricultural livelihoods of communities in the cocoa forest landscape in the corridor around the Sui River and the Suhuma, Tano Ehuro,Tano Suhien and Santomang Forest Reserves. Targeted communities are in the Sefwi Wiawso, Bodi, and the Akontombra districts under the Cocoa and Forest Initiative. The landscape corridor is to be created around the fragmented forest reserves which are located within three political districts. The total land mass covers a surface area of about 12,772.6 square kilometers representing about 11 percent of the region's total land area. This means that actions within the corridor would contribute significantly to the protection of about 97,612-hectares of forest reserves.

Additionally, the project seeks to conserve biodiversity in these landscapes, increase climate resilience, income and food security among smallholder farmers to contribute directly to the national-level efforts aimed at achieving the Sustainable Development Goals (SDGs).

2.7.3 Restoration Activities

Restoration consists of activities that lead to tree planting in on-reserves and off-reserve areas. Under the emission reduction programme three main restoration activities are recognised in the HIA namely: Modified Taungya System (MTS), Enrichment Planting and Trees on Farm (ToF).

2.4.3.1 Modified Taungya System (MTS)

This is a system of agroforestry practice where farmers from fringe communities of Degraded Forest Reserves are allocated degraded areas on reserve to undertake plantation development. In this system, farmers provide labour for the site preparation, pegging, planting and tending of the plantation. The Forestry Commission provides logistics (including pegs, tree seedlings and

some other farming tools as well as protective clothing) and technical support to the farmers. Farmers are allowed to grow food crops along with the tree seedlings and harvest the crops for themselves whiles tending the tree seedlings for three to four years when tree canopy closes and crop production becomes impossible under the shade. A Benefit Sharing Plan (BSP) has been instituted for the MTS with a proportion of 40%: 40%: 15%: 5% to Farmers, Forestry Commission, Community and Traditional Authorities respectively.

The selection of a community or farmer group for the MTS were based on the following criteria among others:

I. Proximity to the planting site: Since the plantation establishment is labour intensive especially during activities such as site preparation, selection of communities or farmer group is based on their proximity and thus those fringing the Forest Reserves are selected. Another reason is that communities are responsible for ensuring that the plantation and the Forest Reserve as a whole is protected from wildfire, illegality, etc. and so communities fringing the reserve are mostly selected.
II. Willingness to participate: As per the Benefit Sharing Plan, proponents are responsible for their individual roles, thus it requires a willing farmer or a community who understand and are willing to invest and wait for the returns in a long term. Some farmers would prefer to be paid for their labour and forfeit future returns.
III. Previous experience: With the implementation of MTS in Ghana nearing two decades, the FC has had myriad interactions and engagements with communities fringing Forest Reserves and have institutional memory of committed communities based on their past performance. Thus, the selection criteria of farmers also include past community performance in MTS establishment including their ability to protect previous plantation stands established.
IV. Ability to work on the farm: Selection of farmers are also based on their age and health conditions. Strong adults and youth are preferred regardless of the gender.

2.7.3.2 Enrichment Planting

Enrichment planting was undertaken in a fairly degraded forest with the aim of increasing tree cover by planting tree seedlings within the forest. This plantation model has introduced valuable species to degraded forests without the elimination of valuable individuals already present. In Sefwi Wiawso - Bibiani HIA, the Forest District manages Enrichment Planting activities. In Enrichment Planting, strips of 5-6-meter width are cut through the degraded portions of the

compartment along which tree seedlings are planted and nurtured to increase tree density. This work is done under the supervision of Forestry Commission.

2.7.3.3 Trees on farms (ToF)

This system of carbon stock enhancement focuses mainly on cocoa farms in off-reserve areas that are unshaded or not fully shaded according to the right regime. Farmers are supported and have incorporated trees in their farms to ensure sustainable yield whilst at the same time contributing to climate change mitigation. By incorporating trees on their farms, they contribute to carbon stock enhancement, which serves as a carbon sink.

In executing this model, COCOBOD and private sector cocoa companies support ToF implementation since it falls directly into their remit although under strong coordination and partnership with the Forestry Commission. Farmers benefit from agricultural extension services as well as supervision and logistical support. In this HIA, the Forest District, COCOBOD District, and Mondelez are leading ToF.

2.7.4 Climate- Smart Cocoa

Climate-Smart Cocoa (CSC) consists of farm-level activities that lead to increased resilience, carbon sequestration and general improvement in the livelihood of farmers. At this, a number of REDD+ partners in the HIA including COCOBOD and the private sector cocoa companies undertake climate-smart related activities. The Ghana Cocoa Board generally term their version of CSC as Productivity Enhancement Programme (PEP). COCOBOD since 2017 has rolled out the PEPs to shore up cocoa production in the country and consolidate its position as the leading producer of premium quality cocoa beans in the world. The objective of the PEPs is to roll out a set of measures that will improve productivity per hectare and increase cocoa production levels well above 1 million metric tonnes per year (versus an average of 800,000 tonnes per year over the last ten years). The PEPs mainly entail measures to sustainably increase plant fertility; develop irrigation systems; rehabilitate aged and disease-infected farms; increase warehouse capacity; and create an integrated farmer database. Some of the activities under PEP include the following:

1. Cocoa Rehabilitation Programme
2. Cocoa Diseases and Pest Control Programme (CODAPEC)
3. Cocoa HiTech (Fertilizer) Programme
4. Free Hybrid Cocoa Seedling Distribution

5. Artificial Hand Pollination
6. Mass Cocoa Pruning
7. Cocoa Management System (CMS)
8. Irrigation

1. Cocoa Rehabilitation Programme

Under this programme, COCOBOD bears the full cost of the two-year rehabilitation process which involves the cutting of cocoa trees affected by the Cocoa Swollen and Virus Disease (CSSVD), treating whole farms and replanting them with disease-tolerant, early bearing, and high yielding cocoa hybrid cocoa seedlings as well as complementary plantain suckers to provide temporary shade for the young cocoa seedlings and recommended desirable shade tree species to provide permanent shade for the newly established cocoa.

2. Cocoa Disease and Pests Control (CODAPEC)

COCOBOD introduced the CODAPEC programme (Mass Spraying) in 2001/2002 to control black pod disease and mirids (capsids) to prevent their effects on cocoa production. The programme comes at no cost to the farmer. Only mapped farms in good condition are considered under this exercise. COCOBOD takes full responsibility of carting chemicals to the regions and districts for onward distribution to farmers through various task forces in districts and communities. The chemicals are allocated to farmers to arrange with supervisors of spraying gangs to plan spraying schedules to spray their farms. There are 2 components involved:

- Capsid control
  i. A 7-member spraying gang (supervisor inclusive) ensures two (2) rounds of insecticides application in April/May and September/October respectively.
  ii. Cocoa farmers are then expected to complement the first two (2) rounds with additional two (2) rounds in June and December within a cropping year.
- Black pod Control
  i. The first three (3) rounds of fungicides application spraying are carried out between 3-4 weeks' intervals by COCOBOD in June, July and August/October.
  ii. Cocoa farmers are encouraged to work closely with the gang to identify which periods within the intervals to complement with additional three (3) rounds application of the fungicides.

3. Cocoa HiTech Programme

Management of Ghana Cocoa Board (COCOBOD) re-introduced the Subsidized Fertilizer Programme following evidence of widespread theft, nepotism, favoritism diversion and smuggling which characterized the then 'Free Fertilizer Programme' some years ago. The aim of the fertilizer distribution was to restore soil nutrients depletion to enable a smooth process during cocoa production. The Subsidized Programme, which makes use of the private sector in the distribution processes, seeks to ensure availability, equity, and transparency. The introduction of this new scheme, with active private sector participation, has also helped to create jobs to boost economic growth in the country. Generally, the Cocoa HiTech Programme has a number of benefits including:

- cutting off the needless politicization, nepotism and theft that hitherto characterized the distribution of fertilizers.
- stimulating an industry that is one of Ghana's top earners of foreign exchange and accounts for about 7 percent of gross domestic product.
- eliminating market distortions as well as steps to map cocoa farms and soil, improving sector management, upgrading ports and storage facilities and rehabilitating ageing trees.
- enhancing access of the ordinary cocoa farmer to the right fertilizer which will help stimulate productivity and increase livelihood.
- promoting a subsidized programme, which makes use of the private sector in the distribution processes, ensures availability, equity, and transparency.

The mode of distribution of the farm inputs is done through the following processes:

- Farmer based Cooperatives are formed, in order to facilitate equitable distribution of fertilizers. Each farmer must belong to a community farmer based corporative.
- Cooperatives then must apply for the subsidized fertilizers at COCOBOD. Farmers can therefore apply through these approved farmer-based cooperatives.
- Farmers are given a one-year moratorium for the payment of the subsidized fertilizers.

4. Free Hybrid Cocoa Seedling Distribution program

Every year, Ghana Cocoa Board (COCOBOD) through the Seed Production Division (SPD) raises disease-tolerant hybrid cocoa seedlings for distribution to farmers free of charge. The initiative is aimed at increasing cocoa production and incomes of cocoa farmers.

Distribution of the seedlings to farmers is mostly done from May – July every year to enable farmers plant them. The mode of distribution takes the following process:

- The seedlings are raised by the Seed Production Division (SPD) at over 380 nursery sites established in communities across the cocoa regions.
- The Cocoa Health and Extension Division (CHED) distributes the seedlings using farmer data.

5. Artificial Hand Pollination Programme

Cocoa Artificial Hand Pollination started in 2017 against the background that cocoa is naturally pollinated by insects called midges, but with only an average of 10-20% of flowers being pollinated, whilst about 80-90% is aborted. The hand pollination exercise was originally restricted to seed-gardens but has now been extended to farms to boost yield. The selection criteria of cocoa farms for hand-pollination include hybrid farms; farms that are between 8-20 years; farms free from Cocoa Swollen-Shoot Virus Disease (CSSVD); and accessibility. In addition, farmers must be willing to maintain their farms by brushing regularly, pruning, controlling pests and diseases, as well as the willingness and preparedness to apply the required amount of fertiliser to help achieve the desired results of increased productivity. The artificial hand pollination exercise has been undertaken in some farms and is still ongoing at a steady rate within the Sefwi Wiawso - Bibiani landscape.

- The processes involved are detailed below: A farm earmarked for pollination must be pruned two months before it is pollinated
- Transfer of pollen grains is aided by forceps and containers
- Application of fertilizers is essential to support pod setting and development

6. Mass Cocoa Pruning Programme

A strategy to prune all productive cocoa across all cocoa growing regions and districts. To this end COCOBOD has supplied 100,000 motorized pruners to various farmer cooperatives to encourage pruning and weeding/slashing as pruning is the master key that unlocks flowering in cocoa to aid flowering and pod setting. It also helps to reduce the incidence of pests and diseases that affects cocoa farms.

7. Cocoa Management System (CMS)

Popularly known as Cocoa farmer census is a program under which all cocoa farmers are enumerated with their data captured including useful sociodemographic characteristics. Their

farm sizes and other farm characteristics are also captured. This data will eventually be the platform upon which essential services like cocoa farmers pension scheme would be rolled out for farmers by COCOBOD

8. Irrigation

Due to climate change and its devastating effects COCOBOD has embarked on an aggressive irrigation programme to bring irrigation to the farm gate of the ordinary cocoa farmer as a climate change mitigating and coping strategy. To this end a lot of boreholes have been sunk and solar powered to irrigate some clusters of farms in the various district. Plans are far advanced to dam some big rivers in the cocoa districts for irrigation purposes.

2.7.5 Wildlife Conservation and Protection

The Wildlife Division of the Forestry Commission has a mission to ensure conservation, sustainable management and development of Ghana's wildlife resources for socio-economic benefit to all segments of society. Specially, the Division has adopted the following strategies:

- Protect and develop Ghana's permanent estate of wildlife-Protected Areas (PAs).
- Promote management and development of wildlife outside wildlife-Protected Areas.
- Develop Eco- tourism potentials of the PAs.
- Promote the development of wildlife - based enterprises.
- Develop linkages with other agencies and NGOs whose activities impact wildlife.
- Assist local communities to develop and manage own reserves
- Foster closer collaboration with communities closer to PAs through the promotion of community resource management areas (CREMA).
- Promote public awareness and education on wildlife management issues.

In line with the above, in the Sefwi Wiawso - Bibiani HIA, the Wildlife Division at the district level embarks on a number of activities including community education and sensitization, as well as patrolling and monitoring of forest reserves for biodiversity protection and conservation.

2.7.6 Some key project outputs in the Sefwi Wiawso - Bibiani HIA

I. Development of the Sefwi - Wiawso landscape governance structure and systems leading to MoU & Partnership formation.
II. Draft constitution for the HIA

III. Developed National Climate Smart Cocoa Standard with the Government of Ghana, Civil Society and Cocoa Companies.

IV. Designed Landscape level Monitoring, Reporting and Verification systems that align with the Ghana Cocoa Forest REDD+ Program methodology.

The outcomes of the project include measurable reductions in deforestation, enhanced community resilience against climate change, significant increases in most farmers' yields and incomes, and the marketing of deforestation-free cocoa beans.

3.0 INSTITUTIONAL SETUP FOR IMPLEMENTING GCFRP ACTIVITIES

NRS has put in place an inclusive and participatory approach for the implementation of all activities. In a broader sense, the main institutions implementing the REDD+ and have interest in environmental and social management include:

- Ministry of Lands and Natural Resources (MLNR);
- Ministry of Food and Agriculture (MOFA);
- Ministry of Environment, Science, Technology and Innovation (MESTI)
- Forestry Commission (FC): - National REDD+ Secretariat (NRS)/Climate Change Directorate (CCD), Forestry Services Division (FSD), Resource Management Support Centre (RMSC);
- Ghana Cocoa Board;
- Metropolitan, Municipal and District Assemblies (MMDAs);
- Environmental Protection Agency (EPA);
- World Bank and other donors.
- Traditional Authorities
- Cocoa Research Institute of Ghana (CRIG)
- Participating Civil Society Organizations (CSOs) / Non-Governmental Organizations (NGOs)
- Participating Private Companies and their representatives in-country
- Community members and farmer groups

Table 3: Organizations/Institutions and Partner Agencies involved in the GCFRP implementation

NAME OF ORGANIZATION / PARTNERS	CORE CAPACITY AND ROLE
Forestry Commission of Ghana	Forestry Commission (FC) is the government institution responsible for the sustainable management of Ghana's forest and wildlife resources. Forestry Commission and COCOBOD set the national framework and developed an enabling cocoa policy and strategy around environmental sustainability for this project. The Climate Change Directorate of the FC was established in 2007 with a mandate to manage forestry-sector

NAME OF ORGANIZATION / PARTNERS	CORE CAPACITY AND ROLE
	initiatives related to climate change adaptation and mitigation, including REDD+. It hosts the National REDD+ Secretariat, which is responsible for coordinating Ghana's REDD+ process. The sector ministry for the FC is the Ministry of Lands and Natural Resources (MLNR). In partnership with Ghana's Cocoa Board, the FC is responsible for this programme, including its design, management, and implementation.
Ministry of Lands and Natural Resources (MLNR)	MLNR is the sector Ministry to which the Forestry Commission reports. It is also responsible for coordinating and implementing Ghana's Forest Investment Programme (FIP). The Minister of the MLNR chairs the National REDD+ Working Group (NRWG) which is an intersectoral body that provide oversight, Coordination and Management of the GCFRP.
Ghana Cocoa Board (COCOBOD)	Ghana Cocoa Board (Cocobod) is a co-proponent of the GCFRP with the Forestry Commission and together they co-lead the programme implementation. Cocobod is the government institution responsible for the regulation and management of the cocoa sector. Cocobod serve as co-chair, with the Forestry Commission on the GCFRP Joint Coordination Committee to provide strategic coordination and management for implementation of the programme
Ministry of Environment, Science and Technology (MESTI)	MESTI is the sector ministry with responsibility to formulate, develop, implement, monitor and evaluate environmental policies in Ghana, including the National Climate Change Policy. MESTI has a seat on the NRWG and is a key partner on all aspects of REDD+.
Ministry of Food and Agriculture (MOFA)	MOFA is represented on National REDD+ Working Group (NRWG) and is responsible for ensuring that extension services and interventions related to food and cash crops including oil palm and citrus align with the goals of Ghana's Cocoa Forest REDD+ Programme.
Environmental Protection Agency (EPA)	EPA is the National Focal Point for United Nations Convention on Climate Change (UNFCCC) and is responsible for all National Communication to the UNFCCC. EPA ensures that the programme's accounting is reflected

NAME OF ORGANIZATION / PARTNERS	CORE CAPACITY AND ROLE
	in the national accounting. It also hosts Ghana's Climate Change Data Hub, which supports elements of data management and registry.
Forestry Research Institute of Ghana (FORIG)	FORIG is a research institute under the Council for Scientific and Industrial Research (CSIR) conducting research on forests and forest products for social, economic and environmental benefits of society. FORIG advises the Joint Coordinating Committee (JCC) and provide technical guidance on the implementation of field activities and development of appropriate systems for the success of the programme.
Cocoa Research Institute of Ghana (CRIG)	CRIG is a subsidiary of Cocobod established as a center of excellence for developing sustainable, cost effective, socially and environmentally acceptable technologies for the cocoa industry. CRIG is responsible for all cocoa research that provides information and advice on matters relating to the production of cocoa and other mandate crops
National House of Chiefs	The National House of Chiefs is a body of elected representatives from Ghana's Regional Houses of Chiefs that is recognized by the Constitution. It is charged to advice on issues related to culture and chieftaincy and works towards the codification of customary law. The national house of chiefs works with the programme to liaise with Paramount chiefs that have jurisdiction over landscapes within the programme area. They play critical role in the implementation of the Grievance Redress Mechanism and will also provide guidance on issues related to benefit sharing.
Solidaridad	Solidaridad is an international civil society organization with over 50 years of experience in developing solutions to make communities more resilient. They promote sustainable production, inclusivity and agricultural service provision for small and medium enterprises. They also work in market integration for smallholders, food security and nutrition, climate-responsiveness, and community development, in collaboration with farmers, miners, workers and local communities.

NAME OF ORGANIZATION / PARTNERS	CORE CAPACITY AND ROLE
World Cocoa Foundation (WCF)	WCF promotes a sustainable cocoa economy through economic, social and environmental development in cocoa-growing communities. It is organizing an industry commitment to end deforestation and forest degradation. The initiative will develop in consultation with the relevant cocoa producing country governments, farmers and farmer organizations, civil society organizations, development partners, and other stakeholders, measures to end deforestation and forest degradation, while improving the livelihoods of smallholder farmers working in the cocoa supply chain.
Produce Buying Company (PBC)	PBC is one of the biggest licensed cocoa buying companies (LBCs) in Ghana, and has the greatest geographical presence, being present in every village/society.
Olam	Established in 1994, Olam Ghana is one of the leading agri food companies in the country. Their Purpose is to 'Re-imagine Global Agriculture and Food Systems, and their Vision is to be the most differentiated and valuable global food and agri-business.
Tropenbos	TBG in Ghana works towards the sustainable management and restoration of the GCFRP landscape through inclusive decision making and sustainable incentives involving local communities, smallholder cocoa farmers, the government at all levels and the private sector.
Rainforest Alliance	The Rainforest Alliance is an international non-profit organization working at the intersection of business, agriculture, and forests to make responsible business the new normal. They are building an alliance to protect forests, improve the livelihoods of farmers and forest communities, promote their human rights, and help them mitigate and adapt to the climate crisis.
Partnership for forests	Partnerships for Forests catalyses investments in which the private sector, public sector and communities can achieve shared value from sustainable forests and sustainable land use.

NAME OF ORGANIZATION / PARTNERS	CORE CAPACITY AND ROLE
	By creating market-ready 'Forest Partnerships' that offer an attractive balance of risks and benefits for the private sector, public sector and communities, the programme aims to mobilise significant investment, principally from the private sector.
HMB	The HIA encapsulates all the designated Sub-HIAs and therefore connects all HIA communities as though a single harmonized landscape-wide governance and/or jurisdictional entity. Therefore, HMB is the apex decision-making body structure of the HIA governance structure and responsible for guiding and directing all HIA management decisions towards a common vision in the collective good of Sub-HIAs, Zones/CREMAs, CRMC and communities.

3.1 Coordination of Interventions/Activities at the HIA Level

While NRS directs and coordinates implementation, the actual implementation of priority activities in each HIA rely on a consortium of stakeholders (HIA Implementation Consortium Partners) who live, work, or have investments within the landscape, and have an interest in the area. The HIA landscape is managed by an HIA Governance Body made up of local land-users, landowners and traditional authorities who organize themselves into a government recognized Natural Resource Management (NRM) structure, like that of the CREMA (i.e., modified CREMA), which accords them the right to manage their natural resources for their benefit.

The Consortium and the HIA Governance Body put in place how best to coordinate all activities related to the programme in the HIA. The NRS and the HIA Consortium carry on a participatory process to build the HIA governance and implementation structure at each location. Following successful negotiation of HIA initiation, the programme supports the requisite steps to establish management boards, prepare HIA constitutions, and hold regular HIA governance meetings. Key decisions of the HIA Governance Board are to determine how best to make the transition to a climate-smart, no deforestation, sustainable cocoa production system in line with the development of a standard. Key activities involve landscape planning, zoning land use practices, approving CSC practices to be adopted by farmers in the HIA, financial planning and management

structures, and reaching agreements with the HIA CSC Consortium. Appropriate levels of communications with all stakeholders are achieved through durbars, local FM radio announcements and other media.

3.2 Integration of Stakeholders in the Implementation of Interventions/Activities through the HIA Governance Structure

The HIA is designed to work in collaboration with a formal Consortium of key stakeholders, including private sector cocoa companies, NGOs and government agencies, through an established HIA Implementation Committee with representatives from both the community based HIA Management Board and the Consortium on this committee (Figure 10). The landscape is divided into a series of sub-landscape HIAs (Sub-HIAs) which together cover the area of the whole HIA. Each sub-HIA will provide localized leadership and governance within defined boundaries which reflect divisional or sub-chiefs' jurisdictions and/or appropriate environmental/geographic boundaries. Key aspects of creating or supporting Sub-HIAs are determining the boundaries, the zoning of conservation areas and development areas, as well as the creation of sub-HIA and HIA byelaws and then a Management Plan. At the landscape level, all of the Sub-HIAs have representatives on an umbrella body—the HIA Landscape Management Board. This Board has a formal relationship with the Consortium and is advised by the highest level of Patrons from the Traditional Council.

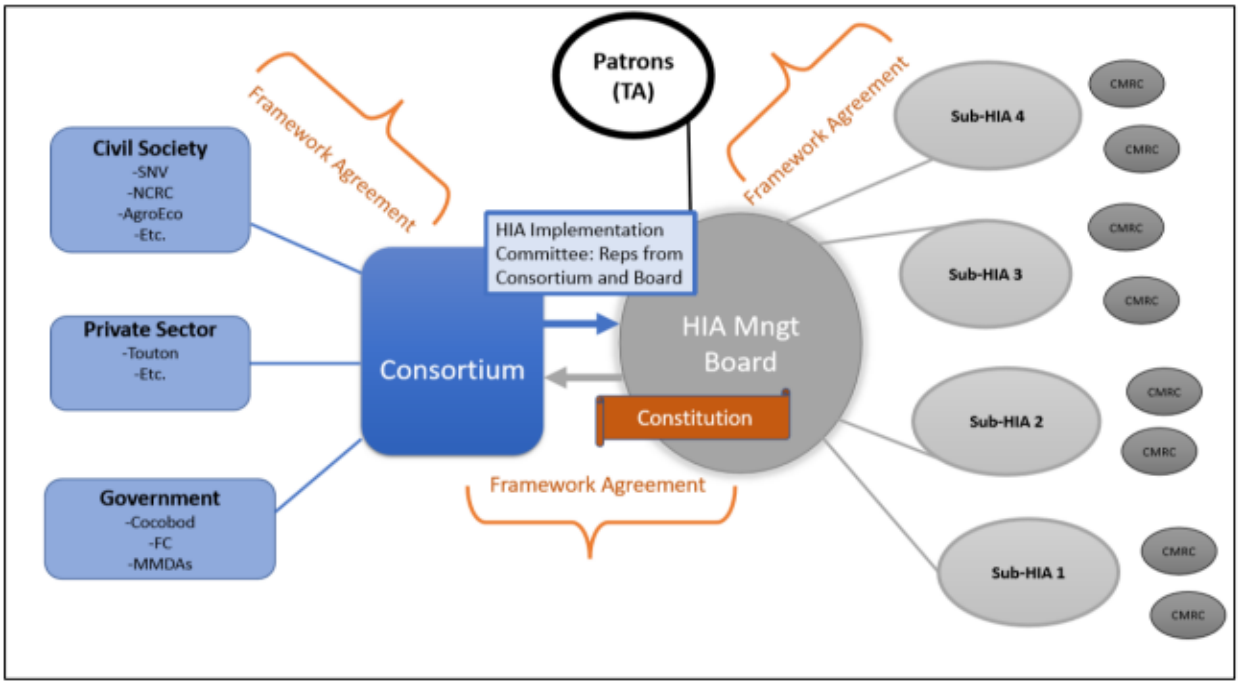


Figure 10: Collaboration within the HIA

The organization of communities for active REDD+ implementation is done at various levels (tiers) to ensure openness, inclusiveness, as well as participatory and transparent process. At the various levels (Community, CREMA/Zone, Sub-HIA and HIA), community-led leadership (Functional Units) is constituted to provide leadership. The Functional Units are the Community Resources Management Committees that provide leadership at the community level, CREMA Executive Committee that provide leadership at the CREMA level, Sub-HIA Executive Committee that provide leadership at the Sub-HIA level and HMB that provide overarching leadership at the HIA level.

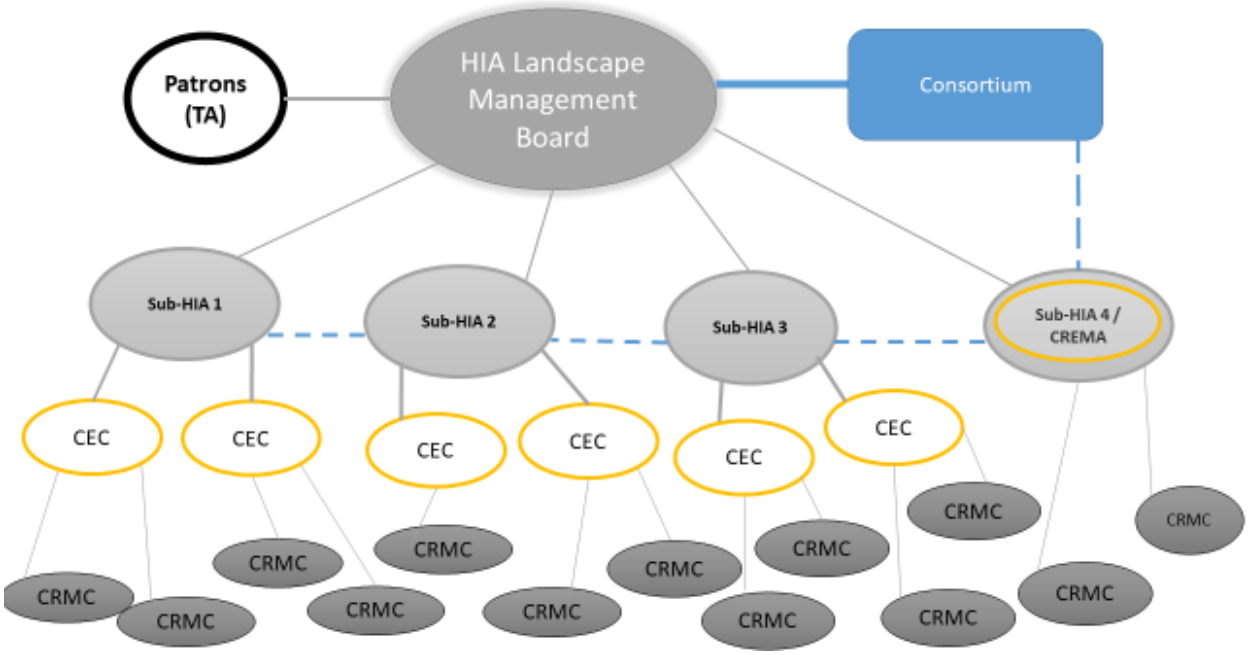


Figure 11: Tiers of the governance structure within the HIA

3.3 HIA functional units

3.3.1 Community Resources Management Committee (CRMC)

The Community Resources Management Committee (CRMC) is the basic unit of the HIA governance structure yet most crucial in that the strength of the entire structure depends on the quality of persons forming the CRMC who direct and mobilise farmers for action at the community level. Within each constituent community of the HIA, the CRMC has a representation of all identifiable interest groups. This structure is built on existing community governance and decision-making structures and is tasked with the implementation and/or enforcement of CREMA, SUB HIA and HIA management decision within the respective communities.

3.3.2 Community Resources Management Area (CREMA)

Community Resources Management Area (CREMA) or Zone is the next phase of the HIA governance structure designed to achieve a landscape-wide governance structure. CREMA is defined as a geographically defined area that includes one or more communities that have agreed to manage natural resource in a sustainable manner guided by constitution and enacted by-laws. In the CREMA/Zone formation, several CRMC communities are clustered together based on commonality of traditional boundaries, proximity, cultural or traditional ties. The term zone is conveniently used to denote the cluttered area/group that is worked on to achieve a CREMA status. This implies that areas designated as zones do not have bylaws but rather have rules and regulations to guide their operations owing to the relatively longer time and rigorous process involved in obtaining bylaws. At the Zonal level, elections are conducted to elect Zonal/CREMA Executives, known as the CREMA Executives, that have oversight responsibility over the CRMCs.

3.3.3 Sub-Hotspot Intervention Area (SUB-HIA)

In the HIA governance structure, the Sub-HIA is the third tier that encapsulates the CREMA and the adjoining Non-CREMA Area (NCA) which is sometimes referred to as zones. In other words, several CREMAs and NCA subsume under a given Sub-HIA. The tier covers an expanse area same as, or normally larger than a CREMA area. It is managed by a Sub-HIA Executive Committee (SHEC) with equitable representation of all its constituent groupings and is responsible for decisions of collective interest. Similar to the formation of the CREMA, several zones are grouped together to form the Sub-HIAs based on political-administrative district boundaries, sizes of their communities and their population. Each sub-HIA has a seven-member SHEC who are elected from the respective CREMAs and NCAs constituting that particular sub-HIA. The Sefwi Wiawso - Bibiani HIA has seven Sub-HIAs. Each sub-HIA is entitled to 1-2 patrons who are drawn from the traditional authorities or influential community members (Sub-Chiefs). They serve as advisers to the sub-HIA and are the final arbiters in traditional matters arising from activities within the sub-HIA. Patrons also act in making peace and unity in order to advance development within the sub-HIA.

3.3.4 Hotspot Intervention Area Management Board (HMB)

The HIA encapsulates all the designated Sub-HIAs and therefore connects all HIA communities as though a single harmonized landscape-wide governance and/or jurisdictional entity. Therefore, HMB is the apex decision-making body structure of the HIA governance structure and

is responsible for guiding and directing all HIA management decisions toward a common vision for the collective good of Sub-HIAs, Zones/CREMAs, CRMC and communities. The HMB was set up by a conscious consideration of creating space for a balanced representation of individuals from the Sub-HIA level to be well represented on the HMB. The selection of HMB representatives is subjected to a robust, competitive electoral process involving nominations, vetting, manifesto reading, and voting by a secret ballot.

The HMB, together with the HIA functional Units including the CRMCs, CECs, SHECs, are expected to play important roles at the landscape level including but not limited to the following:

- Commits to implement 'CREMA-type' landscape planning and management processes
- Commits to building local governance institutions to manage the cocoa landscape
- Commits to supporting farmers in the adoption of climate-smart cocoa practices, with attention to gender and youth
- Commits to participate in the identification of cocoa farms in the landscape including on-reserve
- Commits to participate in GCFRP activities within the landscape
- To educate communities on the importance of conservation of the natural and cultural resources and to stem further habitat degradation.

4.0 STAKEHOLDER ANALYSIS

4.1 Stakeholder Identification and Mapping

Stakeholder mapping provides adequate understanding of the position and relevance of each stakeholder when evaluated by the same key criteria and compared to each other and also helps in visualizing the often-complex interplay of issues and relationship. Key stakeholders identified included the traditional authorities, local governance institutions, forestry offices, agriculture development departments, cocoa companies, licensed buying companies (LBCs), farmer groups, civil society organizations (CSOs) and related sectors. These were categorized into five (5) major groups: (i) public sector agencies, (ii) private sector, (iii) traditional authority, (iv) Civil Society Organizations/Non-governmental Organizations and (v) community-based actors such as farmer associations and agro-commodity producers. According to the draft Asunafo Asutifi Management Plan, a stakeholder mapping analysis was done using Mendelow's Stakeholder Mapping Matrix (1991), otherwise called the power-interest matrix to identify stakeholders conflicting elements and determine their potential role, power, and influence in the landscape as far as the implementation of GCFRP activities in the HIA are concerned.

Table 4: Stakeholder Matrix Model Explained with Implication on Programme Implementation

No.	Category of Matrix	Explanation and Implication	Stakeholders in the HIA
1.	Low Interest and Low Power (LL) – Minimal Effort	• They are more likely to accept what they are told and follow instructions. • Can be largely ignored when considering project planning. • Ethically, it is considered that ignoring them may awaken their interest. • Monitor (Minimum Effort)	• Lands Commission • Office of the Administrator of Stool lands (OASL)
2.	High Interest and Low Power (HL)	• Should be duly considered during implementation phase. • Keep informed and not underestimated.	• Municipal and District Assemblies (MDAs) • Cocoa Forest Initiative Secretariat • Civil Society Organizations

		• Can lobby others to join forces to exert pressure	• Donor Partners
3.	Low Interest and High Power (LH) – Keep Satisfied	• Keep satisfied and remains dormant. • If they become more interested, they can easily become key players.	• Traditional Authority
4.	High Interest and High Power (HH) – Key Players/Participation	• Have high influence on programme implementation. • Could inhibit the achievement of project objectives. • Manage closely	• Forestry Commission • National REDD+ Secretariat • Ghana Cocoa Board • Ministry of Lands and Natural Resources • Ministry of Food and Agriculture • Private sector companies • Farmers and Farm-based Organization

The tool identified the National REDD+ Secretariat of the Forestry Commission, COCOBOD and the private sector (cocoa companies) as the three most important stakeholders as far as the implementation of the GCFRP is concerned. The tool also identified the traditional authority as stakeholder with a lot of influence that must be engaged always. Important stakeholder such as the local government, MoFA, CSO, CBOs, development agencies, Farmer-based organizations, are potential key implementation partners and these must be engaged actively for the successful implementation of the programme.

4.2 Public Consultations

Public consultations placed centrally to safeguards implementation of activities/interventions at both national and sub-national levels. Public consultations were organised through meetings, community engagements, trainings and workshops. A series of information sharing and consultative programmes were undertaken to enhance awareness of the program and ensure

that there is shared understanding of the critical roles of key stakeholders. Stakeholders consulted included Cocoa Private Sector actors', Multi-stakeholder Policy Actors. Legislators, MMDA's, NRWG, Traditional Authorities. A summary of public consultations that took place are detailed below:

Box 1: Public Consultation 1

Roundtable discussions on draft BSP for the GCFRP

As part of finalizing and validating the BSP for the GCFRP, roundtable discussions on the draft BSP were held on Friday 19th January, 2018 at the FC Auditorium, and Friday, 2nd March 2018 at the same venue. This round of discussions resulted in the finalization of the draft BSP towards National Validation.

Box 2: Public Consultation 2

Engagement and Sensitization of Safeguards Focal Persons

Between the periods 7th, 8th & 22nd February 2018, Safeguards Focal Persons (SFP) were sensitized and trained on key global, donor and national level safeguards requirements for REDD+ implementation. The SFPs were drawn from the Regional, District and Park offices of FSD and WD. 71 SFPs were convened and trained on the requisite safeguards requirements for REDD+ implementation at Anita Hotel, Kumasi. Opinions and recommendations were also solicited from participants with regards to how best to implement REDD+ activities.

Box 3: Public Consultation 3

Multi-stakeholder meeting on the implementation of the GCFRP

Subsequent to the signing of the joint framework for action on cocoa and forest initiative between the Government of Ghana and Private Sector actors in the cocoa industry on 17th November 2017 in Bonn (Germany), a multi-stakeholder meeting was held on the implementation of the GCFRP on Wednesday, 28th February 2018 at the Forestry Commission Board Room. The discussions centred on private sector initiatives within the Cocoa Forest Mosaic Landscape under the GCFRP. Stakeholders were requested to deliver a five (5) minute presentation on their initiatives in the landscape highlighting the location, objectives, key actions and the expected output.

Box 4: Public Consultation 4

Engagement of community members and other stakeholders

NRS engaged community members and other stakeholders in 10 districts within the 6 HIAs to sensitize them on REDD+ Safeguards in collaboration with CSOs within the landscapes. The opinions and recommendations of these stakeholders were also solicited. These engagements occurred in 10 forest districts across all the six Hotpot Intervention Areas (HIAs) Identified for the GCFRP. The districts are Sefwi Wiawso, Cape Coast (Kakum National Park Area), Kade, Bechem, Juaso, Goaso, Nkawie, Ho, Begoro and Juaboso. Participants were 850 consisting of 580 males (about 70%) and 270 females (representing about 30%). These landscape activities were done in active collaboration with some Civil Society Organizations in Ghana namely Civic Response, International Union for Conservation of Nature (IUCN) and HATOF Foundation.

Box 5: Public Consultation 5

Engagement on SIS and FGRM for REDD+ regional and district safeguards focal persons

The Climate Change Department (CCD) organized a two-day training workshop on the functions of Ghana's REDD+ SIS and FGRM at the Forestry Commission Training Centre (FCTC) in Kumasi from 19th - 20th June, 2018 for regional and district safeguards focal persons within the High Forest Zone of the GCFRP. The selected 71 Safeguards Focal Persons (SFPs) were trained on the functions of Ghana's REDD+ SIS and FGRM. Feedback and recommendations were solicited from the SFPs on where and how to improve the SIS and FGRM.

Box 6: Public Consultation 6

Engagement on Safeguards and monitoring exercise

To ensure a successful REDD+ implementation, there was the need to monitor and evaluate activities undertaken during the readiness phase and seek suggestions to effectively implement the REDD+ programme. A field team visited seven Forest/Wildlife districts which were; Kakum, Begoro, Kade, Sefwi-Wiawso, Juabeso-Bia, Nkawie, and Juaso. The objective of the field visit was to get feedback from stakeholders on the effectiveness of the safeguards capacity building workshop held in 2018 to achieve effective REDD+

safeguards implementation. Another objective was to go through pre-screening exercise of sub-projects under the GCFRP with Safeguards Focal Persons (SFPs) to identify potential environmental impact. The field visit commenced on 4th of March and ended on 15th March, 2019.

Box 7: Public Consultation 7

Stakeholder Engagement on Safeguards Implementation

32 Safeguards Focal Persons across the GCFRP operational area including SFP from the Sefwi Wiawso - Bibiani HIA were engaged on safeguards implementation in 2019. The engagement was to share experiences and perspectives on how SFP could deliver on safeguards mandates.

Box 8: Public Consultation 8

Consultative workshops to inform on tree tenure and benefit sharing plan for REDD+

7 consultative workshops conducted in Kakum, Begoro, Kade, Sefwi-Wiawso, Juaboso-Bia, Nkawie and Juaso.

Box 9: Public Consultation 9

REDD+ Awareness Creation and Sensitization of Stakeholders

Over 15 Awareness Creation and Sensitization events were undertaken including meetings with Executive Management Team (EMT), GCFRP Launch, Safeguards workshops, TV and Radio shows etc.

Box 10: Public Consultation 10

National stakeholder engagement meetings for the GCFRP

A two days national GCFRP stakeholders meeting was held on the premises of the Forestry Commission from 2nd – 3rd November, 2020. This meeting was specifically to sensitize stakeholders on the agreed percentage and commensurate benefits due them according to the BSP, explain the modalities of receiving payments, Upfront and Actual, update stakeholders on the rationale for the UAP and the utilization thereof, and discuss the GCFRP implementation planning and progress in context of meeting first monitoring report requirements.

Box 11: Public Consultation 11

Stakeholder engagement on alternative livelihood opportunities for local actors involved in GCFRP implementation

As part of the negotiated Upfront Advance Payment (UAP) of the Emission Reductions Payment Agreement (ERPA) between the International Bank for Reconstruction and Development (World Bank) and Government of Ghana, an activity outlined in the workplan was assessment of viable alternative livelihood options for landscape actors within the Ghana Cocoa Forest REDD+ Programme (GCFRP) area. A stakeholder engagement was conducted from 15th-18th December, 2020 in four (4) HIAs (Kakum, Sefwi Wiawso-Bibiani, Asunafo-Asutifi and Juaboso-Bia) with landscape actors on the selected livelihood support options and discussed conditions and criteria for selection of beneficiaries under the GCFRP results based programme.

Box 12: Public Consultation 12

Sub-national stakeholder engagement meetings -updates and discussions for enhancing GCFRP implementation

On the account of the finalized Benefit Sharing Plan (BSP) arrangements and upon the receipt of the Upfront Advance Payment (UAP) from the World Bank, the NRS deemed it fit to engage the stakeholders working within three of the HIAs, namely, Kakum, Wiawso-Bibiani and Juaboso-Bia HIAs. To this effect, stakeholders were sensitized on the BSP for the Ghana Cocoa Forest REDD+ Programme and updated on the Upfront Advance Payment (UAP). The meeting also provided equal opportunity to discuss implementation plan for the GCFRP and to build concerted-based actions for the way forward. This engagement took place from 19th – 27th November, 2020

Box 13: Public Consultation 13

CFI Landscape level supervision

As part of activities in setting up a functional Monitoring and Evaluation System for the Cocoa and Forest Initiative including data collection and reporting, a second round of landscape supervision was undertaken to follow up on data collection and receive feedback

on challenges encountered in three (3) HIAs (Asunafo-Asutifi, Juaboso-Bia, and Sefwi Wiawso-Bibiani) from 18th – 29th January, 2021.

Box 14: Public Consultation 14

Engagements on Alternative Livelihood Options for the Ghana Cocoa Forest REDD+ Programme within four HIAs

A second round of landscape engagements was undertaken from April 06 – 15, 2021 to present and consolidate the options of livelihood support for community beneficiaries within four Hotspot Intervention Areas namely; Juaboso-Bia, Sefwi Wiawso, Asunafo-Asutifi and Kakum. The discussion focused on the consolidated feedback from the first round of engagements which was undertaken from December 15-18, 2020 to prioritize selected livelihood options for implementation.

Box 15: Public Consultation 15

Engagement of landscape actors on farmer registration and REDD+ Safeguards

The Climate Change Directorate on April 19-23, 2021, embarked on Sub-National level stakeholder engagements with relevant stakeholders across four Hotspot Intervention Areas (HIAs): Kakum, Goaso, Juaboso and Sefwi Wiawso-Bibiani.

This was done to engender continual awareness creation and capacity development of local actors on the GCFRP, BSP as well as to solicit inputs from the stakeholders on farmer registration process.

5.0 INSTITUTIONAL SETUP AND RESPONSIBILITY FOR ENVIRONMENTAL AND SOCIAL SAFEGUARDS IMPLEMENTATION AND REPORTING

5.1 Implementing institutions

NRS has put in place a robust institutional arrangement for the implementation, monitoring and reporting of safeguards in close collaboration with EPA, the National Safeguards Working Group as well as partner organizations supporting the implementation of ER activities.

At the national level, Environment and Social Safeguards staff are recruited as part of the national level Project Management Unit (PMU). The PMU Safeguard Specialists are responsible for operationalizing all safeguards aspects of the GCFRP and overseeing and organizing all activities related to safeguards trainings, monitoring, and reporting within the program area. This team receives all of the safeguards information and data from the regional/district-level Safeguards Focal Points in order to review and further analyse the data as required, provide final verification, and where questions or gaps arise, work with the Regional/district level focal points to make corrections and improvements.

The national level PMU safeguards specialists play a key role in ensuring safeguards compliance and are further responsible for

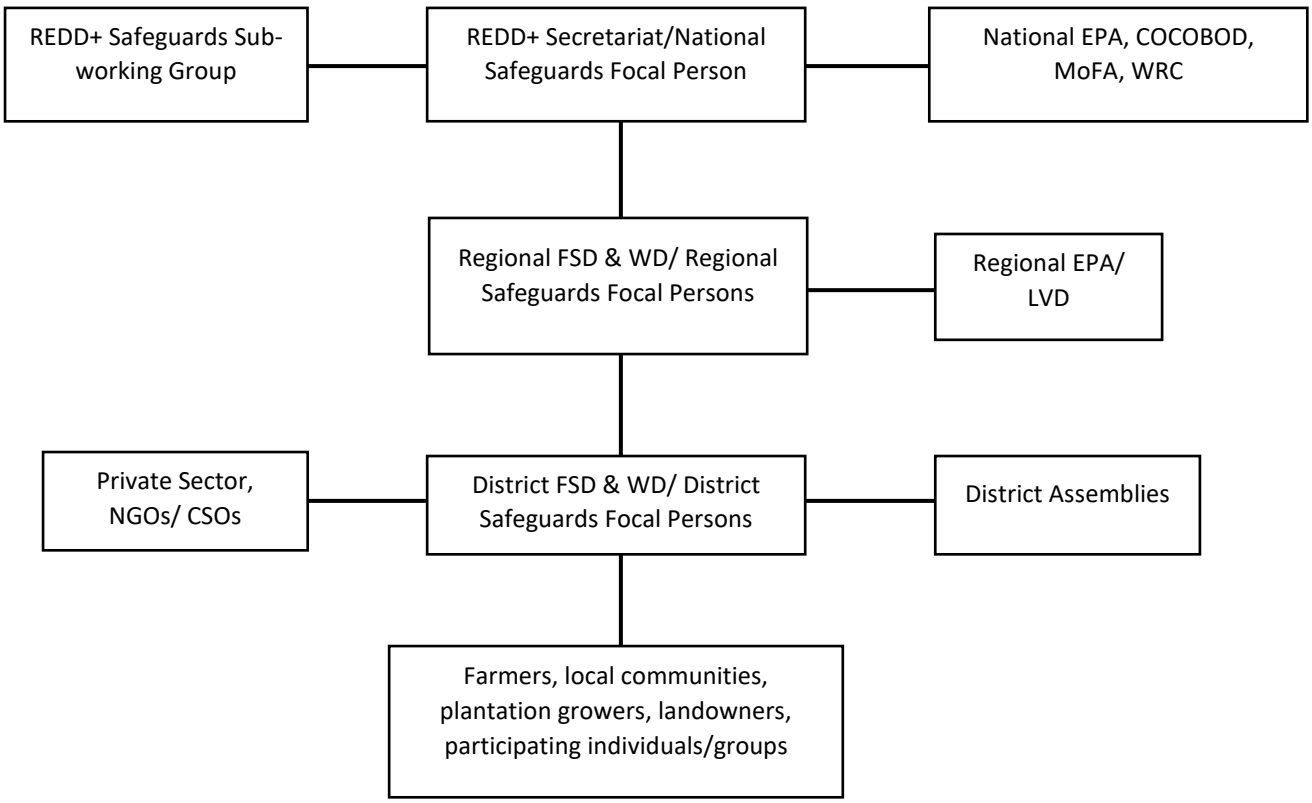
- Coordinating environmental and social safeguards across the HIAs;
- Providing leadership across the regional and district levels for the implementation of safeguards;
- Providing guidance and project level info and tools on safeguards for all stakeholders;
- Managing the environmental and social safeguard experts at ER program areas;
- Coordinating all safeguard activities with donors, implementing agencies and other potential investors; and
- Overseeing all environmental and social safeguard training and capacity building.

At the regional and districts levels, regional/district level Environmental and Social Safeguards Focal Points are in place. They:

- work closely with the national level NRS Environmental and Social Safeguards (ESS) Focal Points to ensure that all environmental and social safeguards issues are incorporated into Bid and specifications documents for all sub project types;

- ensure that safeguards issues are included as part of the training at District level and contractors invited to participate;
- draft safeguards report based on collated documents and reports from district activities as part of usual regional reporting on the project;
- are the first point of contact for the district in case of any challenging issues on project-related safeguards - land, environmental, safety and health and draw the FC ESS Focal Point's attention in case of lack of resolution;
- collaborate with relevant authorities (chiefs and elders) and other community members and facilitate the implementation of subprojects and implementation of any other safeguards related activity; and
- perform any other related activities that may be assigned by the NRS ESS Focal Point to whom s/he will report.

Below is the diagram illustrating safeguards implementation:



5.2 Collaborating Institutions

NRS supervises on-ground safeguards implementation including screening and monitoring of interventions/activities captured under the Ghana Cocoa Forest REDD+ Programme. This exercise is usually done collaboratively between NRS and other key partners such as the Environmental Protection Agency (EPA) and the HIA Management Board (HMB). The EPA being the statutory regulator of the environment provides technical support to complement the efforts of the NRS. The EPA undertakes training and sensitization programmes focusing on safe handling of agro-chemicals, safety issues, and protection of natural resources including forest, biodiversity and water. The EPA collaborates with key institutions like the District Assemblies and the Departments of Agriculture (under the Ministry of Food and Agriculture) in providing these services.

Also, the Ghana Cocoa Board being one of the proponents of GCFRP undertakes measures to safeguard adherence through Climate Smart Cocoa, training on safe use of agro-chemicals, compost application, training on approved/recommended agrochemicals, and on-farm biodiversity conservation. The private sector cocoa companies similarly undertake such activities as part of their commitment to safeguards implementation. The Civil Society Organizations (NGOs) /Non-Governmental Organization (NGOs), on the other hand, promote the uptake of safeguards implementation among farmers at the community level. The CSOs/NGOs regularly interface with farmers/ farmer groups on a number of capacity building activities on safe compliance. All these are done in collaboration with the Regional/District level Safeguards Focal Points.

These important contributions from the GCFRP partners result to many positive outputs including yield improvement leading to hunger and poverty alleviation, biodiversity improvement and forest protection, to mention a few.

5.3 Safeguards Information System (SIS)

As part of requirements from the UNFCCC for receiving results-based payment under REDD+, countries are expected to provide information on how they are addressing and respecting safeguards. In addition, the UNFCCC requirements also require that information on the implementation of the safeguards associated with REDD+ activities at sub-national and site levels

are collected and provided as evidence that the safeguards have been addressed and respected in practice. This would include demonstrating that safeguards measures, processes / procedures have been applied as well as monitoring the impacts of REDD+.

Although there are no official guidelines, Parties to the UNFCCC have agreed on some broad guidance on the characteristics of a SIS. It should:

- provide transparent and consistent information that is accessible by all relevant stakeholders and updated on a regular basis;
- be transparent and flexible to allow for improvements over time;
- provide information on how all the safeguards referred to in Appendix I to decision 1/CP.16 are being addressed and respected;
- be country-driven and implemented at the national level; and
- build upon existing systems, as appropriate.

Reliable safeguards information is important not only for achieving REDD+ in a sustainable manner but can serve possible broader sustainable development and other national policy, goals (as well as other international reporting obligations). For Ghana, which has multiple reporting commitments linked to relevant agencies/initiatives (e.g., Cancun, FCPF Carbon Fund, Green Climate Fund, national and other safeguards) an SIS that is able to provide information to all of them, is a cost-effective approach. A comprehensive review of policies/laws/ regulations has been undertaken as part of the development of the SIS (safeguards information needs of the SIS), specific indicators and criteria were developed to serve as a basis for implementing and monitoring safeguards (Policies, Criteria and Indicators (PCIs)).

In the case of the Cancun safeguards, Ghana has determined 'what type' of information is needed to demonstrate whether they are being addressed and respected. This has been done in accordance with Ghana's clarification of the Cancun safeguards. It is worth noting that the clarification specifies how the general principles outlined in the Cancun safeguards translate into specific principles and objectives that are to be followed and promoted in the context of the implementation of REDD+ interventions in Ghana, and which are anchored in the country's policies, laws and regulations (PLRs). The clarification, interpretation or description was an

essential step in the design of an effective safeguard governance framework for REDD+ for two reasons:

- It is one of the foundations of the Safeguard Information System (SIS) as it is key to determining the types of information that are to be gathered by the SIS; and
- It is central to the preparation of the summary of information, as it helps to determine the information that should be provided to the UNFCCC to demonstrate how the safeguards are being addressed and respected.

Ghana's approach to the development of safeguards Principles, Criteria and Indicators (PCIs) within the country's context involved the identification of key elements from existing mandatory and voluntary safeguards standards/frameworks such as the UNFCCC (Cancun) Safeguards and World Bank Operational Policies, that relate to the rights of local communities; inclusive participation of all relevant stakeholders; equitable sharing of benefits and risks; gender mainstreaming; Free, Prior and Informed Consent (FPIC); enhancement of biological diversity and ecosystem services, and other key issues that affect social and environmental performance of REDD+ programmes and/or projects.

An initial identification/drafting of PCIs was carried out by a technical team through a step-wise approach, after which the draft PCIs were subjected to stakeholder consultations at the local and national levels for feedback and finalization. The safeguard information needs of the SIS is outlined in the framework document of the SIS.

In line with this, a web-based REDD+ Safeguards Information System (SIS) has been developed to provide transparent and consistent information that is accessible by all relevant stakeholders. The web-based SIS platform provides information on how REDD+ Social and Environmental safeguards are being addressed and respected throughout implementation of the REDD+ programme. The web platform was developed after a series of engagements by stakeholders. The web platform was developed by the ICT department of FC with financial support from SNV Netherlands Development Organization under the project ''Operationalizing national safeguards for results-based payment from REDD+'' with funding from the German Government. The SIS web address is www.reddsis.fcghana.org. This SIS was launched officially on 21st December, 2020. The FC has demonstrated its dedication to boosting accountability, improving livelihoods

and enhancing ecosystem resilience. The launch positioned Ghana again for positive and ambitious climate mitigation and adaptation action.

Through this participatory process it was determined that Ghana's SIS will report on the information:

1. Cancun safeguards;
2. ESMF process, policy, and outcome indicators on risks, opportunities and how they are being addressed from the project to national levels;
3. GCFRP benefit sharing;
4. Co-benefits;
5. FGRM: Indicators on grievance redress (conflicts and resolutions);
6. Additional indicators that will be determined to support effective implementation, as required.

The functions of the SIS are closely linked to the institutional arrangements, as the functions may be carried out by a single, or multiple agencies/institutions. Core functions considered by Ghana are:

- **Collection**: process of collecting raw data through information systems and sources.
- **Compilation**: process of acquiring requested information from the relevant systems and sources.
- **Aggregation**: process of aggregating, into a central repository/database, the information provided by the relevant sources and systems for the purpose of analysis.
- **Analysis**: process of undertaking a qualitative assessment of the information in order to determine to what extent the safeguards are being addressed and respected.
- **Dissemination of information**: process of disseminating, both internally (national level) and externally (international reporting) through appropriate means (e.g., website, reports, meetings with relevant stakeholders, etc.)

The SIS is populated with information that covers all the activities being carried out by NRS and all proponents of the GCFRP. Stakeholders are continuously educated on how to access and navigate the SIS web platform. The web platform provides information on the Climate Change Directorate (NRS), its functions and mandate as well as the purpose of the SIS.

The information on the web platform has been categorized per HIA under the consultations section, with GCFRP area wide (National and Sub-national) reports and documents uploaded to the library page (publications and documents). Information that is HIA specific is uploaded and updated under the respective HIA as and when necessary. This includes data on the governance structure set up, the REDD+ activities undertaken and feedback from stakeholders. Information on the institutional arrangements under the GCFRP is also provided.

The programmes page has been populated with information on the various activities been carried out in the HIA, by which proponent of the programme and the timeframe. The FGRM page provides stakeholders with information on what FGRM is and its modalities. The page also has feedback in the form of videos from project proponents as well as various means of contact and reporting of feedback and grievances like hotlines and forms.

A SIS mobile application is been developed by the ICT department of FC with support from SNV. This mobile app is intended to be used for project screening and monitoring, providing information on GCFRP activities as well as FGRM reception and reporting.

6.0 COMPLIANCE WITH ENVIRONMENTAL AND SOCIAL SAFEGUARDS IMPLEMENTATION

A key activity under this programme is to clearly identify the associated potential environmental and social issues and concerns, both positive and negative. Thus, the potential impacts/risks of project/activities on various components of the environment and society in the HIA were identified and appropriate mitigation measures provided.

6.1 Approach to safeguards screening

The Environmental and Social Management Framework (ESMF) developed for the programme outlined potential impacts/risks on various components of the environment and society and provided appropriate measures. This subsequently led to the development of the Environmental and Social Management Plan (ESMP) and Environmental and Social Safeguards (E&S) screening checklist. The NRS with support from the World Bank developed the Safeguards screening checklist to screen activities under the GCFRP. All activities/ interventions under the GCFRP are screened against the checklist to identify any potential risks and the appropriate mitigation measures provided. This screening takes into account both social and environmental risks within the context of the programme.

The key project activities that were screened for potential risks and for which mitigation measures were provided comprise the following:

Component One: Forest Restoration

- Modified Taungya System (MTS)
- Enrichment Planting
- Trees on farm (ToF)

Component Two: Climate smart cocoa

- Cocoa Rehabilitation
- Cocoa Diseases and Pest Control Programme (CODAPEC)
- Cocoa HiTech (Fertilizer) Programme
- Free Hybrid Cocoa Seedling Distribution
- Artificial Hand Pollination
- Mass Cocoa Pruning

Component Three: Additional livelihoods Activities/Interventions

- Train and promote economically viable and environmentally sound on-farm income diversification options:
    - Vegetable farming
    - Bee-keeping
    - Animal husbandry

6.2 Approach to the Safeguards Monitoring

Monitoring was done to ensure / verify ESS compliance under these activities. Compliance with ESS implementation is done in two parts, namely:

a) Addressing Safeguards: that is, confirming existence of National legislative instruments, policies and measures on REDD+ Safeguards. Addressing REDD+ Safeguards could also involve National Policy Reforms that aims at reducing/ mitigating social, environmental, or economic risks from REDD+ programs/project implementation.
b) Respecting Safeguards: relating to activities undertaken to ensure that program activities triggering/ relating to safeguards requirements are being adhered to, including screening of program/project activities and outputs for risks and pre-determining measures to forestall/mitigate the risks.

6.3 Safeguards compliance of legislature and policy reform

The GCFRP is implementing an integrated set of activities (land use, policy reform on tree tenure, climate smart cocoa, community-based livelihoods, etc.) aimed at empowering local farming communities by amplifying their voice and agency in the planning, implementation, and monitoring of program activities. This program is building on the long tradition of social forestry in Ghana whereby CREMA has long since been established for the management of natural resources. To enhance greater inclusion and active participation, the HIA consortium has signed contracts (Addendum to the Framework Agreement) with each farmer or via farmer groupings or associations and has begun the registration of all committed cocoa farmers. Furthermore, a Farmers Contract is signed between the farmer, the HIA Governance Board and the licensed buying company consortium for future purchase. All registered cocoa farmers receive a photo ID card, an executed contract and regular training. Each HIA CSC Consortium has put together a farmer engagement package that gives farmers access to the agronomic, economic and knowledge resources to be able to achieve and maintain substantial yield increases. The engagement package includes farmer's access to:

- hybrid cocoa seeds, seedlings, or other types of planting material that are recommended under the CSC Good-Practice Guidelines;
- fertilizer (organic or inorganic) and pest/disease management products so that they can reduce losses and increase productivity on farm;
- technical extension and training opportunities to enable them to understand and follow the CSC Good-Practice Guidelines, improve their practices, and increase yields;
- professionalization services or business training opportunities so that interested farmers can realize and maximize benefits from yield increases through improved record keeping and financial literacy, enhanced professional capacity, and more detailed planning of their farm management (Farmer Business School (FBS));
- credit facilities to support their farming practices and management decisions, and to an insurance product that will reduce the considerable risk of losses associated with changing rainfall patterns and temperatures; and
- shade tree planting material and promotion of assisted natural regeneration and maintaining mature shade trees.

6.4 Tree tenure

Tree tenure is understood to refer to the bundle of rights over tree and tree products, each of which may be held by different people at different times. These rights include the right to own, inherit, dispose, use and exclude others from using trees and tree products. The concept of benefit-sharing refers to specific forms of responsibility to direct returns from the exploitation of natural resources, be they monetary or non-monetary, to various actors in the activity and the local communities, in recognition of their rights, roles and responsibilities in the activity.

The various national afforestation programs invest huge capital in creating forest estates with government, private sector, and community partnerships. However, most analyses of the underlying challenges to achieving legality in the management of off-reserve forest resources in Ghana and sustainable forest management in general conclude that 'existing tree tenure regimes is largely regarded as a disincentive to sustainable forest management' and inadequacies in the legislation and/or misinterpretations of the very complex texts relating to tree tenure and benefit sharing are at the root of the problem. Some major safeguards implications of this includes:

- Tree tenure arrangements for naturally occurring forest trees outside forest reserves where the farmers are not entitled to economically benefit from the revenue that accrue from harvesting the trees. This is a great disincentive to encouraging shaded cocoa farming systems and in broader agro-forestry systems.

6.4.1 Mitigation measures

Under the Forestry Component of the Natural Resources and Environmental Governance Technical Assistance (NREG TA), the Ministry of Lands and Natural Resources (MNLR) engaged the services of a firm to help design options for tree tenure regimes with accompanying benefit sharing mechanisms in Ghana in consultation with the FC and a wide range of stakeholders. The result of this work is expected to contribute significantly to Ghana's drive at halting deforestation, enhancing its forest estate and promoting good forest governance.

The major tree management regimes considered in this exercise are based on four main categories of arrangements viz: Naturally occurring trees on-reserve; Naturally occurring trees off-reserve; Planted trees on-reserve; and Planted trees off-reserve. Tree tenure reform and fair benefit sharing reforms are anticipated in forest and wildlife policy and this study is part of the effort by the MLNR to give currency to the policy intentions. Current tree tenure and benefit sharing are, however inadequate, based on statutory legislation and/or customary laws.

Based on synthesis of the views of various stakeholders and their preferred options for tenure and benefit sharing reform, recommendations have been made on the optimal reform options for the various tree management regimes identified. Recommended reforms, which are essential to the overall success of the programme identified through the assessment of Policies, Laws and Regulations (PLRs) and their relation to safeguards requirements include:

- Passage of the Wildlife Resources Management Bill which will support effective implementation of the 2012 Forest and Wildlife Policy.
- Policy reform on tree tenure
- Policy reform on cocoa farm inputs
- Policies to address carbon transaction rights and benefit-sharing arrangements

While efforts are still underway to put in place land-use management plan and tree tenure policy reform, the Feedback and Grievance Redress Mechanism (FGRM) that has been operationalized under the GCFRP addresses issues related to these as much as possible. Another related safeguards issue identified within the GCFRP Landscape is the absence of a comprehensive national land-use plan for the country. Though the Land Use and Spatial Planning Act 2016 provides a general framework for the development of land use plans, the Act does not specifically address forested areas or agricultural lands as the focus is skewed towards urban and peri-urban planning.

As a form of mitigation, the Forest Reserve Areas are being protected against encroachment by expansionist agriculture as well as against illegal harvesting of trees. The Forestry Commission has trained personnel to patrol the forest reserve areas. In Off-Reserve areas, extension services being provided by Agric and Cocobod extension officers are intensified and advocacy for intensification is being made as well as capacity building regarding Climate-Smart Cocoa practices are being done to reduce further deforestation outside forest reserves for agricultural purposes. These extension services as well as protection of forest is serving as a short to medium term measure whilst engagement with the Ministry of Lands and Natural Resources and the Land Use and Spatial Planning Department to elaborate clear Land Use Plan for Forest Areas.

6.5 Tree registration

As agroforestry practices are being introduced to cocoa communities, trees from different species are planted on farms. Registering these trees is critical as it give farmers tree ownership and benefit financially from any revenue generated from their sale. Also registering planted trees provides farmers rights of alienation such that, should their registered cocoa tree get destroyed during the felling of economic shade trees, they will receive compensation from the timber merchant. To mitigate this action, Ghana's MLNR, along with FC, created a tree registration form to facilitate tree registration process. The cocoa and chocolate-producing companies undertook a first-of-its-kind initiative step to digitize this form into an innovative mobile application – with capability to work both on and offline. With the many sensitizations and capacity building on forest restoration, protection of existing trees and incorporating trees on farms, a major risk is the non-registration of most farmer planted trees. This in part reduces farmer confidence and trust in the rights and benefits from tree tenure being promised. Thus, the expeditious actions

towards national validation and rolling out of tree registration modalities is crucial to the attainment of expected outcome.

6.6 REDD+ Gender mainstreaming

Gender considerations are essential to REDD+. Gender sensitive initiatives have the potential to become a conservation, poverty reduction and climate mitigation strategy. Thus REDD+ projects are designed and implemented with a gender-sensitive perspective to be efficient and effective in decreasing the gender gap. FC partnered with the International Union for the Conservation of Nature (IUCN), to develop a roadmap that would guide the design and implementation of a gender-sensitive REDD+ strategy in Ghana, which recognizes and protects the rights and interests of women and other vulnerable groups. The National REDD+ Gender Sub-Working Group (GSWG) was established as a multi-stakeholder gender advocacy group to spearhead the gender mainstreaming process and provide technical support in the review of REDD+ documents and processes to ensure gender sensitivity, as well as capacity building at the grassroot level. The GSWG was convened and subsequently trained in Accra, on Climate Change, REDD+ and its status in Ghana, the links between gender, REDD+ and safeguard issues and the importance of mainstreaming gender considerations into the REDD+.

The GSWG also liaises with decentralized institutions such as the district offices of key Government Agencies, District Assemblies, Traditional Authorities, Local Communities and Civil Society Organizations to implement actions at the sub-national level. The members of the GSWG who include representatives from different Ministries, Departments and Agencies (MDAs), Traditional Authorities, Local Communities, Academia, Private Sector and NGO/Civil Society Organizations also developed an operational plan and budget for the implementation of actions in the Gender and REDD+ Road Map.

In all activities undertaken by NRS, it is ensured there is at least 40% women representation. These include meetings, workshops, trainings and even constitution of committee members. The various structures that make up the HIA governance structure also ensure gender equity through free and fair processes. Per the Gender Action Plan:

- Training materials on sustainable management of forests and REDD+ are developed to be accessible to women.

- Training programmes (workshops, consultative meetings) on gender and REDD+ issues for implementing partners working on REDD+ issues are organised as part of sensitisation and education.
- NRS has identified and documented good practices and actions in other forest management / conservation initiatives that have fully and effectively integrated women and gender considerations.
- The capacity of local women in project areas are built to actively participate in REDD+ activities.
- Equal access and control are given to women and men in relation to tools, equipment, technology and resources needed to engage in REDD+ activities.
- NRS identified potential risks of REDD+ implementation on rights and livelihoods (with particular attention to land and natural resource use; full and effective consultation and participation; fair access to information, education to enable decision-making and consent; and equitable distribution of benefits).
- Local women are informed of their rights, safeguards and their capacity built to use FGRM or protocols systems if safeguards are violated.

6.7 Uptake of Safeguards in REDD+ Programmes/Activities at the HIA Level

Generally, the mix of projects/interventions being implemented in the Sefwi Wiawso – Bibiani HIA have contributed to many transformational positive impacts with minimal risks/impacts. This attests to the fact that stakeholders have taken safeguards adherence extremely seriously following the capacity building/training on safeguards in project implementation. Additionally, community members interacted with during the monitoring exercise attested to the numerous trainings / capacity building opportunities they have received from various stakeholders on several topics. The topics include climate-smart cocoa, farmer business school, safe handling of agro-chemicals, proper disposal of agrochemicals, compost/organic fertilizer application, buffer zone protection, wildlife and forest protection, to mention a few. Again, it came to light that there has been deep involvement of local traditional systems and decision-making processes throughout REDD+ related activities fostering many impacts including community ownership and acceptance of the Ghana emission reduction programme. The rights and knowledge of local communities were observed to have been strictly respected including taboos and totems, experience/knowledge in cocoa farming and traditional conflict resolution mechanisms. It

worthwhile to share that gender has been progressively integrated and mainstreamed in project implementation by the project proponents.

Again, activities of some key partners including private sector cocoa companies have promoted uptake on safeguards actions at the landscape level. For example, key safeguards information in the form of flyers and visual aids covering several topics including list of endangered species, list of approved and not approved agro-chemicals, safe handling of agro-chemicals, buffer zone protection, soil management, biodiversity conservation and protection among others have been displayed in vantage places to promote awareness and visibility on safeguards among farmers (see annex section).

Furthermore, the non-carbon component of the emission reduction programme has been much emphasized. Greater number of communities have been supplied with farm inputs such as cocoa and shade tree seedlings free of charge to enhance contributions towards emission reductions and yield enhancement.

The adherence of the safeguard in the REDD+ implementation in the HIA has helped to maximize both environmental and social benefits with some examples below:

- improved vegetative or tree cover in the project communities
- improved environmental integrity of the project landscape
- Lead to livelihood improvement of beneficiary communities
- improved resilience to climate change
- Encourage knowledge sharing among beneficiaries and communities
- Increased livelihood and economic activities of beneficiary communities
- Enhanced health standards
- Good time management for productive activities
- Reduced conflicts and enhance peaceful co-existence amongst community members
- Accelerated development of communities
- Improved income for farmers

Table 5: Results of monitoring of activities in the HIA

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
Modified Taungya System	Generation of smoke from burning of biomass (debris and logs) during land preparation	4.01 Environmental Assessment 4.04 Natural Habitats 4.36 Forests	• Biomass generated was used as firewood and also as pegs • Minimized burning of biomass as much as possible • Workers were required to wear suitable Personal Protective Equipment (PPE) as appropriate • A grievance mechanism was established to ensure any complaints / comments regarding the Project is received and responded to in a timely manner, providing solutions and taking corrective measures as appropriate	• Site observation • Records of PPEs provided • FGRM operationalized	
	Exposure of workers / communities to smoke generated during land preparation		• Minimized burning of biomass as much as possible	• Site observation • Records of PPEs provided	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			• Fire was used only in situations where this was effective and least environmentally damaging • Workers were required to wear suitable Personal Protective Equipment (PPE) as appropriate (boots and protective clothes) • A grievance mechanism was established to ensure any complaints/comments regarding the Project is received and responded to in a timely manner, providing solutions and taking corrective measures as appropriate. Practically, recorded grievances were checked at various points including the district offices of Forestry Commission and COCOBOD.	• FGRM operationalized	
	Reverse gains from carbon sequestration –		• Minimized burning of biomass as much as possible	• Site observation	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
	adding carbon into the atmosphere		• Fire was used only in situations where this was effective and least environmentally damaging		
	Risks of modification of natural habitat		• Environmentally sensitive sites and unnecessary exposure or access to sensitive habitats were avoided • Sensitive sites with high erosion risk were identified and were not cultivated. Vegetation of such areas was maintained to help control erosion as well as to ensure soil stability • Planting was designed to include both exotic and indigenous plants in the right proportions and positions • Organic farming practices (planting nitrogen-fixing species, agroforestry practices, composting, application of organic fertilizers) were implemented and	• Site observation	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			this helped minimize the use of inorganic fertilizers and herbicides that are major contributors to soil and surface water quality deterioration • Labour-intensive approach using simple farm tools like hoes and cutlasses was employed.		
	Impacts on flora and fauna		• Environmentally sensitive sites and unnecessary exposure or access to sensitive habitats were avoided • Planting was designed to include both exotic and indigenous plants in the right proportions and positions • Organic farming practices (planting nitrogen-fixing species, agroforestry practices, composting, application of organic fertilizers) were implemented and this helped minimize the use of inorganic	• Site observation • Training report	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			fertilizers and herbicides that are major contributors to soil and surface water quality deterioration • Measures to correct low soil pH were implemented as much as possible: - Farmers were assisted to avoid the use of acidifying nitrogen-based fertilizers where soil pH was low as part of the regular community-level trainings conducted by COCOBOD Extension Officers as well as other institutions such the Department of Agric and the Environmental Protection Agency (EPA) - Efficient fertilizer use considers the prescribed dosage, period or timing and intervals of application, and release properties		

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			• Labour-intensive approach using simple farm tools like hoes and cutlasses was employed.		
	Risks of Accelerated erosion		• Sensitive sites with high erosion risk were identified and were not cultivated. Vegetation of such areas was maintained to help control erosion as well as to ensure soil stability • Implementation of standard erosion and sediment control best management practices	• Site observation	
	Risks of Planting single tree species		• Planting was designed to include variety of both exotic and indigenous plants in the right proportions and positions • Planned and strategized the procurement of diversified seedlings	• Site observation • Records of seedlings supplied	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
	Alterations in local natural water cycles/ hydrology		• Promotion of buffer zones along the local streams to ensure their integrity and protection of other aquatic life forms. The buffer reserves serve as natural filters for surface runoff from the planting areas. The reserves also play a major role in protecting the banks of the waterways from channel erosion. • Implementation of standard erosion and sediment control best management practices ensured throughout the project cycle.	• Site observation	
	Risks of pollution / contamination of water bodies (herbicides, pesticides, insecticides, weedicides, ash, dust)		• The use of agrochemicals including inorganic fertilizers, weedicides and pesticides was reduced as much as possible. Where possible, mechanical weed control was considered instead of the use of weedicides.	• Site observation • Number of farmers trained • Training report	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			• Promotion of buffer zones along the local streams to ensure their integrity and protection of other aquatic life forms. The buffer reserves serve as natural filters for surface runoff from the planting areas. The reserves also play a major role in protecting the banks of the waterways from channel erosion. • Farmers trained and provided with tools to create buffer of no-spray zones in farms with close proximity to water body(s) • Farmers whose farms located along water bodies were provided with technical assistance to leave a vegetation cover as a buffer zone along the water bodies. • Implementation of standard erosion and sediment control best management practices		

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			• Organic farming practices (planting nitrogen-fixing species, agroforestry practices, composting, application of organic fertilizers) were implemented and this helped minimize the use of inorganic fertilizers and herbicides that are major contributors to soil and surface water quality deterioration		
	Impacts of Poor site selection		• Ensured good site selection taking into consideration condition score, natural regeneration potential and basal area	• Site observation	
	Risks of Improper disposal of chemical containers		• The use of agrochemicals including inorganic fertilizers, weedicides and pesticides was reduced as much as possible. Where possible, mechanical weed control was considered instead of the use of weedicides	• Training report • Awareness creation materials displayed • List of approved and unapproved agrochemicals shared	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			• Complied with the requirements of applicable waste management regulations for the management of all waste generated as a result of the project activities • Education and sensitization on the proper disposal of hazardous waste and material		
	Risks of disposal of polybags		• Education and sensitization on the proper disposal of polybags	• Site Observation	
	Potential Land allocation conflicts		• Forest Management plan was prepared for all sites to also reflect community expectations • Technical assistance offered in land allocation • A grievance mechanism was established to ensure any complaints / comments regarding the Project is received and responded to in a timely manner, providing	• Forest Management plan • FGRM operationalized • On-site verification with farmers	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			solutions and taking corrective measures as appropriate		
	Inadequate engagement with local communities		• Stakeholder consultations were done to identify best practices and guide implementation in partnership with traditional authorities. • Forest Management plan was prepared for all sites to also reflect community expectations • Equal opportunity was given to all abled bodied persons who wanted to participate	• Engagement report • Forest Management plan	
	Poor records of primary supply and contract workers		• Proper records of workers are kept and updated as appropriate	• Records of workers	
	Unfair allocation of more lands to families/persons/groups		• Equal opportunity was given to all abled bodied persons who wanted to participate • A grievance mechanism was established to ensure any complaints / comments	• On-site verification with farmers • FGRM operationalized	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			regarding the Project is received and responded to in a timely manner, providing solutions and taking corrective measures as appropriate		
	Failure to honour MTS benefit arrangement		• Ensured engagement of MTS beneficiaries on the right percentages due them.	• Records of engagement	
	Low percentage of women accessing lands		• Equal opportunity was given to all women who wanted to participate	• Records of farmers	
	Unavailability and no/limited use of personal protective equipment		• Workers were required to wear suitable Personal Protective Equipment (PPE) as appropriate. • Education and sensitization were done on the need for and proper usage of PPEs	• Records of PPE supply • Confirmation with workers	
	Limited awareness creation programs on health and safety including chemical handling.		• Design and implementation of awareness creation programs to educate persons on protecting workers' health and safety including paying attention to chemical handling was done	• On-site verification with farmers • Confirmation with workers	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			• Workers were required to wear suitable Personal Protective Equipment (PPE) as appropriate.		
Enrichment Planting	Improper disposal of polybags	4.01 Environmental Assessment 4.04 Natural Habitats 4.36 Forests	• Education and sensitization on the proper disposal of polybags	• Site Observation	
	Poor record keeping of primary supply workers		• Employment and other opportunities were given to local communities as much as possible. • Proper records of workers are kept and updated as appropriate	• Confirmation with communities	
	Poor record keeping of contract workers				
	Unavailability and no/limited use of personal protective equipment		• Workers were required to wear suitable Personal Protective Equipment (PPE) as appropriate. • Education and sensitization were done on the need for and proper usage of PPEs	• Confirmation with communities • Site observation	
	Limited awareness creation programs on health and safety		• Design and implementation of awareness creation programs to educate persons on protecting workers' health and safety	• Confirmation with communities	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			including paying attention to chemical handling was done • Workers were required to wear suitable Personal Protective Equipment (PPE) as appropriate.	• On-site verification with farmers	
	Delay in payment of contract workers		• Ensured workers were paid on time	• Records of payments	
Trees on Farms	Disturbance of flora and fauna	4.01 Environmental Assessment 4.04 Natural Habitats 4.09 Pest Management 4.36 Forests	• Environmentally sensitive sites and unnecessary exposure or access to sensitive habitats were avoided • Planting was designed to include both exotic and indigenous plants in the right proportions and positions • Organic farming practices were implemented and this helped minimize the use of inorganic fertilizers and herbicides that are major contributors to soil and surface water quality deterioration	• Site observation	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			• Labour-intensive approach using simple farm tools like hoes and cutlasses was employed.		
	Planting single tree species		• Planting was designed to include variety of both exotic and indigenous plants in the right proportions and positions • Planned and strategized the procurement of desirable and diversified seedlings	• Site observation • Records of seedlings supplied	
	Planting/ keeping shade tree with undesirable characteristics e.g., Disease prone shade trees, host of pest and diseases, easily broken branches etc.				
	Planting inadvisable shade tree species e.g., invasive species				
	Planting more trees than required leading to over-		• Farms were mapped to determine farm sizes and site/area specific conditions to avoid over supply of seedlings		

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
	shadowing of cocoa farms.		• Thinning out was done to adjust the number of trees on the farms		
	Limited understanding on shade tree management.		• Education/ adequate trainings were provided to farmers	• Training report	
	Destruction from harvesting of timber resources on farm		• A grievance mechanism was established to ensure any complaints/comments regarding the Project is received and responded to in a timely manner, providing solutions and taking corrective measures as appropriate • Appropriate sanctions were applied on offenders including fines and jail sentences	• FGRM operationalized • Reports	
	Failure to register farmers		• Records of farmers are kept	• Records of farmers	
	Limited awareness creation on health and		• Design and implementation of awareness creation programs to educate persons on protecting workers' health and safety	• Training report • On-site verification with farmers	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
	safety including tools and equipment handling		including paying attention to chemical and equipment handling was done • Workers were required to wear suitable Personal Protective Equipment (PPE) as appropriate		
	Unavailability and no/limited use of personal protective equipment		• Workers were required to wear suitable Personal Protective Equipment (PPE) as appropriate. • Education and sensitization were done on the need for and proper usage of PPEs	• Records of PPE supply • Training report	
Climate Smart Cocoa	Exposure of local folks (farmers) to chemicals during and after application of agrochemical on cocoa farmers.	4.01 Environmental Assessment 4.04 Natural Habitats	• Workers were required to wear suitable Personal Protective Equipment (PPE) as appropriate. • Education and sensitization were done on the need for and proper usage of PPEs • The use of agrochemicals including inorganic fertilizers, weedicides and pesticides was reduced as much as	• Records of PPE supply • Training report	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
		4.09 Pest Management	possible. Where possible, mechanical weed control was considered instead of the use of weedicides.		
	Generation of fumes during cutting down of diseased or over-aged cocoa trees.	4.36 Forests	• Minimized burning of biomass as much as possible • Fire was used only in situations where this was effective and least environmentally damaging • The use of agrochemicals including inorganic fertilizers, weedicides and pesticides was reduced as much as possible. Where possible, mechanical weed control was considered instead of the use of weedicides.	• Site observation • Records of PPEs provided	
	Impacts on flora and fauna		• Environmentally sensitive sites and unnecessary exposure or access to sensitive habitats were avoided	• Site observation	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			• Planting was designed to include both exotic and indigenous plants in the right proportions and positions • Organic farming practices (planting nitrogen-fixing species, agroforestry practices, composting, application of organic fertilizers) were implemented and this helped minimize the use of inorganic fertilizers and herbicides that are major contributors to soil and surface water quality deterioration • Labour-intensive approach using simple farm tools like hoes and cutlasses was employed.		
	Land clearing and vegetation loss at rehab farms		• Organic farming practices (planting nitrogen-fixing species, agroforestry practices, composting, application of organic fertilizers) were implemented and	• Site observation	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			this helped minimize the use of inorganic fertilizers and herbicides that are major contributors to soil and surface water quality deterioration • Labour-intensive approach using simple farm tools like hoes and cutlasses was employed. • Felled trees and cleared under- brushes were chipped and formed into windrows and allowed to decompose and/or used as pegs for planting		
	Risks of accelerated erosion		• Sensitive sites with high erosion risk were identified and were not cultivated. Vegetation of such areas was maintained to help control erosion as well as to ensure soil stability	• Site observation	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			• Implementation of standard erosion and sediment control best management practices		
	Risks of pollution / contamination of water bodies with herbicides, pesticides, insecticides, weedicides, ash, dust)		• The use of agrochemicals including inorganic fertilizers, weedicides and pesticides was reduced as much as possible. Where possible, mechanical weed control was considered instead of the use of weedicides. • Promotion of buffer zones along the local streams to ensure their integrity and protection of other aquatic life forms. The buffer reserves serve as natural filters for surface runoff from the planting areas. The reserves also play a major role in protecting the banks of the waterways from channel erosion.	• Site observation • Training report	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			• Farmers trained and provided with tools to create buffer of no-spray zones in farms with close proximity to water body(s) • Farmers whose farms located along water bodies were provided with technical assistance to leave a vegetation cover as a buffer zone along the water bodies. • Implementation of standard erosion and sediment control best management practices • Organic farming practices (planting nitrogen-fixing species, agroforestry practices, composting, application of organic fertilizers) were implemented and this helped minimize the use of inorganic fertilizers and herbicides that are major contributors to soil and surface water quality deterioration		

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
	Risks involved with the harvesting of timber resources		• A grievance mechanism was established to ensure any complaints / comments regarding the Project is received and responded to in a timely manner, providing solutions and taking corrective measures as appropriate • Appropriate sanctions were applied on offenders including fines and jail sentences	• FGRM operationalized	
	Cultivating cocoa without adherence to the buffer zone policy		• Farmers trained and provided with tools to create buffer of no-spray zones in farms in close proximity to water body(s) • Farmers whose farms are located along water bodies were provided with technical assistance to leave a vegetation cover as a buffer zone along the water bodies. • Technical officers and farm inspectors sampled and visited farms to check compliance	• Training report • Site observation	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
	Increase in pests and disease due to too much shade and undesirable shade trees		• Producers (farmers) trained on pruning techniques to reduce unnecessary shade • Producers (farmers) trained to control pest using the Integrated Pest Management (IPM) techniques to use only approved crop protection products for all other crops fields.	• Site observation • Training report	
	Involve the use of unapproved/ not recommended agrochemicals (weedicides, pesticides, insecticides etc.)		• Raised awareness on the list of approved agro-inputs and the list shared/pasted at vantage points for public viewing	• Confirmation with communities • List of approved and unapproved agrochemicals shared	
	Over-use of agro-inputs such as fertilizers and agro-chemicals.		• The use of agrochemicals including inorganic fertilizers, weedicides and pesticides was reduced as much as possible. Where possible, mechanical	• Training report • List of approved and unapproved agrochemicals shared	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			weed control was considered instead of the use of weedicides. • Education and sensitization were done on the proper use and dosage of agro-inputs		
	Use of fire during land preparation		• Fire was used only in situations where this was effective and least environmentally damaging • Workers were required to wear suitable Personal Protective Equipment (PPE) as appropriate.	• Site observation • Records of PPEs provided	
	Limited and/or untimely supply of cocoa seedlings		• Seedlings were supplied on time to meet onset of reliable rainfall • Seedlings were sourced within close proximity/catchment area	• Records of seedlings supply	
	Establishing new farms cocoa farms within forest reserves.		• Admitted farmers that expanded beyond allowed limits were made to return to the permitted areas only	• Engagement/training Reports • Records of admitted farms	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			• District Assembly by-laws used to support the conservation of dedicated forests and to sanction encroachment • Farmers trained and encouraged to involve in alternative livelihood programs to prevent the risk of expansion in to protected areas.	• DA by-laws	
	Generation of hazardous waste such as arboricides, herbicides, weedicides, and pesticides.		• Mass sprayers who spray agro-chemicals for farmers have been cautioned and educated on proper disposal of chemical containers after use • Famers have been encouraged to report hazardous activities of neighbors to through the FGRM for correction remedy • Training on safe chemical application was given	• Training report • Awareness creation materials displayed • List of approved and unapproved agrochemicals shared • FGRM operationalized	
	Risks with transportation of hazardous chemicals (arboricides, herbicides, weedicides, and pesticides)				

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
	Improper disposal of hazardous waste		• Trained spraying gangs (farmer) on how to wear PPEs and the essence of PPEs.		
	Poor storage of hazardous chemicals				
	Recycle of hazardous chemicals				
	Improper or poor records keeping of direct workers		• Employment and other opportunities were given to local communities as much as possible. • Proper records of workers are kept and updated as appropriate	• Records of workers	
	Improper or poor records keeping of contracted workers				
	Improper or poor records of primary supply workers				
	Potentially could cause or aggravate land-use conflicts		• A grievance mechanism was established to ensure any complaints/comments regarding the Project is received and responded to in a timely manner, providing	• FGRM operationalized • Forest Management plan	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			solutions and taking corrective measures as appropriate • Stakeholder consultations done to identify best practices and guide implementation in partnership with traditional authorities • Forest Management plan prepared for all sites to also reflect community expectations • Admitted farmers that expanded beyond allowed limits were made to return to the permitted areas only • District Assembly by-laws used to support the conservation of dedicated forests and to sanction encroachment	• Engagement/training Reports • Records of admitted farms • DA by-laws	
	Unavailability and no/limited use of personal protective equipment		• Workers were required to wear suitable Personal Protective Equipment (PPE) as appropriate.	• Confirmation with workers	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			• Sensitization was done on the need for and proper usage of PPEs		
	Limited awareness creation of programs on health and safety including chemical handling		• Design and implementation of awareness creation programs to educate persons on protecting workers' health and safety including paying attention to chemical handling was done • Workers were required to wear suitable Personal Protective Equipment (PPE) as appropriate	• Training report • On-site verification with farmers	
Additional livelihoods Activities/Interventions	Generation of smoke from burning of biomass (debris and logs) during land preparation for vegetable farming	4.01 Environmental Assessment 4.04 Habitats	• Most biomass generated was used as firewood and also as pegs • Minimized burning of biomass as much as possible • Workers were required to wear suitable Personal Protective Equipment (PPE) as appropriate	• Site observation • Records of PPEs provided • FGRM operationalized	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
		4.09 Pest Management 4.36 Forests	• A grievance mechanism was established to ensure any complaints/comments regarding the Project is received and responded to in a timely manner, providing solutions and taking corrective measures as appropriate		
	Exposure of workers / communities to smoke generated during land preparation for vegetable farming		• Minimized burning of biomass as much as possible • Fire was used only in situations where this was effective and least environmentally damaging • Workers were required to wear suitable Personal Protective Equipment (PPE) as appropriate • A grievance mechanism was established to ensure any complaints/comments regarding the Project is received and responded to in a timely manner, providing	• Site observation • Records of PPEs • FGRM operationalized	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			solutions and taking corrective measures as appropriate		
	Risks of pollute/contaminate water bodies (herbicides, pesticides, insecticides, weedicides, ash etc.)		• The use of agrochemicals including inorganic fertilizers, weedicides and pesticides was reduced as much as possible. Where possible, mechanical weed control was considered instead of the use of weedicides. • Promotion of buffer zones along the local streams to ensure their integrity and protection of other aquatic life forms. The buffer reserves serve as natural filters for surface runoff from the planting areas. The reserves also play a major role in protecting the banks of the waterways from channel erosion.	• Site observation • Training report	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			• Farmers trained and provided with tools to create buffer of no-spray zones in farms with close proximity to water body(s) • Farmers whose farms located along water bodies were provided with technical assistance to leave a vegetation cover as a buffer zone along the water bodies. • Implementation of standard erosion and sediment control best management practices • Organic farming practices (planting nitrogen-fixing species, agroforestry practices, composting, application of organic fertilizers) were implemented and this helped minimize the use of inorganic fertilizers and herbicides that are major contributors to soil and surface water quality deterioration		

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
	Potential Risks of locating activities within buffer zones or water bodies		• Promotion of buffer zones along the local streams to ensure their integrity and protection of other aquatic life forms. The buffer reserves serve as natural filters for surface runoff from the planting areas. The reserves also play a major role in protecting the banks of the waterways from channel erosion. • Farmers trained to create buffer of no-spray zones in farms in close proximity to water body(s) • Farmers whose farms located along water bodies were provided with technical assistance to leave a vegetation cover as a buffer zone along the water bodies. • Technical officers and farm inspectors sampled and visited farms to check compliance	• Site observation • Training report	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
	Use of fire during land preparation		• Fire was used only in situations where this was effective and least environmentally damaging • Most biomass generated was used as firewood and also as pegs • Minimized burning of biomass as much as possible • Workers were required to wear suitable Personal Protective Equipment (PPE) as appropriate • A grievance mechanism was established to ensure any complaints/comments regarding the Project is received and responded to in a timely manner, providing solutions and taking corrective measures as appropriate	• Site observation • Records of PPEs provided • Training report • FGRM operationalized	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
	Over-use of agro-inputs such fertilizers and agro-chemicals		• The use of agrochemicals including inorganic fertilizers, weedicides and pesticides was reduced as much as possible. Where possible, mechanical weed control was considered instead of the use of weedicides. • Education and sensitization were done on the proper use and dosage of agro-inputs	• Training report • List of approved and unapproved agrochemicals shared	
	Limited and/or untimely supply of cocoa seedlings		• Seedlings were supplied on time to meet onset of reliable rainfall • Seedlings were sourced within close proximity/catchment area	• Records of seedlings supply	
	Lead to the transportation of hazardous chemicals (herbicides, weedicides, and pesticides)		• Mass sprayers who spray agro chemicals for farmers have been cautioned and educated on proper disposal of chemical containers after use	• Training report • Awareness creation materials displayed	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
	Generation of hazardous waste such as herbicides, weedicides, and pesticides.		• Famers have been encouraged to report hazardous activities of neighbours to through the FGRM for correction remedy • Training on safe chemical application was given • Trained farmers on how to wear PPEs and the essence of PPEs.	• List of approved and unapproved agrochemicals shared • FGRM operationalized	
	Improper disposal of hazardous waste				
	Improper storage of hazardous waste				
	Improper or poor records keeping of workers		• Employment and other opportunities were given to local communities as much as possible. • Proper records of workers are kept and updated as appropriate	• Records of workers	
	Potential aggravation of land-use conflicts		• A grievance mechanism was established to ensure any complaints/ comments regarding the Project is received and responded to in a timely manner, providing	• FGRM operationalized • Forest Management plan	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			solutions and taking corrective measures as appropriate • Stakeholder consultations done to identify best practices and guide implementation in partnership with traditional authorities • Forest Management plan was prepared for all sites to also reflect community expectations • District Assembly byelaws used to support the conservation of dedicated forests and to sanction encroachment • Admitted farmers that expanded beyond allowed limits and were made to return to the permitted areas only	• Engagement/training Reports • Records of admitted farms • DA by-laws	
	Low percentage of women in livelihood improvement activities			• Records of farmers	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
	Prioritization of a few demographic in terms of labour		• Employment and other opportunities were given to local communities as much as possible. • Equal opportunity was given to all abled bodied persons who wanted to participate		
	Unfair selection of beneficiaries				
	Limited awareness creation of programs on health and safety issues		• Design and implementation of awareness creation programs to educate persons on protecting workers' health and safety including paying attention to chemical and equipment handling was done • Workers were required to wear suitable Personal Protective Equipment (PPE) as appropriate	• On-site verification with farmers	

NB: With regards to Personal Protective Equipment (PPE), stakeholders are entreated to protect themselves as much as possible even in the absence of industrial grade PPE. That is, clothing that covers every inch of the body like PPE would (long sleeved shirts, jeans, boots/footwear, mask).

7.0 OPERATIONALISATION OF FEEDBACK AND GRIEVANCE REDRESS MECHANISM (FGRM)

Feedback and Grievance Redress Mechanism (FGRM) is generally designed to be the "first line" of receipt and response to stakeholder feedback and/or concerns from implementation of GCFRP activities. This mechanism provides an enabling environment and structures for stakeholders to provide feedback and also access support for conflict resolution resulting from the program activities. Not all complaints/ conflicts are handled through the FGRM. Complaints of acts of criminal nature or grievances that allege corruption, coercion, or major and systematic violations of rights and/or policies are normally referred to organizational accountability mechanisms or administrative or judicial bodies for formal investigation, rather than to FGRMs for collaborative problem solving.

Broadly, the FGRM is operationalized in four steps. Parties seeking to have any REDD+ dispute resolved would file their complaint with the Safeguards Focal Person (SFP) at the district office (FSD) including the offices of the MMDAs within the ER program area where it will be received and processed before it is communicated through the Regional Safeguards Focal Person to the National FGRM coordinator to ensure transparency and the effective exercise of oversight responsibility.

1. If the parties are unable or unwilling to resolve their dispute through negotiation, fact-finding or inquiry a mediator chosen with the consent of both parties would be assigned to assist the Parties to reach a settlement.
2. Where the mediation is successful, the terms of the settlement shall be recorded in writing, signed by the mediator and the parties to the dispute and lodged at the FGRM registry. The terms of the settlement will be binding on all parties.
3. If the mediation is unsuccessful, the Parties will be required to submit their dispute for compulsory arbitration, by a panel of 5 arbitrators, selected from a national roster of experts.
4. The awards of the arbitration panel will be binding on the Parties and can only be appealed to the Court of Appeal. All questions of law would be referred to the High Court.

Support is provided by private sector, NGOs/CSOs, and other stakeholders necessary for helping local actors submit their grievances.

NRS has made provisions for FGRM hotlines and stakeholders have been made aware of this through sensitization and awareness creation. While activities are being implemented within the Sefwi Wiawso - Bibiani HIA, there have been a few reports on grievances and feedback has been received.

Some documented activities under the FGRM are presented in annex 2.

8.0 INSTITUTIONAL STRENGTHENING AND CAPACITY BUILDING

Capacity building is viewed as more than training. It is human resource development and includes the process of equipping individuals with the understanding, skills and access to information, knowledge for successful implementation of the proposed projects. It also involves organizational development, the elaboration of relevant management structures, processes and procedures, not only within organizations but also the management of relationships between the different organizations and sectors (public, private and community).

In every engagement with stakeholders, the opportunity is taken to continuously build their capacities on REDD+ topics and provide updates on activities within the HIA and GCFRP as a whole.

2018

- In 2018, the Climate Change Directorate organized landscape engagements for key stakeholders (Ministries, Departments and Agencies (MDAs) and Metropolitan, Municipal and District Assemblies (MMDAs), Traditional Authorities, Local communities etc) within 10 Forest & Wildlife districts to sensitize them and build their capacity on Climate Change issues, REDD+ mechanism, REDD+ Safeguards, and the REDD+ Feedback & Grievance Redress Mechanism (FGRM) etc.

- Between the periods 7th- 8th February and 20th- 21st February 2018, 60 Safeguards focal persons were sensitized and trained on key global, donor and national level safeguards requirements for REDD+ implementation. Prominent among them were the World Bank (WB) Operational Policies and the United Nations Framework Convention on Climate Change's (UNFCCC) Cancun Safeguards. The SFPs were also taken through project screening as part of national safeguards requirements under the Environmental Protection Agency (EPA) Act, 1994 (Act 490) and Environmental Assessment Regulations 1999, (LI 1652) to understand the classification of projects and sub-projects for Environmental Impact Assessment or otherwise. Overall, the training consisted of 45 males and 15 females.

- The Climate Change Department (CCD) organized a two-day training workshop on the functions of Ghana's REDD+ SIS and FGRM at the Forestry Commission Training Centre (FCTC) in Kumasi from 19th - 20th June, 2018 for regional and district safeguards focal persons within the High Forest Zone of the GCFRP. The selected 71 Safeguards Focal Persons (SFPs) were trained on the functions of Ghana's REDD+ SIS and FGRM. Feedback and recommendations were solicited from the SFPs on where and how to improve the SIS and FGRM.

- Upon Completion of their initial sensitization and training on REDD+ Safeguards, the SFPs according to the Environmental and Social Management Framework (ESMF) developed for REDD+ implementation, led landscape level engagement of MDAs and MMDAs identified in Ghana's ESMF for Safeguards Implementation. These engagements occurred in 10 forest districts across all the six Hotpot Intervention Areas (HIAs) Identified for the GCFRP. The landscape level safeguards engagement was to build the capacity of decentralized institutions on REDD+ and REDD+ Safeguards requirements including FGRM. The districts are; Sefwi Wiawso, Cape Coast (Kakum National Park Area), Kade, Bechem, Juaso, Goaso, Nkawie, Ho, Begoro and Juaboso. Participants were made up of 580 males (about 70%) and 270 females (representing about 30%). These landscape activities were in active collaboration with Civil Society Organisations in Ghana comprising Civic Response, International Union for Conservation of Nature (IUCN) and HATOF Foundation.

2019

- The Climate Change Directorate, and staff of Sefwi Wiawso and Kintampo Forest District officers were invited to undertake a capacity building workshop on the socio-economic benefits of forest and safeguards for non-state forest actors. This was an activity under the project "Strengthening the capacity of non-state actors to improve FLEGT-VPA and REDD+ processes in Western Africa". The project is implemented by Tropenbos Ghana and Nature and Development Foundation (NDF). The workshop took place at Sefwi Wiawso on the 6th November, 2019 and at Kintampo on 8th November 2019 respectively. A total number of 125 participants were invited to participate in the workshops with 80 male representation and 45 female representation for the two landscapes

2020

- The National REDD+ Secretariat (NRS) of the Forestry Commission with support from the World Bank through the AccelREDD+ Project organized a refresher training from 3rd – 5th March 2020 for Regional and District Safeguards Focal Persons (SFPs) across the GCFRP area. The training focused on safeguards instruments respected in Ghana's Country Approach to Safeguards (Ghana's Environmental Regulations), Cancun, World Bank Operational Policies, African Development Bank Safeguards and other donor safeguards requirements. The rationale was to equip SFPs with the requisite skills and knowledge on Ghana's Country Approach to Safeguards (CAS). SFPs would then have the ability to develop safeguards action plans, monitor safeguards compliance, resolving and/or reporting programme related conflicts using the Feedback and Grievance Redress Mechanism (FGRM). A total of thirty-four (34) SFPs were trained (safeguards focal persons who are Forestry Commission's Assistant Regional, District and Park Managers) within the GCFRP area to ensure safeguards compliance at the regional and district levels.

- The "Rainforest Alliance (RA) – Olam Partnership for Forest and livelihood and Landscapes in Western Ghana" is one of the sub-projects under the Ghana Cocoa Forest REDD+ Programme (GCFRP) implemented within the Sefwi Wiawso landscape. A three (3) day capacity building workshop was organized to build stakeholders' capacities on REDD+ safeguards, gender, and the Feedback Grievance Redress Mechanism (FGRM) as part of the programme implementation. The workshop took place from 12-14 February, 2020 at Sefwi Wiawso. The method adopted for the training workshop was an interactive and participatory one. The workshop organized by RA and Olam and facilitated by two resource persons from the Climate Change Directorate (CCD) of the Forestry Commission. A total of twenty-eight (28) participants were present during the workshop as well as the field exercise. The workshop had 26 male representatives and 2 female representatives. The poor female representation was attributed to an ongoing Ghana card registration that had majority of the females engaged in it.

- The NRS as part of activities for effective implementation of the Ghana Cocoa Forest REDD+ Programme (GCFRP) undertook a field visit to four (4) Hotspot Intervention Areas (HIAs) (Asunafo-Asutifi, Juaboso–Bia, Sefwi Wiawso-Bibiani, and Kakum) from September

22nd -29th, 2020. The objective of the field visit was to: give progress update on the Ghana Cocoa Forest REDD+ Programme (GCFRP) and discuss areas of continued support and engagement on implementation of planned activities; Meet with respective Regional and District Managers to discuss the expected roles and responsibilities of the FC and COCOBOD in the GCFRP implementation; Identify challenges that militate against effective GCFRP implementation and receive suggestions/recommendations; visit degraded landscape restoration sites and cocoa farms to observe progress of work and the effects on the GCFRP and cocoa farms; and update FC staff on REDD+ section of the new FSD reporting template.

- A two days national GCFRP stakeholders meeting was held at the Forestry Commission auditorium from 2nd – 3rd November, 2020. This meeting was specifically to sensitize stakeholders on the agreed percentage and commensurate benefits due them according to the BSP, explain the modalities of receiving payments, Upfront and Actual, update stakeholders on the rationale for the UAP and the utilization thereof, and discuss the GCFRP implementation planning and progress in context of meeting first monitoring report requirements. The first day's meeting was planned for the National REDD+ working group and various technical sub-working groups, whose members are drawn from representative institutions. The working groups are: National REDD+ Working Group, Safeguards, Gender, MRV, Policy & M&E Sub-Working Groups. The 2nd day had representatives from the Private sector, CSOs and NGOs. Other stakeholders from the FC have also been strategically included. There may be overlap of persons between days 1 and 2, especially for members of the GCFRP Implementation Committee. There was a total number of 63 participants.

- On the account of the finalized Benefit Sharing Plan (BSP) arrangements and upon the receipt of the Upfront Advance Payment (UAP) from the World Bank, the NRS deemed it fit to engage the stakeholders working within three of the HIAs, namely, Kakum, Wiawso-Bibiani and Juaboso-Bia HIAs. To this effect, stakeholders were sensitized on the BSP for the Ghana Cocoa Forest REDD+ Programme and updated on the Upfront Advance Payment (UAP). The meeting was held from 19th – 27th November, 2020. The meeting also provided equal opportunity to discuss implementation plan for the GCFRP and to

build concerted-based actions for the way forward. The meeting therefore set out to sensitize stakeholders on the agreed percentage and commensurate benefits due them according to the BSP, explain the modalities of receiving payments, Upfront and Actual, update stakeholders on the rationale for the UAP and the utilization thereof and discuss the GCFRP implementation planning and progress in context of meeting first monitoring report requirements. Representatives from the Private sector, Landscape Governance Management Board (HIA & LMB), MMDAs, MTS group, youth groups, FC, COCOBOD, CSOs and NGOs and other stakeholders were invited.

2021

- As part of requirements from the United Nations Framework Convention on Climate Change (UNFCCC) for receiving results-based payment under REDD+, countries are expected to provide information on how they are addressing and respecting safeguards. In line with this and as part of 2nd quarter activities towards effective implementation of the GCFRP, the NRS safeguards team undertook safeguards monitoring in four (4) HIAs (ie., Kakum, Asunafo-Asutifi, Juaboso-Bia and Sefwi Wiawso-Bibiani). The monitoring exercise commenced from 11th-21st May, 2021. The monitoring exercise aimed to effectively monitor and report on safeguards compliance. Additionally, the monitoring exercise sought to identify ongoing projects that are in synergy with the objectives of the GCFRP and enhance capacity of stakeholders on safeguards.

- As part of 3rd quarter activities towards effective implementation of the GCFRP, the NRS safeguards team undertook safeguards monitoring in five (5) HIAs (ie., Kakum, Asunafo-Asutifi, Juaboso-Bia, Ahafo Ano South, Atwima Mponua, Atwima Nwabiagya and Sefwi Wiawso-Bibiani). The monitoring exercise commenced from 16th August -4th September, 2021. The monitoring exercise aimed to effectively monitor and report on safeguards compliance in the 5 HIAs. Additionally, the monitoring exercise sought to identify challenges to operationalizing the FGRM and enhance capacity of stakeholders on safeguards.

2022

- In a bid to build the capacities of REDD+ project implementers and proponents particularly institutions/organizations and local communities, the World Bank with funding support from the project dubbed Accelerating REDD+ (AccelREDD) organized a three-day capacity building workshop for relevant stakeholders to strengthen safeguards implementation in the Ghana Cocoa Forest REDD+ Programme. The workshop was held at the Forestry Commission Training Center (FCTC) at Akyawkrom in the Ashanti Region from 8th to 10th March 2022. The training brought together representatives from the Government (Forestry Commission, Ghana Cocoa Board, and the Environmental Protection Agency), Private sector (World Cocoa Foundation and Olam), Non-Governmental Organizations/ Civil Society Organizations (Proforest, Nature and Development Foundation and Tropenbos Ghana), and local actors including executives of HIA functional Units such as Hotspot Intervention Area Management Board (HMB), Sub-HIA Executive Committee (SHEC), CREMA Executive Committees (CEC) and Community Resource Management Committees (CRMC) who mainly represent local communities, Traditional Authorities and farmers. A number of training topics were discussed in a participatory manner to include overview of GCFRP, World Bank Safeguards Policies, GCFRP Benefit Sharing Plan, Ghana's Country Approach to Safeguards, Feedback Grievance Redress Mechanism (FGRM) and, the Role of the Environmental Protection Agency in safeguards implementation. Group exercises on GCFRP activities vis-à-vis the safeguards policies triggered generated useful discussions and understanding of how to use the safeguards instruments to address and mitigate adverse impacts and risks. In addition, discussions generated a number of questions that would be used to screen social and environmental risks associated with the activities, which resulted in revising the screening checklist. The training was attended by 58 participants in total. Of these, 45 were males and 13 were females.

Table 6: List of some Institutional strengthening and capacity building events

S/N	Institution	Topics
1	National REDD+ Secretariat	1. Training on safeguards for REDD+ Regional and District focal persons 2. REDD+ Safeguards Training- Forest district

		3. Engagement of community members and other stakeholders on REDD+ safeguards 4. Training on SIS and FGRM for REDD+ regional and district safeguards focal persons 5. REDD+ safeguards landscape monitoring and training
2	Wildlife Division	1. Engagement of communities on livelihood improvements 2. Sensitization and education of communities on environmental protection
3	Forest Services Division	1. Engagement of fringe communities on fire management 2. Engagement of fringe communities on shade tree management 3. Engagement of communities on conflict resolution
4	Ghana Cocoa Board	1. Training of farmers on safe chemical application 2. Training of farmers on compost preparation and compost application 3. Training of farmers on buffer zone protection 4. Training of farmers on good agronomical practices 5. Training of farmers on wildlife protection and conservation 6. Training of farmers on proper disposal and storage of chemical waste. 7. Engagement of farmers on shade tree management 8. Training of farmers on additional livelihoods 9. Training of farmers on financial management and records keepings.

9.0 RECOMMENDATIONS AND NEXT STEPS

The proponents of GCFRP as well as implementing partners (from government, private sector and CSOs/NGOs) have exhibited strong dedication to sound environmental and social safeguards measures in the implementation of interventions/activities under GCFRP by demonstrating robust compliance to both national and the World Bank safeguards policies. By involving communities in methods that provide them with environmental and financial benefits, the programme has a strong potential to increase carbon stocks (achieve emissions reductions) in the High Forest Zones by reducing deforestation and forest degradation. Certain negative environmental and social effects (soils, water supplies, biodiversity, and some socioeconomic issues) that result from GCFRP implementation have been identified and mitigated against thereby maximizing the reputational, economic and social benefits of the programme

The recommended mitigation measures are sufficient to protect the environment and promote social growth.

Some recommendations to further enhance programme implementation were drawn based on monitoring of the safeguards implementation:

- There is a need to strengthen partnership and coordination with key stakeholders at the HIA level
- Regular and timely monitoring of activities/interventions undertaken by partners is encouraged
- Continuous stakeholder engagement with project proponents on safeguards implementation is recommended

ANNEXES

Annex 1: Lists of stakeholders engaged/trained

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Dominic Awkuvi	Bia		-

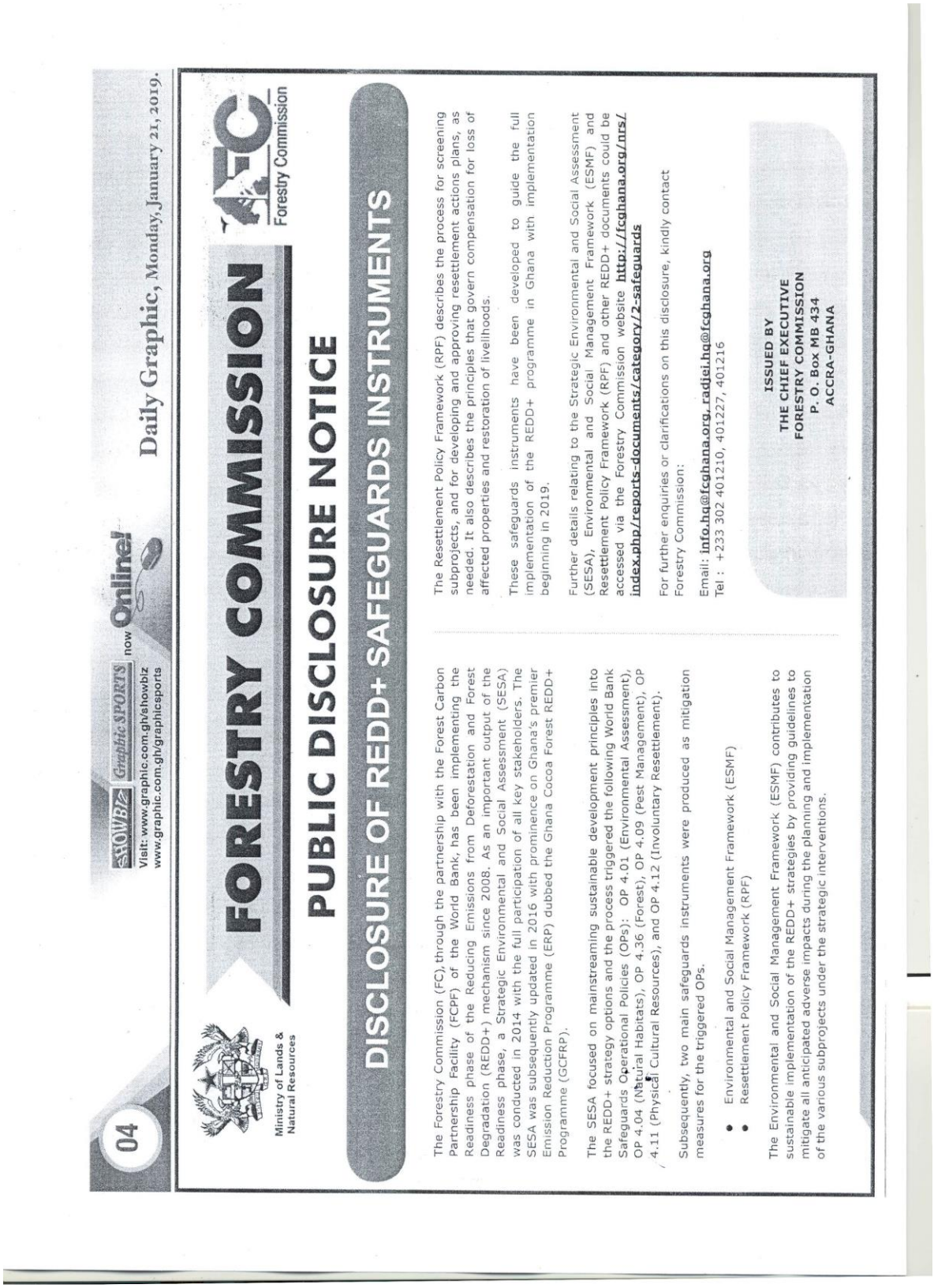
Annex 2: Some recorded FGRM

The Feedback and Grievance Redress Mechanism was found to be operationalized at the institutional level. A number of cases of feedback/grievance/forest infractions had been reported. In all cases responsible institutions had taken steps and had resolved those cases. The table below highlights forest infractions (cases) reported and prosecuted through the court system.

Table 7: Cases recorded and prosecuted

The Republic v. Safianu and 2Ors	Charged and convicted at a fine of 300 penalty units and six months imprisonment each with hard labour for unlawful entry and illegal lumber in a forest reserve.	2019	Sefwi Wiawso – Bibiani HIA
The Republic v. Owusu Korang Joseph	Charged and Convicted at a fine of 1,000 penalty units and in default of 18months in prison for unlawful entry and illegal lumber in a forest reserve. Mercedes Benz Crane Truck Confiscated. Preparations for auction sale to be done in due cause.	2019	Sefwi Wiawso – Bibiani HIA
The Republic v. Faisal Fuseini and Or.	Charged, convicted and sentenced to pay GH¢500 each. Both signed a bond of good behavior for 12months or 6months for poaching and unlawful entry into a wildlife park.	2019	Sefwi Wiawso – Bibiani HIA
The Republic v. Yunubah Suuk, Kwame Affum, Aba Dadzie, Alfred Akpedu and Seleni Akwasi	Unlawful entry, illegal felling and illegal mining in a forest reserve. Unlawful destruction of a water body.	2019	Sefwi Wiawso – Bibiani HIA
The Republic v. Yaw Himah, Isaac Appiah and Isaac Arthur	Unlawful entry, illegal felling and illegal mining in a forest reserve. Unlawful destruction of a water body.	2019	Sefwi Wiawso – Bibiani HIA

Annex 3: Public disclosure



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Daily Graphic, Monday, January 21, 2019.

Ministry of Lands & Natural Resources

FORESTRY COMMISSION

Forestry Commission

PUBLIC DISCLOSURE NOTICE

DISCLOSURE OF REDD+ SAFEGUARDS INSTRUMENTS

The Forestry Commission (FC), through the partnership with the Forest Carbon Partnership Facility (FCPF) of the World Bank, has been implementing the Readiness phase of the Reducing Emissions from Deforestation and Forest Degradation (REDD+) mechanism since 2008. As an important output of the Readiness phase, a Strategic Environmental and Social Assessment (SESA) was conducted in 2014 with the full participation of all key stakeholders. The SESA was subsequently updated in 2016 with prominence on Ghana's premier Emission Reduction Programme (ERP) dubbed the Ghana Cocoa Forest REDD+ Programme (GCFRP).

The SESA focused on mainstreaming sustainable development principles into the REDD+ strategy options and the process triggered the following World Bank Safeguards Operational Policies (OPs): OP 4.01 (Environmental Assessment), OP 4.04 (Natural Habitats), OP 4.36 (Forest), OP 4.09 (Pest Management), OP 4.11 (Physical Cultural Resources), and OP 4.12 (Involuntary Resettlement).

Subsequently, two main safeguards instruments were produced as mitigation measures for the triggered OPs.

- Environmental and Social Management Framework (ESMF)
- Resettlement Policy Framework (RPF)

The Environmental and Social Management Framework (ESMF) contributes to sustainable implementation of the REDD+ strategies by providing guidelines to mitigate all anticipated adverse impacts during the planning and implementation of the various subprojects under the strategic interventions.

The Resettlement Policy Framework (RPF) describes the process for screening subprojects, and for developing and approving resettlement actions plans, as needed. It also describes the principles that govern compensation for loss of affected properties and restoration of livelihoods.

These safeguards instruments have been developed to guide the full implementation of the REDD+ programme in Ghana with implementation beginning in 2019.

Further details relating to the Strategic Environmental and Social Assessment (SESA), Environmental and Social Management Framework (ESMF) and Resettlement Policy Framework (RPF) and other REDD+ documents could be accessed via the Forestry Commission website **http://fcghana.org/nrs/index.php/reports-documents/category/2-safeguards**

For further enquiries or clarifications on this disclosure, kindly contact Forestry Commission:

Email: **info.hq@fcghana.org, radjei.hq@fcghana.org**
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ISSUED BY
THE CHIEF EXECUTIVE
FORESTRY COMMISSION
P. O. Box MB 434
ACCRA-GHANA

Figure 12: Disclosure of REDD+ safeguards instruments

FORESTRY COMMISSION

Forestry Commission

Ministry of Lands & Natural Resources

PUBLIC DISCLOSURE NOTICE

DISCLOSURE OF FINAL BENEFIT SHARING PLAN (BSP) FOR THE GHANA COCOA FOREST REDD+ PROGRAMME (GCFRP)

Ghana led by the Forestry Commission (FC) in partnership with the Forest Carbon Partnership Facility (FCPF) of the World Bank implemented the Readiness phase of the Global Climate Change Mitigation Mechanism; Reducing Emissions from Deforestation and Forest Degradation (REDD+) since 2008.

After a decade of REDD+ Readiness Activities, Ghana has developed its premier Emission Reductions Program dubbed the Ghana Cocoa Forest REDD+ Program (GCFRP), which has been accepted into the Carbon Fund of the FCPF for potential results-based payments. The Forestry Commission (FC) and Ghana Cocoa Board (Cocobod) jointly coordinate this Programme with the support of private sector and local communities.

The goal of the GCFRP is to significantly reduce deforestation and forest degradation in the High Forest Zone by promoting restoration of degraded landscapes, enrichment planting in forest reserves, climate-smart cocoa production, landscape level land-use planning, strategic policy reforms, integrated coordination and monitoring, law enforcement as well as risk reduction efforts within priority Hotspot Intervention Area (HIA) landscapes.

Subsequently, an Emission Reductions Payment Agreement (ERPA) which establishes the conditions of sale and purchase of any Emission reductions (ERs) from the GCFRP was signed between the Government of Ghana (GoG) and the World Bank as a trustee for the Carbon Fund in June 2019 for a period of six years.

A key condition for signing the ERPA is for Ghana to finalise its Benefit Sharing Plan towards full execution of the programme and eventual receipt of payments against demonstrated ERs as a mandatory Safeguards tool.

This notice therefore is to inform the public that the BSP document, which has been designed and developed through extensive stakeholder consultations as an equitable benefit sharing mechanism intended to distribute ERs payments transparently and accountably as articulated by the Programme Document is fully completed and endorsed by the Carbon Fund (CF). It describes the various beneficiaries, their eligibility, roles and responsibilities while specifying the scale and modalities for distribution. Additionally, the BSP describes the type of benefits to be transferred to beneficiaries, the timing of the distribution, and the conditions to be satisfied for the payment of the benefits. It also details the appropriate indicators for monitoring, measuring and verifying compliance with modalities for distributing benefits to beneficiaries.

The completion of the BSP represents a very significant milestone in the lifetime of the GCFRP and the Forestry Commission (FC) is appreciative of all national and sub-national stakeholder efforts for this achievement.

Further details relating to the Final BSP for the GCFRP could be accessed via the Forestry Commission website **http://fcghana.org/library.php** and **http://reddsis.fcghana.org/admin/controller/publications/Final%20BSP_Ghana_%20March%202020.pdf**

For further enquiries or clarifications on this disclosure, kindly contact us through the following email addresses and telephone numbers:

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THE FORESTRY COMMISSION

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Figure 13: Disclosure of BSP for GCFRP

Annex 4: Forest reserves condition scores and biodiversity assessment

Table 8: Description of Forest Condition score

Score	Designation	Description
1	Excellent	Few signs (<2%) human disturbance, with good canopy and virgin or late secondary forest throughout
2	Good	Less than 10% heavily disturbed. Logging damage restricted or light and well dispersed. Fire damage none or peripheral
3	Slightly degraded	Obviously disturbed or degraded and usually patchy, but with good forest predominant; maximum 25% with serious scars and poor regeneration; maximum 50% slightly disturbed, with broken upper canopy
4	Mostly degraded	Obviously disturbed and patchy, with poor quality forest predominant; 25-50% with serious scars; maximum 75% disrupted canopy or forest slightly burned throughout
5	Very poor	Forest with coherent canopy < 25% or more with half the forest with serious scars and poor regeneration; or almost all heavily burned with conspicuous pioneer species throughout
6	No significant forest left	Almost all deforested with savanna, plantation, or farm; <2% good forest; or 2-5% very disturbed forest remaining; or 5-10% left in extremely poor condition

Table 9: Star rating system for plant species in Ghana

Star Rating	Description
Black	Highly significant in context of global biodiversity; rare globally and not widespread in Ghana
Gold	Significant in context of global biodiversity; fairly rare globally/nationally
Blue	Mainly of national biodiversity interest, e.g., globally widespread, nationally rare; or globally rare but of no concern in Ghana due to commonness

Scarlet	Common and widespread commercial species with potential seriously threatened by overexploitation
Red	Common and widespread commercial species; under significant pressure from exploitation
Pink	Common and widespread commercial species; not currently under significant pressure from overexploitation
Green	Species common and widespread in tropical Africa; no conservation concern
Others	Unknown, or non-forest species

Table 10: Ten most important tree species identified in forest ecosystems

Species	**Frequency**
Celtis mildbraedii	182
Broussonetia papyrifera	107
Triplochiton scleroxylon	106
Nesogordonia papaverifera	77
Ricinodendron heudelotii	69
Calpocalyx brevibracteatus	64
Hymenostegia afzelii	64
Diospyros canaliculata	53
Sterculia rhinopetala	47
Discoglypremna caloneura	40

Table 11: Ten most important tree species identified on cocoa farms

Species	**Frequency**
Morinda lucida	77
Persea americana	57
Citrus sinensis	31
Carica papaya	20
Terminalia superba	18
Milicia regia	16

Antiaris toxicaria	15
Ficus exasperata	15
Ficus vogeliana	12
Holarrhena floribunda	12

Table 12: Red and Scarlet star rating of plant species recorded in the forests

Species	**Star Rating**
Chidlowia sanguinea	Blue
Breviea leptosperma	Blue
Xylia evansii	Blue
Afzelia bella	Red
Amphimas pterocarpoides	Red
Anopyxis klaineana	Red
Antrocaryon micraster	Red
Canarium schweinfurthii	Red
Ceiba pentandra	Red
Celtis zenkeri	Red
Daniellia ogea	Red
Distemonanthus benthamianus	Red
Guarea cedrata	Red
Lovoa trichilioides	Red
Mansonia altissima	Red
Piptadeniastrum africanum	Red
Pycnanthus angolensis	Red
Terminalia superba	Red
Albizia ferruginea	Scarlet
Antiaris toxicaria	Scarlet
Entandrophragma angolense	Scarlet
Entandrophragma candollei	Scarlet
Entandrophragma cylindricum	Scarlet
Entandrophragma utile	Scarlet

Guibourtia ehie	Scarlet
Khaya grandifoliola	Scarlet
Khaya ivorensis	Scarlet
Milicia excelsa	Scarlet
Milicia regia	Scarlet
Nauclea diderrichii	Scarlet
Pouteria altissima	Scarlet
Pterygota macrocarpa	Scarlet
Tieghemella heckelii	Scarlet
Triplochiton scleroxylon	Scarlet

Table 13: Red and Scarlet star rating of plant species recorded in cocoa farms

Species	**Star rating**
Pycnanthus angolensis	Red
Albizia ferruginea	Scarlet
Antiaris toxicaria	Scarlet
Entandrophragma angolense	Scarlet
Khaya grandifoliola	Scarlet
Milicia excelsa	Scarlet
Milicia regia	Scarlet
Milicia regia	Scarlet
Pouteria aningeri	Scarlet
Pterygota macrocarpa	Scarlet
Triplochiton scleroxylon	Scarlet

Table 14: Red and Scarlet star rating of plant species recorded in the cropland

Species	**Star rating**
Afzelia bella	Red
Amphimas ptrecapioides	Red
Ceiba pentandra	Red

Celtis zenkeri	Red
Daniellia ogea	Red
Distemonanthus benthamianus	Red
Pouteria altissima	Red
Pycnanthus angolensis	Red
Terminalia ivorensis	Red
Terminalia superba	Red
Albizia ferruginea	Scarlet
Antiaris toxicaria	Scarlet
Entandrophragma angolense	Scarlet
Entandrophragma candollei	Scarlet
Milicia excelsa	Scarlet
Milicia regia	Scarlet
Pterygota macrocarpa	Scarlet
Triplochiton scleroxylon	Scarlet

Annex 5: List of approved and banned agro chemicals

TRADE NAME	ACTIVE INGREDIENT	PRE-HARVEST INTERVAL	RE-ENTRY INTERVAL	DOSAGE
AKATE MASTER	*BIFENTRIN*	21 DAYS	48 HRS	100 ML/ 11L of water
AKATE STAR 3 EC	*BIFENTRIN*	21 DAYS	48 HRS	20 ML/ 11L of water
ACTARA	*Thiamethoxam*	21 DAYS	48 HRS	17ML/11L of water
ACETA STAR	*Acetamiprid&Bifenthrin*	21 DAYS	48 HRS	120ML/11L of water
ACATI POWER	*Thiamethoxam*	21 DAYS	48 HRS	20ML/11L of water
PRIDAPOD	*IMIDACLOPRID*	21 DAYS	48 HRS	20ML/11L of water
VIPER SUPER	*INDOXACARB ANDACETAMIPRID*	21 DAYS	48 HRS	105ML/11L of water
GALIL 300	*IMIDACLOPRID AND BIFENTRIN*	21 DAYS	48 HRS	13ML/11L of water
AF CONFIDENCE	*CAPSAICIN*	21 DAYS	48 HRS	200ML/11L of water
SIVANTO	*FLUPYRADIFURONE*	21 DAYS	48 HRS	40ML/11L OF WATER
NORMAX 150	*ALPHA-CYPERMETHRIN TEFLUBENZURON*	21 DAYS	48 HRS	52 ML/11L WATER
BUFFALO SUPER	*ACETAPRIMID*	21 DAYS	48 HRS	98ML/11L WATER
THODAN SUPER	*LAMBDACYHALOTHRIN+ACETAMIPRID*	21 DAYS	48 HRS	110ML/11L WATER
A1	*IMIDACLOPRID*	21 DAYS	48 HRS	20ML/11L WATER

CALLIFAN SUPER	*BIFENTHRIN+ACETAMIPRID*	21 DAYS	48 HRS	20ML/11L WATER
AKATE GLOBAL	*THIAMETHOXAM*	21 DAYS	48 HRS	20ML/11L WATER
RAGENT 200	*FIPRONIL*	21 DAYS	48 HRS	17ML/11L WATER

FUNGICIDES

TRADE NAME	**ACTIVE INGREDIENT**	**PRE-HARVEST INTERVAL**	**RE-ENTRY INTERVAL**	**DOSAGE**
RidomilGold	*CuprousOxide&Mefonoxam*	21 DAYS	24 HRS (1 DAY)	1 Sachet/ 16L of water
Funguran-OH	*CupricHydroxide*	21 DAYS	24 HRS (1 DAY)	1 Sachet/ 16L of water
Metalm72WP	*Metalxyl*	21 DAYS	12 HRS (0.5 DAY)	1 Sachet/ 16L of water
*Fungiki **l** 50WP*	*Metalxyl*	21 DAYS	12 HRS (0.5 DAY)	1 Sachet/ 16L of water
Kocide2000	*CupricHydroxide*	21 DAYS	24 HRS (1 DAY)	1 Sachet/ 16L of water
CopperNordox75WG	*CuprousOxide*	21 DAYS	24 HRS (1 DAY)	1 Sachet/ 16L of water
Champion	*CupricHydroxide*	21 DAYS	24 HRS (1 DAY)	1 Sachet/ 16L of water

SidalcoDefender	*DicopperChroride trihydroxide,SC*	21 DAYS	24 HRS (1 DAY)	150ML/ 16L of water

Fantic	Benalaxyl M+Copper(I)Oxide	21 DAYS	24 HRS (1 DAY)	1 Sachet/ 16L of water
Forum R	homorph + 400 g/kg Co	21 DAYS	24 HRS (1 DAY)	1 Sachet/ 16L of water
Vamos 500SC	500 g/L Fluazinam	21 DAYS	24 HRS (1 DAY)	75ML/ 16L of water
Banjo Forte 400 SC	methomorph + 200 g/L	21 DAYS	24 HRS (1 DAY)	75ML/ 16L of water
Royal Cop 50WP	50% Copper (II) hydroxide	21 DAYS	24 HRS (1 DAY)	1 Sachet/ 16L of water
Delco 75WP	75 % Cupper (I) oxide	21 DAYS	24 HRS (1 DAY)	1 Sachet/ 16L of water

FERTILIZERS GRANULAR (ORGANIC)

TRADE NAME	**ACTIVE INGREDIENTS**	**DOSAGE**
Asaasewura	NPK 0-22-18+9CaO+75+MgO	3 Bags/ acre
Cocofeed	NPK 0-30-20	3 Bags/ acre
Cocoa Master	NPK-1-21-19+9CaO+65+6MgO +18	3 Bags/ acre
Dua Pa	NPK 3-25-18-7CaO+45+6MgO+0. 3(B+Zn)	3 Bags/ acre
Ferta Agra Cacao Sup	NPK 3-21e20+10CaO+55+5MgO+0.5(B+Zn)	3 Bags/ acre
So Aba Pa	NPK 4-22-18+4CaO+45+5MgO	3 Bags/ acre

	+0.5B+0.2Zn	
Adom Cocoa Fertilizer	NPK2-23- 18+8 CaO+6SO3+6MGO +0.5ZN+0.5B	3 Bags/ acre
Adehye Cocoa Fertiliz	NPK2-23- 18+8 eCaO+6SO3+6MGO +0.5ZN+0.5B	3 Bags/ acre
Sidalco	NPK 6:0:20 + Trace elements (Mg, Fe, Mn,Cu,Zn)	21 DAYS
Lithovit	Urea+Carbonates of Ca and Mg+Trace elements	21 DAYS

List of banned agro-chemicals

GAMALIN 20 (DDT)

UNTENT

COCOSTAT

KABAMALT

PARAQUATS

Banned pesticides

1. 2,4,5-T and Its salts and esters

2. Aldrin

3. Binapaeryt

4. Cantalo

5. Chlordane

6. Clordinciorn

7. Chlorobenzilate

8. Dichlorodiphenyitrichloroethane(DDT)

9. Dieldrin

10. Dinoseb and its calts and esters

11. Dinitro-orthocresol (DNOC) and its salts (such as ammonium salt, potassium salt and sodium salt)

I2. Endria

13. HCH (aixed isomere)

14. Heptachlos

15. Hcxachlorobenxene

16. Parathion

17. Pentachlorophenol and its salts and esters

18. Toxaphene

19. Mirex

20. Methamidophos (Soluble Iquid formulations of the substance that exceed 600 g active ingredient/I)

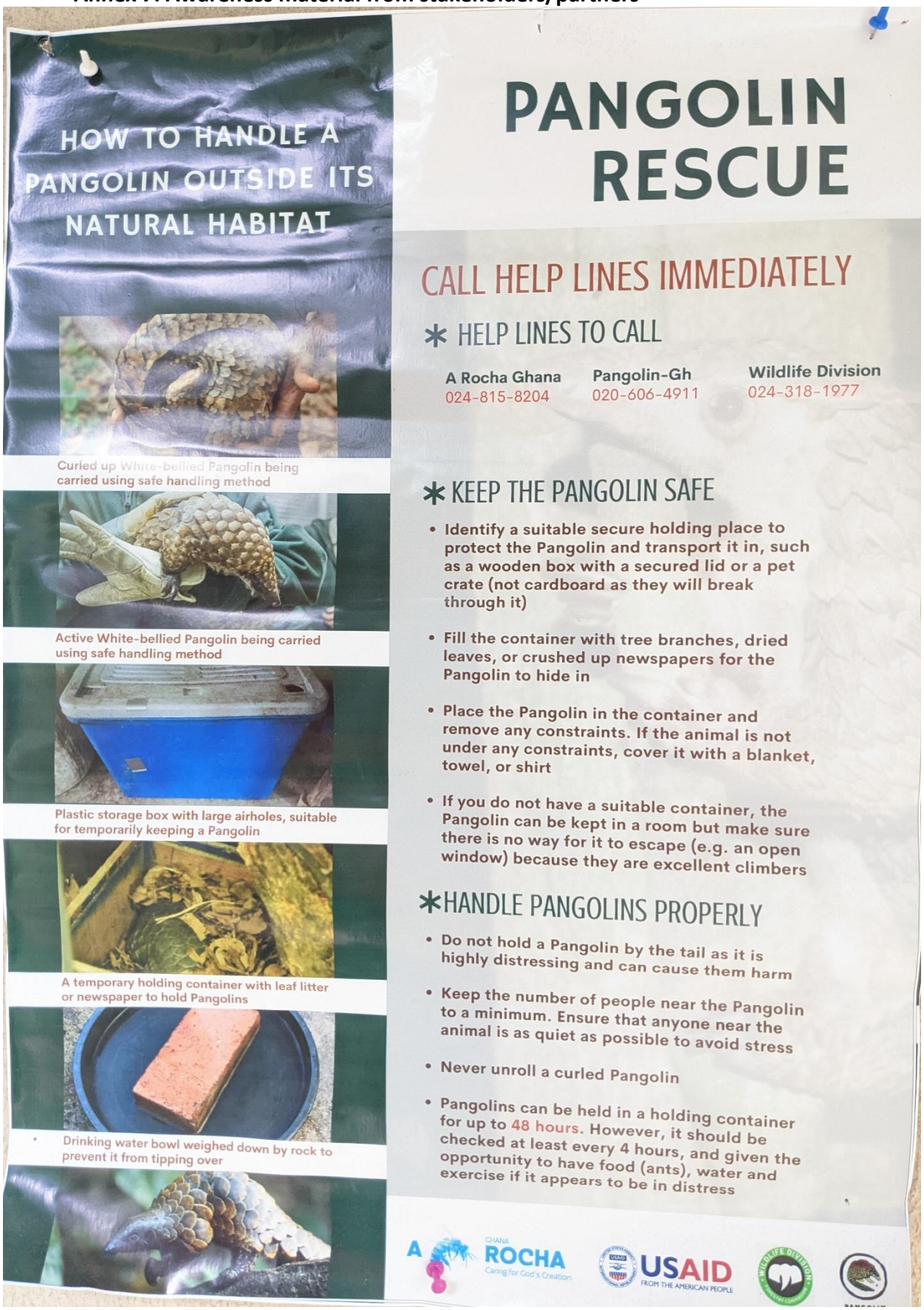
21. Methyl-parathion (emulsifiable concentrates (EC) with at or above 19.5% active ingredient and dusts at or above 1.5% active ingredient)

22. Monocrotophos (Soluble liquid formulations of the substance that exceed 600 g active ingredient/D

23. Parathion (all formulations - aerosols, dustable powder (DP), emulsifiable concentrate (EC), granules (CB) and wettable powders (WP) - of this substance are included, except capsule suspendions (CS))

24. Mosphamidon (Soluble liquid formulations of the substance that exceed 1000 1 active ingredient/I)

Annex 7: Awareness material from stakeholders/partners



TOUTON

WASTE MANAGEMENT PLAN

IDENTIFICATION OF MAIN SOURCE	*POSSIBLE SOLUTION*	*PERSON RESPONSIBLE*	*TIMELINE*
AGROCHEMICAL CONTAINERS	TRIPLE WASH AND PERFORATE THEM AND RETURN THEM TO THE INPUT SUPPLIERS	FAs, AGRONOMISTS, FARMERS	JANUARY - DECEMBER
INORGANIC WASTE	COLLECT AND PUT THEM IN THE TRASH BINS OR VILLAGE WASTE DISPOSAL POINT	PURCHASING CLERKS	JANUARY - DECEMBER
ORGANIC WASTE	MAKE PIT FOR ORGANIC WASTES	PURCHASING CLERKS	JANUARY - DECEMBER
WASTE FROM COCOA HUSK	SPREAD THEM IN THE COCOA FARM TO SERVES AS MANURE	FARMERS	JANUARY - DECEMBER
ANIMAL WASTE	ANIMAL MANURE (FARM YARD MANURE)	FARMERS	JANUARY - DECEMBER

INVASIVE SPECIES

Invasive species	A plant or animal species or subspecies that is not native to a given place, and whose presence or introduction in that place causes or is likely to cause economic harm, environmental harm, or harm to human health. For this standard, invasive species are the ones referenced by IUCN/SSC Invasive Species Specialist Group (ISSG) as 100 of the World's Worst Invasive Alien Species.[13] Crop or livestock species are not considered invasive species.

The following are some invasive species identified in our operational area.

Figure 1: Cacopogonium mucunoide

Figure 2:Broussonetia papyrifera (Yorke/ megye m'ase)

Figure 3: Cedrella odoratta (Cedrella)

Figure 4: Chromoliaena odorata (Acheampong)

Figure 5:Leucaena leucocephala

Figure 5:Eichhonia crasipes

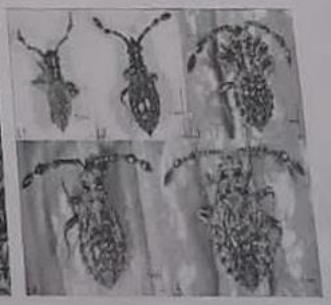
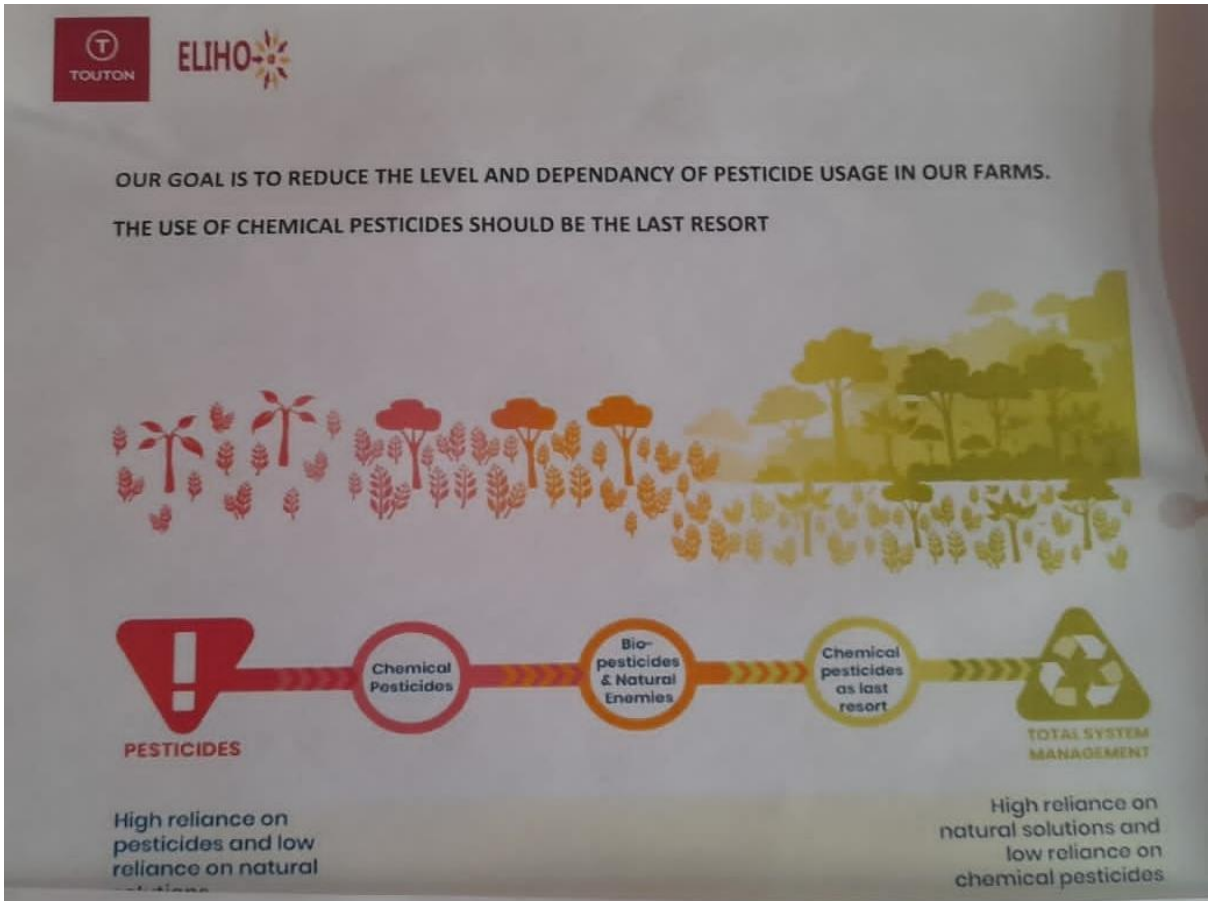
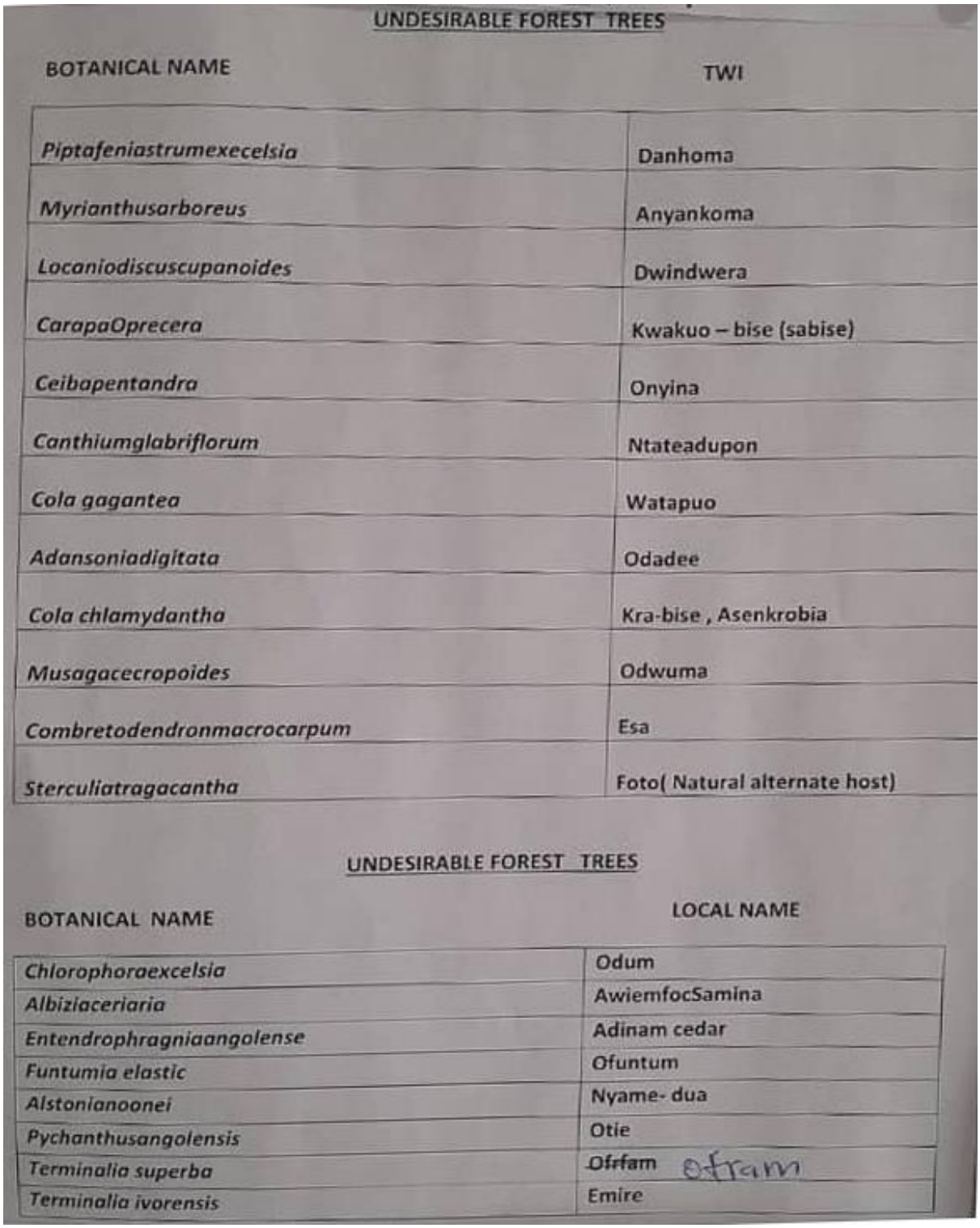


Figure 5:Capsid (Akate)





UNDESIRABLE FOREST TREES

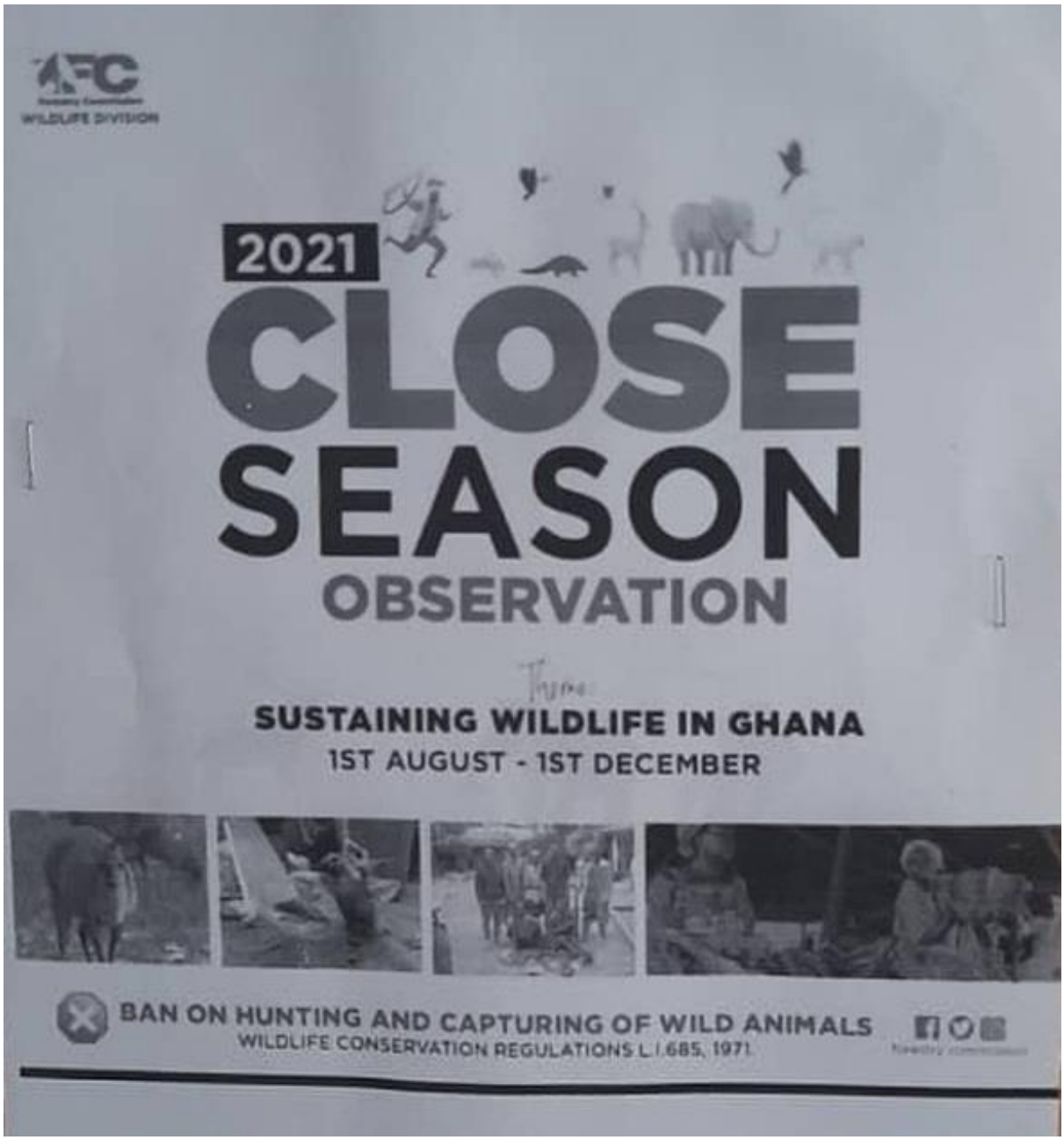
BOTANICAL NAME	TWI
Piptafeniastrumexecelsia	Danhoma
Myrianthusarboreus	Anyankoma
Loconiodiscuscupanoides	Dwindwera
CarapaOprecera	Kwakuo – bise (sabise)
Ceibapentandra	Onyina
Canthiumglabriflorum	Ntateadupon
Cola gagantea	Watapuo
Adansoniadigitata	Odadee
Cola chlamydantha	Kra-bise , Asenkrobia
Musagacecropoides	Odwuma
Combretodendronmacrocarpum	Esa
Sterculiatragacantha	Foto(Natural alternate host)

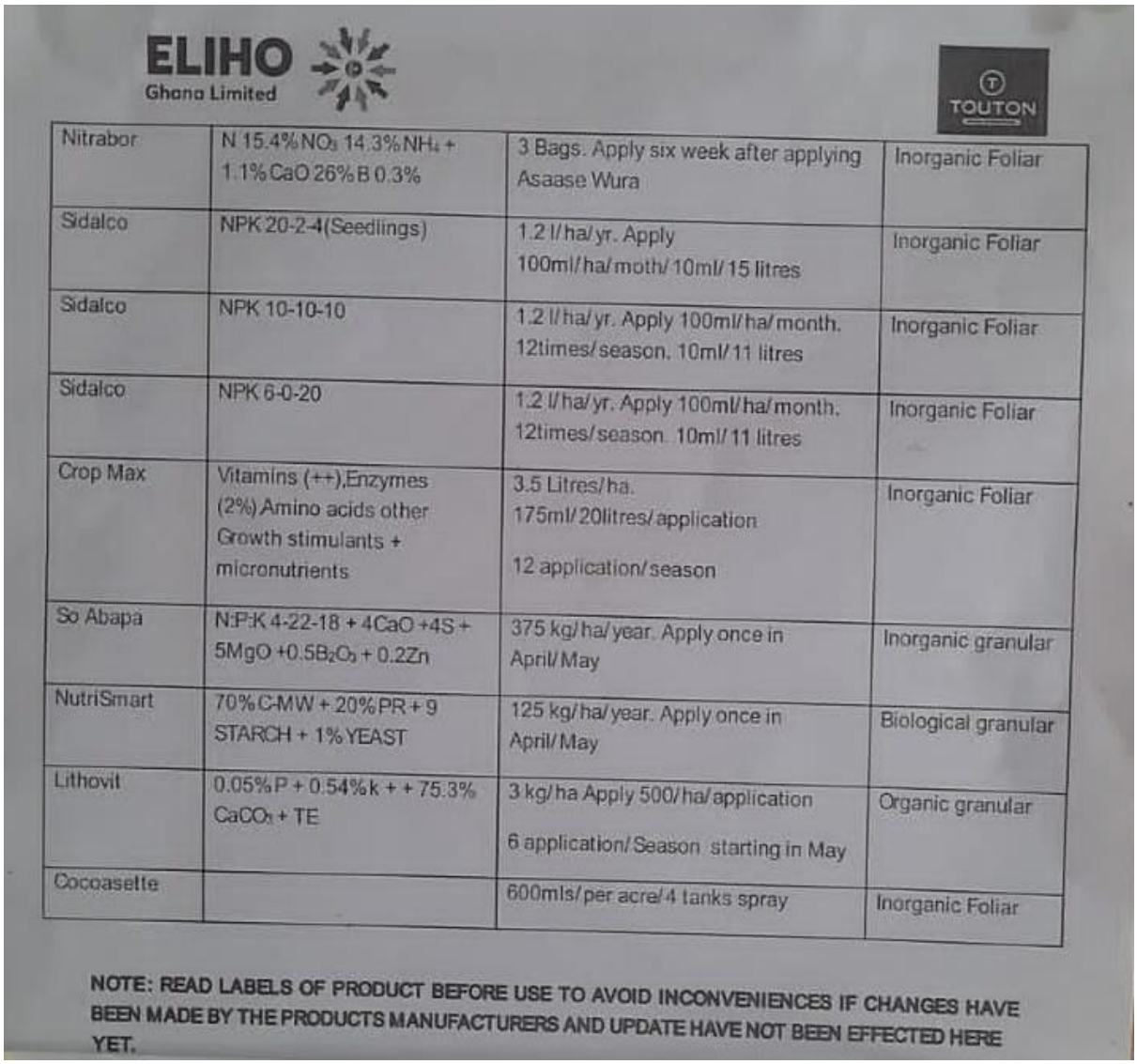
UNDESIRABLE FOREST TREES

BOTANICAL NAME	LOCAL NAME
Chlorophoraexcelsia	Odum
Albiziaceriaria	AwiemfocSamina
Entendrophragniaangolense	Adinam cedar
Funtumia elastic	Ofuntum
Alstonianoonei	Nyame- dua
Pychanthusangolensis	Otie
Terminalia superba	~~Ofrfam~~ ofram
Terminalia ivorensis	Emire


ELIHO-TOUTON COCOA GOOD PRACTICES
Towards Sustainable Quality Cocoa
8 Waste Management
9 Health and Safety
10 Child Labour
11 Working Conditions Workers' Rights and Community Relations
FARMERS ASSOCIATION
ELIHO
COCOA
Forests


ELIHO-TOUTON COCOA GOOD PRACTICES
Towards Sustainable Quality Cocoa
1 Establishing a Cocoa Farm
2 Soil Erosion
3 Optimizing Soil Fertility
4 Integrated Crop and Pest Management
5 Harvest and Post Harvest
6 Safe Handling and Use of Agro-Chemicals
ELIHO


WILDLIFE DIVISION
2021
CLOSE
SEASON
OBSERVATION
SUSTAINING WILDLIFE IN GHANA
1ST AUGUST - 1ST DECEMBER
BAN ON HUNTING AND CAPTURING OF WILD ANIMALS
WILDLIFE CONSERVATION REGULATIONS L.I.685, 1971

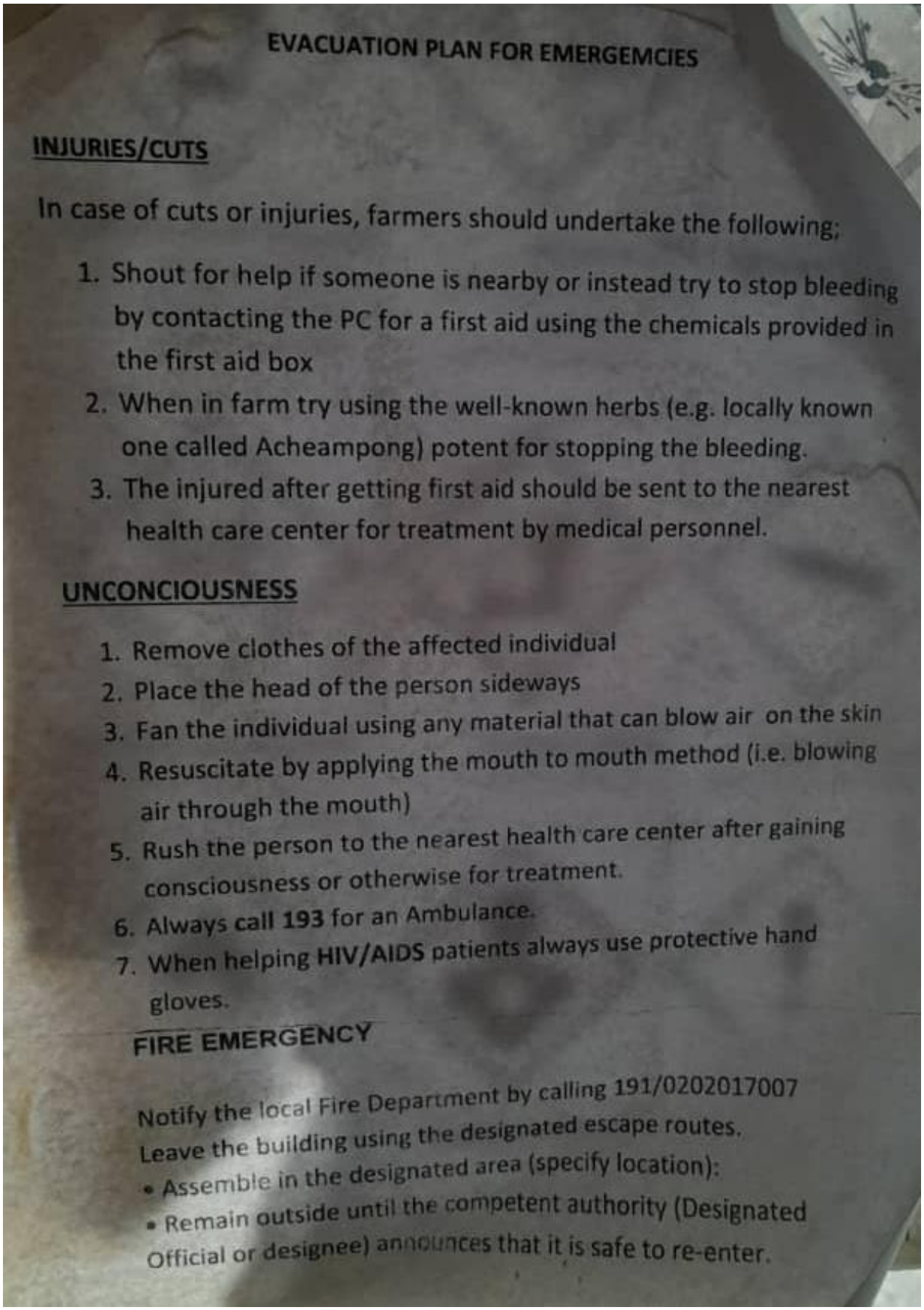


ELIHO Ghana Limited

TOUTON

Nitrabor	N 15.4% NO_3 14.3% NH_4 + 1.1% CaO 26% B 0.3%	3 Bags. Apply six week after applying Asaase Wura	Inorganic Foliar
Sidalco	NPK 20-2-4(Seedlings)	1.2 l/ha/yr. Apply 100ml/ha/moth/ 10ml/ 15 litres	Inorganic Foliar
Sidalco	NPK 10-10-10	1.2 l/ha/yr. Apply 100ml/ha/month. 12times/season. 10ml/11 litres	Inorganic Foliar
Sidalco	NPK 6-0-20	1.2 l/ha/yr. Apply 100ml/ha/month. 12times/season. 10ml/11 litres	Inorganic Foliar
Crop Max	Vitamins (++),Enzymes (2%) Amino acids other Growth stimulants + micronutrients	3.5 Litres/ha. 175ml/20litres/application 12 application/season	Inorganic Foliar
So Abapa	N:P:K 4-22-18 + 4CaO +4S + 5MgO +0.5B_2O_3 + 0.2Zn	375 kg/ha/year. Apply once in April/May	Inorganic granular
NutriSmart	70% C-MW + 20% PR + 9 STARCH + 1% YEAST	125 kg/ha/year. Apply once in April/May	Biological granular
Lithovit	0.05% P + 0.54% k + + 75.3% $CaCO_3$ + TE	3 kg/ha Apply 500/ha/application 6 application/Season starting in May	Organic granular
Cocoasette		600mls/per acre/4 tanks spray	Inorganic Foliar

NOTE: READ LABELS OF PRODUCT BEFORE USE TO AVOID INCONVENIENCES IF CHANGES HAVE BEEN MADE BY THE PRODUCTS MANUFACTURERS AND UPDATE HAVE NOT BEEN EFFECTED HERE YET.



EVACUATION PLAN FOR EMERGEMCIES

INJURIES/CUTS

In case of cuts or injuries, farmers should undertake the following;

1. Shout for help if someone is nearby or instead try to stop bleeding by contacting the PC for a first aid using the chemicals provided in the first aid box
2. When in farm try using the well-known herbs (e.g. locally known one called Acheampong) potent for stopping the bleeding.
3. The injured after getting first aid should be sent to the nearest health care center for treatment by medical personnel.

UNCONCIOUSNESS

1. Remove clothes of the affected individual
2. Place the head of the person sideways
3. Fan the individual using any material that can blow air on the skin
4. Resuscitate by applying the mouth to mouth method (i.e. blowing air through the mouth)
5. Rush the person to the nearest health care center after gaining consciousness or otherwise for treatment.
6. Always call **193** for an Ambulance.
7. When helping **HIV/AIDS** patients always use protective hand gloves.

FIRE EMERGENCY

Notify the local Fire Department by calling 191/0202017007
Leave the building using the designated escape routes.
- Assemble in the designated area (specify location):
- Remain outside until the competent authority (Designated Official or designee) announces that it is safe to re-enter.


Cargill
RAINFOREST ALLIANCE
YƐNNYƐ NNIPA NYINYIMU ƐNTOMU ƐWƆ
YƐN NSOSƆ ADWUMA MU AKASAKASA NE ANIMTIABUO SO ƐWƆ
Yenyi mpue, Yen siesie na etoo ntwa!
Ka ho asem na etoo ntwa!
YƐN NSOSƆ NNIPA FAHODIE NTIETIASOƆ SO ƐWƆ
YƐN NFA MMOFRA NYƐ ADWUMADEN ANAA ƆHYƐ AD-WUMA ƐWƆ


ƐƆ MMOA ADƆMA YI HO BAN (PROTECT ENDANGERED SPECIES)
PORCUPINE
PARTRIDGE
MONKEY
TORTOISE
PANGOLIN
ƐƆ MMOA ADƆMA YI HO BAN (PROTECT ENDANGERED SPECIES)
BOSSMAN'S POTTO
ANTELOPE
PARROT
AFRICAN CIVET
GRASSCUTTER

Annex 8: Ghana REDD+ programme screening checklist for environmental and social issues

Project Information: Name and Contact Details:				
Project Name				
Location	**Region/district/community (reserve/compartment)**			
	HIA			
Person undertaking the screening	**Name**		**Date of screening**	
	Designation			
	Address (Email, Phone number)			
Reviewer	**Name**			
	Designation			
	Address (Email, Phone number)			

Subproject Details: Attach location map (longitude-latitude coordinates (GPS reading) if available):	
Type and scope of activity *What will be done, who will do it, what are the objectives and outcomes*	
Estimated Cost	
Proposed Date of Commencement of Work	
Expected Completion of Work	
Technical Drawing/Specifications Reviewed	

Physical Data:	
Subproject Site area in ha	
Extension of or changes to existing land use	
Any plans for construction, movement of earth, changes in land cover	

Site Characteristics		
	South	

Adjoining Land Uses or Land Cover	North	
	East	
	West	
Proximity to a natural habitat e.g., wetland, river/stream, wetlands, forest reserves, protected areas etc.		
Proximity to a residence or any community resource or facility		
Proximity to a road		
Are there outstanding land disputes within the area?		
What is the status of the landholding required by the project (customary, lease, community lands, etc.)?		
What is the land currently being used for? (e.g., agriculture, gardening, etc.)		
Is there activity In Forest Reserve?		
Is there activity adjacent to Forest Reserve?		

Risks identification							
If implemented, would the activity Potentially	**Yes**	**No**	**If Yes, give a brief description**	**If Yes indicate the frequency of occurrence (likelihood)**			
				Very Rarely	***Rarely***	***Occasionally***	***Very Frequently***
Air Quality and Noise							
Cause air pollution? • generation of dust • generation of smoke • generate fumes? • generate emissions • Create objectionable odor affecting people?							
Expose workers or the community to substantial air pollution?							
Cause noise pollution							
Expose persons to excessive vibration and noise?							
Biological Resources and Natural Resources							
Occur in legally protected/nature reserve or Environmentally Sensitive Areas or a legally defined buffer zone; (forest reserves, national parks, Ramsar sites and wetlands, wildlife habitat areas, steep slopes, riparian areas, upland forests, vulnerable aquifers, biosphere reserves, World Heritage Sites, prime agricultural lands?							

Be located within 100m from a protected/nature reserve or Environmentally Sensitive Areas?							
Have effect on neighbouring protected/nature reserve or Environmentally Sensitive Areas (forest reserves, national parks, Ramsar sites and wetlands, wildlife habitat areas, steep slopes, riparian areas, upland forests, vulnerable aquifers and prime agricultural lands?							
Have effect on flora (vegetation or plants)?							
Have effect on fauna (animals, wildlife)?							
Interfere with the movement of any wildlife species or organisms?							
Lead to the clearing of forestlands and woodlands?							
Cause disturbance in natural habitats?							
Lead to modification of natural habitats?							
Drain wetlands, or be sited on floodplains?							
Lead to enhanced soil erosion due to repeated disturbance?							
Lead to road construction or rehabilitation, or otherwise facilitate access to fragile areas (natural woodlands, wetlands, erosion-prone areas)?							
Harvest wetland plant materials or utilize sediments of bodies of water?							
Involve the harvesting of timber resources?							
Involve the harvesting of non-timber resources?							
Promote in-forest bee keeping?							
Lead to increased hunting or the collection of animals or plant materials?							
Increase the risks to endangered or threatened species?							
Accelerate erosion by water or wind?							
Reduce soil fertility and/or permeability?							
Involve removing renewable natural resources such as forest products?							
Involve the extraction of non-renewable natural resources?							
Water Quality and Hydrology							

Occur within 100m distance from the nearest water body or drainage channel?							
Involve water extraction or abstraction from rivers, lakes, groundwater							
Have effect on potable water supplies to communities?							
Potentially contaminate surface water and groundwater supplies? • by generating liquid waste? • by generating liquid with human or animal waste? • by generating liquid with pH outside 6-9 range? • by generating liquid with an oily substance? • by generating liquid with a chemical substance? • by generating liquid with odor/smell?							
Lead to increase in surface run-off, which could result in flooding on or off-site?							
Potentially pollute or contaminate surface water?							
Potentially pollute or contaminate groundwater resources?							
Affect existing stream flow, reduce seasonal availability of water resources or cause changes in local natural water cycles?							
Agricultural and Forestry Production							
Affect existing or traditional agricultural production systems by reducing seed availability or reallocating land for other purposes?							
Lead to forest plantation harvesting without replanting, the burning of pastureland, or a reduction in fallow periods?							
Affect domestic livestock by reducing grazing areas or creating conditions where livestock disease problems could be exacerbated?							
Involve the use of insecticides, herbicides, and/or other pesticides?							
Hazardous Waste and Materials - *Will* the activity							
Lead to the generation of hazardous waste such as: • Pesticides, weedicides and							

other garden chemicals							
Lead to the transportation of hazardous waste?							
Lead to the recycling of hazardous waste?							
Lead to the storage and disposal of hazardous waste?							
Land Acquisition, Restrictions on Land Use and Involuntary Resettlement							
Require changes to existing land tenure system?							
Require acquisition of land (public or private, temporarily, or permanently) for its development?							
Potentially cause or aggravate land-use conflicts?							
Restrict land rights or land use rights?							
Restrict access to natural resources that cause a community or groups within a community to lose access to resource usage where they have traditional or customary tenure, or recognizable usage rights?							
Lead to the physical displacement? *Physical displacement occurs when individuals or communities are fully or partially no longer able to occupy an area and must relocate to a new location due to project activity.*							
Lead to economic displacement? *Economic displacement occurs when individuals or communities are fully or partially restricted in their access to land or resources that are important to their livelihoods and economic well-being*							
Cause a disruption on Power or other utility supply?							
Affect livelihood opportunities of people?							
Involve the use of direct workers? *Direct workers are people employed or engaged directly by the Borrower (including the project proponent and the project implementing agencies) to work specifically in relation to the project.*							
Involve the use of community workers?							

Community workers are people employed or engaged in providing community labor.							
Involve the use of contracted workers? *contracted workers are people employed or engaged through third parties to perform work related to core functions of the project, regardless of the location.*							
Involve the use of primary supply workers? *Primary supply workers are people employed or engaged by the suppliers.*							
Involve the use of Children?							
Social Inclusion							
Cause the exclusion of migrants, poor, persons with disabilities, youth, women, men from discussions related to the project?							
Are women and youth (vulnerable groups) considered in project implementation (decision making, farming activities, etc)?							
Are women and youth (vulnerable groups) benefiting from project implementation (access to tools, fertilizers, etc for farming activities)?							
Prioritize one demographic over the other in terms of labor?							
Unfairly allocate more benefits to a particular demographic?							
Give more opportunities to a particular demographic in the formation of governance structures?							
Cultural Heritage							
Involve excavations, demolition, movement of earth, flooding or other changes in the physical environment?							
Be located in, or in the vicinity of, a recognized cultural heritage site?							
Affect culturally important sites in the community such as sacred areas, burial grounds or cemeteries?							
Affect religious sites shrines, temples, mosques, churches?							
Affect any archeological or historical site?							
Community Health and Safety							
Lead to labour influx? *Labor influx consists of the rapid migration to and*							

settlement of workers in the project area, typically in circumstances where labor/skills and goods and services required for a project are not available locally. Projects also stimulate speculative influx ("followers"), including those seeking employment or enterprises hoping to sell goods and services to the temporary project workforce, as well as "associates" who often follow the first two groups to exploit opportunities for criminal or illicit behavior (e.g., prostitution and crime).							
Create conditions that can lead to community health problems such as community exposure to health risks and vector-borne diseases, communicable diseases, injuries, nutritional disorders, HIV/AIDS and infectious Diseases?							
Lead to increase road traffic, vehicles or fleets of vehicles for the purposes of the activity?							
Involve the use of Security personnel?							
Other Areas							
Production or use in any product or activity deemed illegal under Ghanaian laws or regulations or international conventions and agreements, or subject to international bans, such as pharmaceuticals, pesticides/herbicides, ozone depleting substances, PCB's, wildlife or products regulated under CITES.							
Does the proposed REDD+ intervention risk displacing emissions to another part of Ghana?							
Is there a risk that stakeholders who have grievances linked to the proposed REDD+ intervention may not have an easily accessible, culturally appropriate avenue to address these grievances?							
Does the REDD+ intervention have, or increase the risk of negative impacts on gender (exclusion, discrimination, abuse etc.)							

Risks/Impact classification:

When considering the location of a subproject, rate the sensitivity of the proposed site in the following table according to the given criteria. Higher ratings do not necessarily mean that a site is unsuitable. They indicate a real risk of causing undesirable adverse environmental and social effects, and that more substantial environmental and/or social planning may be required to adequately avoid, mitigate or manage potential effects.

Risk areas	Site Sensitivity (severity)			Rating (L,M,H)
	Low (Risk that can impact on a small scale)	Moderate (Risk that can cause an impact but not a serious one)	High (Risks that can cause result in huge impact)	
Natural habitats (Biological Resources and Natural Resources)				
Air Quality and Noise				
Water quality and water resource availability and use (hydrology)				
Agricultural and Forestry Production				
Land and Farming Tenure (Land Acquisition, Restrictions on Land Use and Involuntary Resettlement)				
Socio-economic, Livelihood and Labour				
Hazardous Waste and Materials				
Social Inclusion				
Community Health and Safety				

Overall proposed subproject/activity risk classification: ……

E & S assessment comments based on site visit

Determination of environmental category based on findings of the screening: A ____B ____C ____

Recommendations for Instruments to be prepared		
Recommendation:	**Tick as appropriate**	**Justification**
No further instrument required		
Requires the preparation of:		
Environmental Impact Assessment (EIA)		
Environmental and Social Impact Assessment (ESIA)		
Environmental and Social Management Plan (ESMP)		
Resettlement Action plan (RAP or ARAP)		
Environmental and Social Audit		
Hazard or Risk Assessment		
Social and Conflict Analysis		
Cultural Heritage Management Plan		
Biodiversity Management Plan		

Prepared by: ……. **Date:** ……

Potential Environmental and Social Issues That Require Referral to EPA or Using EA1 Form

	Benchmark and Issues	**Impact description**	**Yes**	**No**	**Remark**
1.	Statutory provisions	Is the proposed plantation area less than 40ha?			
2.	Statutory provisions (*see Natural Habitat Issues in Checklist*)	Are there any ecologically sensitive/ critical areas within the proposed project area (**refer to Annex 3)**			
3.	Protected areas and wildlife	Will project activities potentially impact natural habitats or critical wildlife species			
4.	Biodiversity loss	Will land use change or vegetation clearance lead to loss of exceptional flora/ fauna			

5.	Water pollution	1. Is there a local stream close to the project site? 2. Does it flow all year round? 3. How long does it take to walk to this stream 4. Do you think any project activity will affect this stream			
6.	Soil erosion	Are there steep slopes in the project area? Can you easily walk on the slopes without falling			

National Requirements			
If implemented, would the activity require permit or approval from the following national regulatory agencies?	**Yes**	**No**	**Justification**
Environmental Protection Agency			
Forestry Commission			
Water Resources Commission			
Ghana Standards Authority			
Food and Drugs Authority			
Minerals Commission			
Plant Protection & Regulatory Services			
Ghana Health Service			
District Assembly			

Clearance	
Name	
Designation	
Signature	
Date	

ANNEX ENVIRONMENTALLY SENSITIVE/ CRITICAL AREAS

NB: *Projects sited in these areas could have significant effects on the environment and the EPA could require a more stringent environmental assessment*
All areas declared by law as national parks, watershed reserves, forest reserves, wildlife reserves and sanctuaries including sacred groves
Areas with potential tourist value
Areas that constitute the habitat of any endangered or threatened species of indigenous wildlife (flora and fauna)
Areas of unique historic, religious, cultural, archaeological, scientific or educational interest
Areas that provide space, food, and materials for people practising a traditional style of life
Areas prone to disaster (geological hazards, floods, rainstorms, earthquakes, landslides, volcanic activity etc.)
Areas prone to bushfires
Areas classified as prime agricultural areas
Recharge areas of aquifers
Water bodies characterized by one or any combination of the following conditions: Tapped for domestic purposes Within controlled/ protected areas Which support wildlife and fishery activities
Mangrove areas characterized by one or any combination of the following conditions: With primary pristine and dense growth Adjoining mouth of major river system Near or adjacent to traditional fishing grounds Which acts as natural buffers against shore erosion, strong winds and storm floods
Estuaries and lagoons

Other coastal areas of ecological, fisheries or tourism importance or which are subject to dynamic change
Wetlands
Rivers
Areas of high population density