SAFEGUARDS IMPLEMENTATION AND MONITORING REPORT

AHAFO ANO SOUTH - ATWIMA MPONUA - ATWIMA NWABIAGYA HIA

CLIMATE CHANGE DIRECTORATE

(NATIONAL REDD+ SECRETARIAT)

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LIST OF ABBREVIATIONS

AfDB	African Development Bank
AASWDA	Ahafo Ano South-West District Assembly
APR	Annual Progress Report
CFU	Colony Forming Unit
CIF	Climate Investment Funds
CLP	Cocoa Life Programme
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
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
FDP	Farm Development Plan
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
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
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
PLP	Production Landscape Programme
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
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. The Western Region holds the largest area of remaining primary forest in Ghana and produces over 50per cent of the country's cocoa beans. 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 Ahafo Ano South - Atwima Mponua - Atwima Nwabiagya HIA is one of the designated landscapes where GCFRP implementation is underway with the support of Forestry Commission, COCOBOD, World

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

Cocoa Foundation (WCF), Solidaridad, Mondelez and Olam, among others. 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, 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 Ahafo Ano South --Atwima Mponua – Atwima Nwabiagya HIA.

2.0 GENERAL DESCRIPTION OF AHAFO ANO SOUTH - ATWIMA MWABIAGYA - ATWIMA MPONUA HIA

2.1 Basic Administration

Located in Ashanti Region of Ghana, the Ahafo Ano South - Atwima Mponua - Atwima Nwabiagya HIA encompasses four districts namely: Ahafo Ano South West, Ahafo Ano South East, Atwima Mponua and Atwima Nwabiagya. The landscape spreads over 365,673 Ha. (Figure 1).

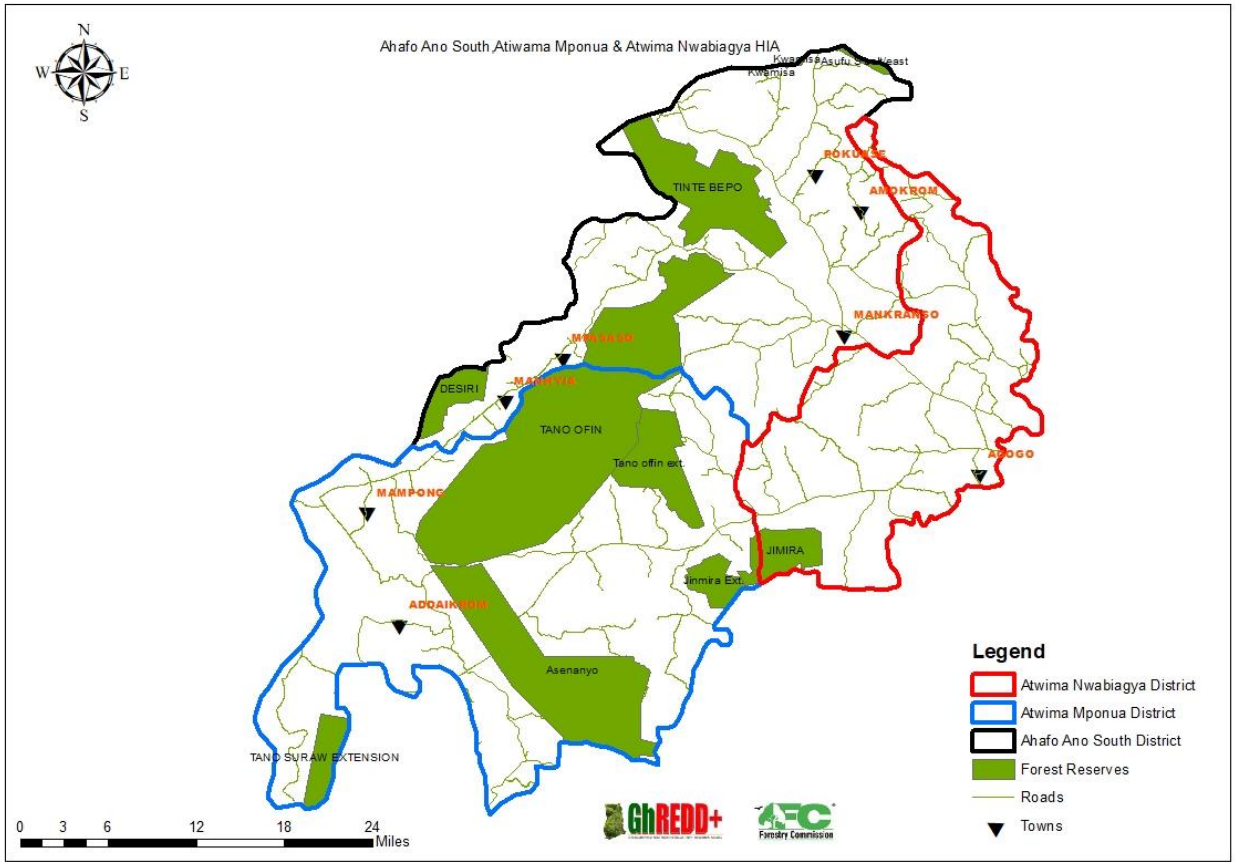


Figure 1: Map of Ahafo Ano South - Atwima Mponua - Atwima Nwabiagya HIA

Ahafo Ano South West District is one of the forty-three districts in Ashanti Region and one of the 261 Metropolitan, Municipal and District Assemblies (MMDAs) in Ghana. It was once a part of the larger Ahafo Ano South District, which was formed in 1988 from the former Ahafo Ano District Council. On March 15, 2018, a portion of the district was divided to form the Ahafo Ano South East District, renaming the remaining portion Ahafo Ano South West District. Legislative Instrument (L.I.) 2323 from 2017 established it. The district assembly's capital city is Mankranso, which is situated in the western portion of the Ashanti Region. The District is

further divided into 29 Electoral Areas and Five (5) Area Councils. 29 elected, 13 appointed, one district chief executive, and one member of parliament make up the 44 assembly members.

Atwima Mponua District is one of the forty-three districts in Ashanti Region, Ghana, and is the westernmost district in the Ashanti Region. It was formerly a part of the then-larger Atwima District in 1988, until a decree on November 12, 2003, which took effect on February 18, 2004, divided the district into Atwima Mpouna District and Atwima Nwabiagya District, with the remaining portion remaining in the district (which it was elevated to municipal district assembly status on 15 March 2018 to become Atwima Nwabiagya Municipal District). The district assembly's capital city is Nyinahin, which is situated in the western portion of the Ashanti Region. A District Chief Executive, a Member of Parliament, 39 Elected Assembly Members from the 39 Electoral Areas, and 16 individuals nominated by the government make up the Assembly's 57 members. The Executive Committee acts as the Assembly's executive and coordinating body.

Atwima Nwabiagya Municipal District is one of the forty-three districts in Ashanti Region, Ghana. When it was once called as Atwima District, the district assembly was initially established in 1988. The remaining portion of the district was renamed Atwima Nwabiagya District after a decree on November 12, 2003, which took effect on February 17, 2004, divided a portion of the district to create Atwima Mponua District. Nevertheless, the district's northern portion was eventually divided into the Atwima Nwabiagya North District on March 15, 2018, and the remaining portion was elevated to municipal district assembly status the following year to form the Atwima Nwabiagya Municipal District. The municipality's capital city is Nkawie, which is situated in the western portion of the Ashanti Region. Eight subcommittees of the District Assembly report to an executive committee and the General Assembly, which is where important decisions are decided. There are 55 members of the assembly; 38 are elected and represent the 38 electoral zones, and the remaining 17 are chosen by the central government.

Table 2: Administrative districts

Region	**District**	**District Capital**

Ashanti	Ahafo Ano South West	Mankraso
	Ahafo Ano South East	Adugyama
	Atwima Mponua	Nyinahin
	Atwima Nwabiagya	Nkawie

2.2 Socio-economic, geographic and environmental profile

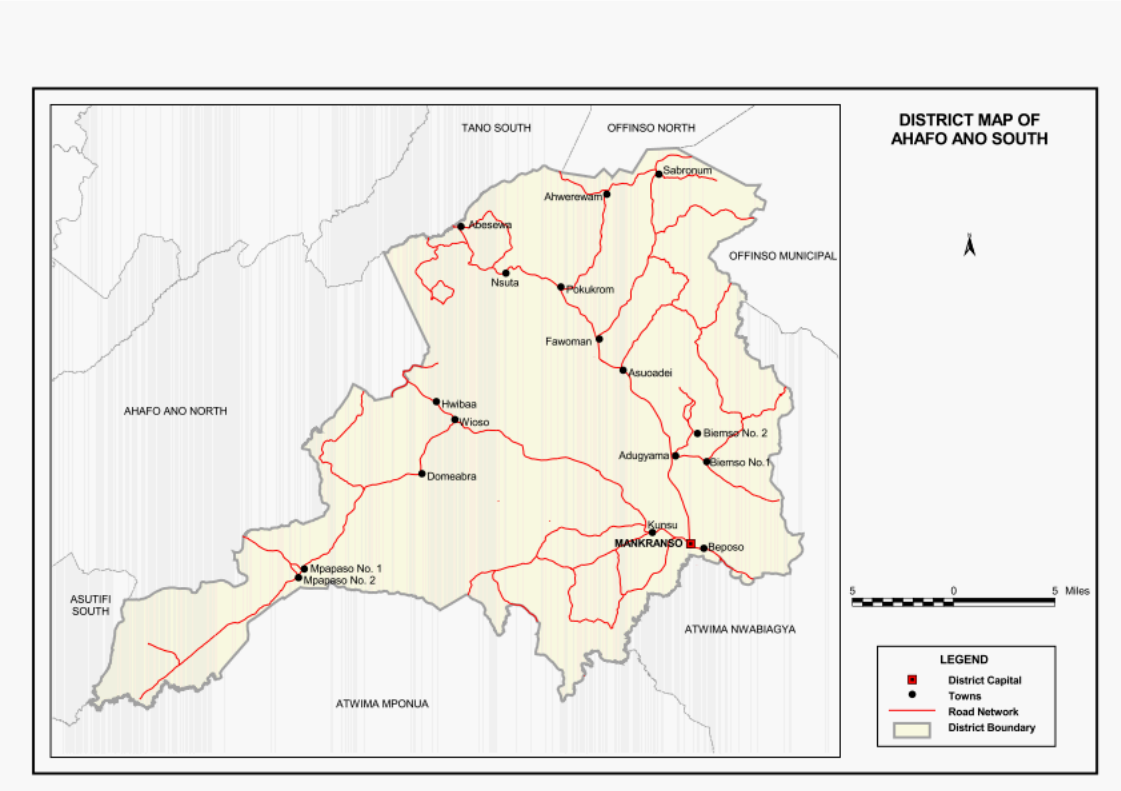


Figure 2: Map of Ahafo Ano South

2.2.1 Ahafo Ano South West District

Demographics:

The Ahafo Ano South West district is located in the north-western part of the Ashanti Region covering an area of approximately 645.54km^2 representing 2.6 percent of the entire region (24,370.5km^2). It lies between longitude 1°45'W and 2°20'W and latitude 6°42'N and 7°10'N. The District shares boundaries with four districts, in the North with Ahafo Ano South-East District, Atwima Mponua District to the South, Atwima Nwabiagya Municipal to the East and Ahafo Ano North Municipal to the West all in the Ashanti Region. The location of the District falls within the forest zone of Ghana.

According to the 2010 Population and Housing Census (PHC), the Ahafo Ano South-West District has a total population of 62,529, which accounts for 1.3 percent and 0.3 percent of the population of Ashanti Region and Ghana respectively. In comparison, the 2010 PHC (62,529) decreased by 6,154 to that of 2000 PHC (68,683) and increased by 20,464 compared to 1984 (42,065). Per the figures available from the Ghana Statistical Service (GSS), the district recorded 1.09 percent annual average growth rate from 1984 to 2010. Using the growth rate of 1.09 percent, the population of the district is projected at 77,186 for 2021. This suggests that the district has the potential to increase in size and grow to support any development in the district.

Males make up 51.8 percent (37.182) of the district's total population, and females make up 48.2 percent of the entire population (34,589.28). 43.0 percent of the population are under the age of 15, 17.6 percent is between the ages of 15 and 24, and 4.6 percent is 65 years and older. This means that the district's young population, which has significant potential for socioeconomic development, makes up just under three-fifths (60.6 percent) of the overall population. Comparatively, the District's population pyramid mirrors that of the regional and national pyramids and is a typical developing and rural district. The district's young population of 60.6 percent is higher than both the region (58.4%) and national (58.3%). Children (under 15 years old) account for 43.0 percent of the population, which is higher than the national and regional averages of 37.7 percent and 38.3 percent, respectively. This suggests that the population is large, young, and expanding, which has an impact on concerns of development including education, health, recreation, the environment, sanitation, security, and safety. In total, the district has a 47.6 percent dependence age group (those under 15 and those 65 and above), compared to a 52.4 percent working age group (15-64 years). The district's age dependence ratio is 90.8 percent, which is greater than both the regional and national averages of 72.5 and 75.6 percent, respectively. According to this, every 100 people in the working-age range of 15 to 64 in the district must care for 91 dependents, including children and the elderly. This shows that the district's working-age population is more responsible for providing for many dependents.

Climatic Conditions:

According to the district assembly, the district has a wet semi-equatorial climate. Between 2018 to 2021, climate conditions of the district have not conformed to the usual conditions. During this period, the district experienced erratic rainfall patterns and higher temperatures

(22 ºC - 33 ºC) throughout the entire years. The vegetation of the district is mainly rain forest and exhibits moist semi- deciduous characteristics. Major soil types found in the district are Acrisols, Lixisols and Leptosols. The vegetation and varying soil types jointly support the growth of big and tall trees of different kinds such as Wawa, Ofram, Sapele, Odum. Kyenkyen, Fununtum and Mahogany. The lands in the district are very fertile and support crop production. Food and cash crops such as cocoa, cassava, cocoyam, maize, rice, pear, banana, mango, tomatoes, garden eggs, onions, pepper, groundnut, and others are widely grown in the district as well as rearing of fishes, and pigs. Bad farming practices such as shifting cultivation, slash and burn method of farming and illegal logging is gradually depleting the forest cover and reducing soil fertility. There are two main forest reserve (Tano Offin and Tinte Bepo Forest reserve) in the district which helps to preserve the vegetation and bio-diversity. The district forms part of the Ashanti Plateau. The topography is generally undulating; the most prominent feature is the range of hills, which stretch from west to northeast. The highest elevation is about 2,500ft (763m) above sea level and these include the Aya, Kwamisa and Tinte Hills.

The principal rivers in the district include the Mankran, Offin, Abu, and Aboabo, as well as their tributaries. The Offin basin includes certain places. These rivers' and streams' volume and flow have been negatively impacted by the ongoing clearance of their catchment areas for agricultural use. Although the rivers still provide a significant portion of the household water supply, they have essentially turned into seasonal rivers, and as a result, many settlements have severe water shortages during the dry season. The district is endowed with immense natural resources in the form of arable land, forests, Clay, Bauxite and Gold. The total arable land in the district is about 8,300 hectares, representing about 0.014 percent of the regional total of 960,000 hectares.

2.2.2 Ahafo Ano South East District

Demographics:

The District is located on the North-western part of the Ashanti Region and covers a total surface area of approximately 545.16km^2 representing 2.2 percent of the region's total surface area (24,370.5km^2). It lies in Longitude -1.87, Latitude 6.88, Altitude 267.5. Adugyama, the capital is about 42km from Kumasi. The District shares direct boundary with four districts; in the North with Offinso North District, Ahafo Ano South-West to the South, Atwima Nwabiagya North District to the East and Tano South Municipal in Brong Ahafo Region to West. Others are

Offinso Municipal to the North East, Atwima Nwabiagya to the South East and Ahafo Ano North Municipal to the South-West.

Per reports from the district assembly, the projected population for 2020 was 64,958 while 2021 is 65,571 using the Annual Intercensal Growth Rate of 0.94%. Males form about 50.8% of the total estimated population and females 49.2%.

Climatic conditions:

The climate of the district is the wet semi-equatorial type, according to the district assembly. The mean monthly temperature is about 26°C. Maximum temperature of about 29°C is recorded in March and April just before the onset of the rainy season. The rainfall pattern consists of two rainy seasons. The major season is usually between March and July with June as the peak period. The minor season is between late September and November. Between 150 and 170 centimeters of rain fall annually on average. The amount and frequency of rainfall varies greatly from year to year. Every year, there are typically 100 to 120 rainy days, with 75 percent of those days falling during the main season. December through March are essentially dry months (harmattan period). Particularly during the wet months and in the early morning hours, the relative humidity is significant. Between December and January, the relative humidity could occasionally be as low as 70% thanks to the northwestern winds. The district forms part of the Birimian formations-mainly phyllites and schist-intruded with granite rocks. An area like Sabronum has gold deposits. Evidence exists at Dwinyama and Sabronum as old mining sites. There is agricultural land in the district. Around 60% of the arable land is under cultivation, and about 80% of the area is suitable for crop cultivation. The primary food crops include maize, rice, cassava, yam, cocoyam, and plantains. Numerous agricultural products, including citrus, cocoa, oil palm, plantains, cassava, tomatoes, maize, and rice, are supported by the soils and rainfall pattern.

2.2.3 Atwima Mponua District: Demographics

The District lies between longitude 2°00'W and 2°32'W and latitude 6°32'N and 6°75'N covering a land area of 1,883.2km^2. Mponua, which means "Group of Trees", was named after the four Forest Reserves totalling a land area of 75,323.0 hectares representing 40.0 percent of the total land area of the District (AMDA, 2010a). The District shares boundary with eight

Districts, principally in the South with the Amansie West District, Ahafo Ano South District to the North, Atwima Nwabiagya District in the East and Bibiani-Anwhiaso-Bekwai District of the Western Region to the West. The location of the District offers it the opportunity to interact with three political regions (Brong Ahafo Region, Western Region and Central Region) of the country. Nyinahin, the capital is more in the west of the District, about 45km from Kumasi.

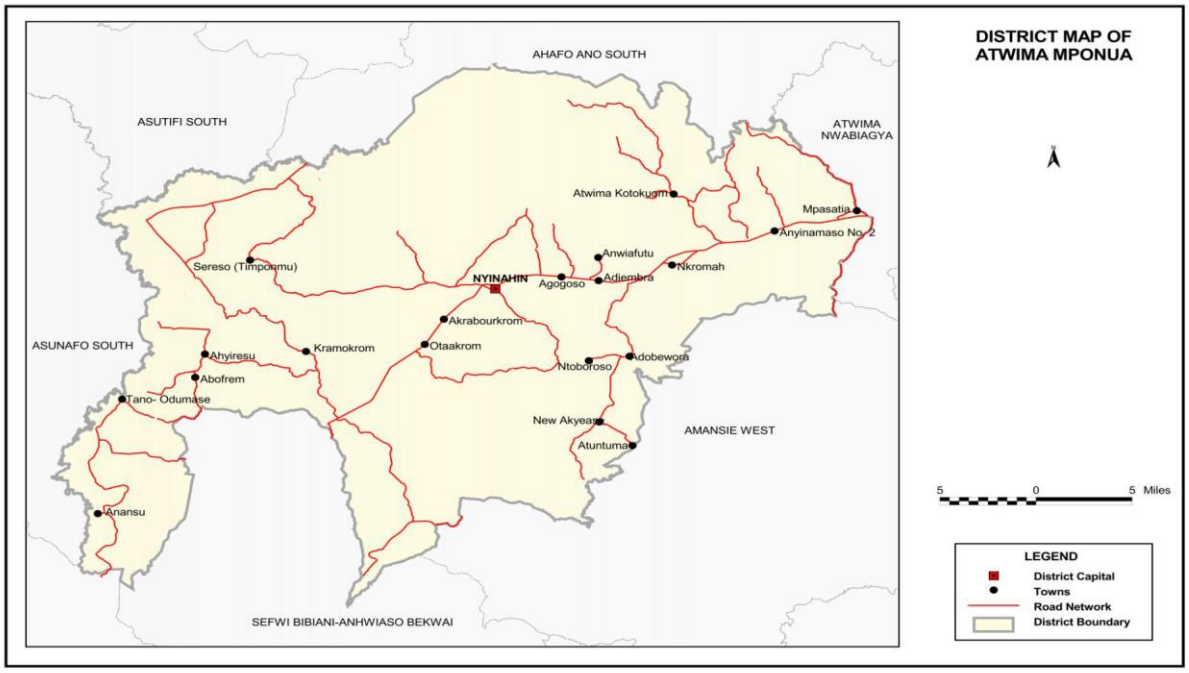


Figure 3: Map of Atwima Mponua district

The results of the 2010 PHC show that the total population of Atwima Mponua District as at 26th September, 2010 is 119,180 which account for 2.5 percent and 0.5 percent of the population of Ashanti Region and Ghana respectively. With this population, the Atwima Mponua District ranks ninth in terms of population in the region, with Offinso North District having the lowest population and Kumasi Metropolis having the greatest (2,035,064). (56,881). The outcome shows that the District's population increased by 10.1% from its 2000 population estimate (108,235). The District did, however, record a yearly average intercensal growth rate of 0.9 percent between 2000 and 2010, which is lower than the regional average of 2.7 percent and the national average of 2.5 percent. The District's population is anticipated to reach 123,862 in 2014 and 127,494 in 2017 with an annual average intercensal growth rate of 0.9 percent (using the exponential method).Climatic Conditions:According to the district assembly,

like most areas that lie in the wet semi-equatorial forest zone in Ghana, the District is marked by double maxima rainfall seasons. The major rainfall period begins from March to July peaking in May. The average annual rainfall for the major season is about 1,700 millimetres – 1,850 millimetres per year. The minor rainfall period begins in August tapering off in November with an average minor annual rainfall of 1,000 millimetres – 1,250 millimetres per year. However, from December to February, it is dry, hot and dusty. The average temperature is about 27oC with variations in mean monthly temperature ranging between 22oC to 30oC throughout the year. The climate in the District is ideal for the cultivation of both cash and food crops such as cocoa, plantain, rice and all kinds of vegetables. The district has undulating topography dissected by plains and slopes with average height of 76 meters above sea level. The high grounds are part of the Atiwa-Atakpame mountain range that lies to northwest of the District. The Offin and Tano rivers mostly drain the District. These rivers can be used for both home and agricultural reasons because they flow continuously throughout the year. In the District, irrigation agriculture has great potential, particularly at Adiembra and Tanodumase, where expansive flat areas can be found near the Offin and Tano Rivers, respectively. The majority of the vegetation is of the semi-deciduous variety. The flora and fauna are diverse, consisting of several varieties of tall, ornamental, and economic tree species, as well as game and wildlife. These are very vast economic potential for timber based value adding industries. There are four forest reserves in the District stocked by valuable timber species such as Wawa, Sapele, Esa, Asafena, among others. The reserves include Asanayo Forest Reserves, Gyemara Forest Reserves, Tano–Offin Forest Reserves and Offin Forest Shelter. The soils in the District are generally suitable for agriculture. They are however classified into two using their major characteristics as moderately suitable and marginally suitable soils. These deep soils are suitable for a variety of monetary, food, and tree crops. It is supported by the mineral-rich Birimain and Tarkwaian rocks, which are rich in bauxite and gold. District-wide, there are rocks that contain gold. Nyinahin is home to bauxite, however it is not currently being utilized. It is reasonable to anticipate that the extraction of the District's minerals will significantly energize its development through the creation of jobs, increased household incomes, and the much-needed funds in the form of royalties to the District Assembly.

2.2.4 Atwima Nwabiagya District

Demographics:

The Atwima Nwabiagya District lies approximately between latitude 6° 32'N and 6° 75'N, and between longitude 1° 36' and 2° 00' West. It is situated in the Western part of the Ashanti Region and shares common boundaries with Ahafo Ano South and Atwima Mponua Districts (to the West), Offinso Municipal (to the North), Amansie–West and Atwima Kwanwoma Districts (to the South), Kumasi Metropolis and Afigya Kwabre Districts (to the East). It covers an estimated area of 294.84 sq km.

Figure 4: Map of Atwima Nwabiagya district

The district had a total population of 149,025 as of the 2010 Population and Housing Census, with a 1.6 percent annual growth rate. According to the census, the district had a sex ratio of 93, meaning there were 93 more females than males living there. The district is expected to have 156,293 residents in 2013. The district's proximity to Kumasi has a significant impact on its population increase. Due to the great demand for housing in the Kumasi Metropolis and the majority of communities in the region being used as dormitory towns by those who work there, most people consider the area to be suitable for living in. The population density of the district is 505 people per square kilometre.

Climatic Conditions:

According to the district assembly, the district has an undulating topography. The lands have average heights of about 77 metres above sea level. The high lands have gentle to steep slopes. The highest points in the district can be found in the Barekese, Ntensere and Tabere areas. There are a number of wider valleys with no evidence of stream flow. These valleys provide opportunities for rice, sugarcane and vegetable cultivation. The Offin and Owabi are the main rivers which drain the surface area of the district. There are however, several streams in the district. These include Kobi and Dwahyen. Two major dams, Owabi and Barekese have been constructed across the Owabi and the Offin rivers respectively. These dams supply pipe borne water to the residents of Kumasi and its environs. Some of the rivers and streams have farming operations near to their banks, which raises the levels of eutrophication and siltation in some of them. Due to the discharge of liquid and solid waste into them, those that pass through significant settlements have also been contaminated. The district's water bodies must be managed appropriately to support agriculture and a sustainable environment. The district lies within the wet semi-equatorial zone, which is marked by double maximum with annual rainfall ranging between 170cm and 185cm. The major rainfall season is from Mid-March to July, and the minor season is between September and mid-November. Rainfall in the district is not distributed throughout the year. It is also not very reliable. It is therefore not safe to rely solely on rain fed agriculture. Agriculture within the district must incorporate soil and water conservation measures at all times to ensure good yield. Temperature is fairly uniform ranging between 27ºC (August) and 31ºC (March). Mean relative humidity of about 87 to 91 percent is characteristic of the district. The lowest relative humidity usually occurs in February/April when they are between 83 -87 in the morning and 48-67 in the afternoon. The district's vegetation is

mostly of the semi-deciduous variety. Human activities (logging, farming, bush fires, etc.) have significantly altered the vegetation type, depriving it of its original valued tree species (such odum and sapale), animals, and other forest products. However, the district does have a few isolated forest reserves. These include the Barekese Water Works Forest Reserve and the Owabi Water Works Forest Reserve, which safeguard the Ofin and Owabi rivers' watersheds. In addition part of the Gyemena Forest Reserve is located in the district. The Barekese and Owabi forest reserves have been encroached upon by farmers, sand winners and illegal chain saw operators. These practices continue to threaten the lives of the offin and Owabi Rivers, and the Barekese and Owabi reservoirs. Public education, reforestation and proper enforcements of existing laws should be carried out to protect and conserve water bodies in the district. The district is underlain by the Lower Birimian rocks, which consist of phyllites, greywaches, achists and gneiss, and the Cape Coast Granite. Both the Lower Birimian and the Cape Coast Granite are of considerable economic importance since they do bear Gold, and good clay deposit for ceramics and brick making. The Cape Coast Granite is a good potential for the building and road construction industry. The predominant soils in the district are the Kumasi-Asuansi/Nta-Ofin Compound Associations and the Bekwai- Nzema/Oda Complex Associations. The Kumasi-Asuansi Compound Associations developed over cape Coast Granites are generally medium to coarse textured, good structured and moderately gravelly. The soils are capable of storing a lot of moisture. The soils are not suitable for mechanical farming. The cultivation of hands is advised. The soils are suitable for farming. They are ideal for both tree and agricultural crops, including ginger, cocoa, pineapple, citrus, mango, guava, avocado, maize, cassava, yams, and cocoyam. Rice, sugarcane, and vegetable agriculture do well in the valley bottom soils.

2.3 Traditional structures, Socio-cultural values and beliefs

Traditional Authorities play very important role in the administration of the Ahafo Ano South – Atwima Mponua – Atwima Nwabiagya HIA. The people's traditional structure grants the chief authority and respect in the villages. In a traditional environment, the chief has both executive and legislative authority within the borders of the stool and is supported in ruling by a hierarchically organized council of elders, which includes queen mothers. There are two main paramountcies in Ahafo Ano South, headed by Sabronum Paramount Chief and Mpaaso I Paramount Chief. Besides these, there are other sub chiefs heading the various towns and villages. These chiefs are obligated to the Manhyia Palace, either directly or indirectly. They are

well-liked by the populace, respect and adhere to the established regional traditions. These traditional institutions' rigidity and organization provide a favorable environment for the Assemblies' open interaction with the diverse communities. All community-focused projects are routed through the competent Assembly members and traditional leaders. The Atwima Mponua district has no Paramount Chiefs but rather Divisional/Stool Chiefs who owe direct or indirect allegiance to the Manhyia Palace. There are six traditional authorities or divisional chiefs in the District. The majority of the HIA's towns have designated Tuesdays and Fridays as holy days or days off from farming. However, Tuesdays are set aside for communal work projects so that people can use them to clean up their surroundings. Since the District Assemblies and the conventional authorities get along well, law and order maintenance and administration are successful. This suggests that there is harmony between the District Assemblies and Traditional Authorities, which has allowed for significant progress over time through resource mobilization and other difficulties.

The predominant cultural practice in the HIA is the Asante culture as reflected in the whole region. Asante-Twi is the primary language used, but Ewe, Bono, Fante, Krobo, and other Northern dialects are also spoken in isolated areas. The food that is most frequently eaten is called "fufu," which is typically made with cassava, plantains, or cocoyams and served with soup. Others include roasted plantain/cocoyam that is served with roasted groundnuts and boiling plantain/cocoyam that is eaten with "kontonmire" or garden eggs stew. The cloth is the main traditional attire; it is worn by males and females to social gatherings like funerals, churches, festivals, wedding and naming ceremonies. The main dance is Adowa, Kete, and Nwomkro. The Asantes, Bonos, Fantes, and Akyems, who speak Akan, are the majority of the population in the HIA, and there are small populations of other tribes, mostly from the Upper East, Upper West, and Northern Regions. Other species include Ewes, Gas, and Fantis. Asante-Twi is primarily the most widely used language, and there appears to be both cultural diversity and coexistence. Since its founding, there has never been any ethnic conflict in the HIA. This has made it simpler for the populace to carry out daily tasks while guaranteeing that all ethnic groups coexist peacefully to foster development.

The HIA has a very high level of communal spirit because the intrinsic notion of love, respect, and coexistence that permeates across the villages directly reflects the exercise of royal power. Agriculture (crop farming and animal husbandry), cooking/food preparation, wood carving,

batik tie-dye, and basket weaving make up the majority of the traditional knowledge in this area. The primary farming implements used by farmers are the cutlass, hoe, and basket.

The district essentially has three different religions: Christianity, Islam, and Traditional Religion, with Christianity being the most prevalent.

Festivals

The prominent traditional festival of the people is the Asante's festivals such as Akwasidae and Awukudae are important cultural practices of the people in the HIA. Every six weeks, the Akwasidae and Awukudae celebrations are observed. If properly planned, it can be anticipated that these beneficial cultural practices (festivals) could be leveraged to mobilize support for development initiatives. A prominent traditional festival of in Atwima Mponua district is the 'AMANANO ASUOBO'. The seven-day festival is intentionally followed by the populace to commemorate "spiritual cleaning by their forefathers" and is thus marked by the spirit of purity. Asantes make up the majority of the population of the HIA, with small populations of other tribes primarily from the Upper East, Upper West, and Northern Regions, it can be considered that the HIA is essentially homogenous. Other species include Ewes, Gas, and Fantis. All of the ethnic groups coexist peacefully.

2.4 Land Tenure and farming

Land for agriculture may be obtained through hiring, outright purchase or share cropping which is the most common. There are two main types of share cropping/holdings namely:

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.

The HIA practices mono-cropping, mixed cropping, and plantation cropping, which are the three main types of crop cultivation. Hoes and cutlasses are the most often used tools in the traditional farming method, which is widely utilized to prepare the soil. Slash and burn techniques are connected to this system. The farming practice with the greatest adoption is shifting cultivation. The typical fallow phase follows one to three agricultural seasons and lasts between four and five years. The HIA is fairly well-endowed with an abundance of inexpensive migrant labour that is readily available all year long. However, family members, including children, typically engage in certain farming chores.

2.5 Settlement pattern, livelihoods and markets

There are 219 known settlements in the Ahafo Ano South. The 219 villages make up around 74.8 percent (890.7 km^2) of the District's total land area, which is roughly 1,190.7 km^2. Forest Reserves make up the remaining 25.2 percent (753.28km^2).

The Ahafo Ano South West district has a total of about 119 settlements. According to demographic definition, the district has roughly six towns with a population of more than 5000 people, which are considered urban areas. These include Mankranso, the district's administrative center, Kunsu, Wioso, Hwibaa, and Mpasaso No. 1 and 2. The provision of social, economic, and technical infrastructure is negatively impacted by the skewness in the population distribution in favor of urban areas, which often requires a necessary threshold population to justify its provision. From the analysis, 56% of the district population lives in the

urban areas and about 44% live in the rural areas. This indicates that large proportion of the district population live in the rural areas where poverty, deprivation, illiteracy and other social vices are more pronounced.

According to the 2010 PHC, in Ahafo Ano South, the proportion of persons 15 years and older representing 69,334 form 57.0 percent of the entire population (121,659) comprising 34,699 males (50.1%) and 34,635 females (49.9%). The percentage of the population that is economically active (75.5%) is much greater than the percentage of the population that is not economically engaged (24.5 %). A little over 96 percent (96.4 %) of the economically active population is employed, compared to 3.6 percent who are jobless. In addition, full-time schooling accounts for the majority of the economically inactive population (46.2%), followed by household responsibilities (29.8%), being too young or old (10%), and pensioners/retired (40.2%). It's also important to note that 7.1% of the population was not working because they were ill or disabled. It reveals that skilled employees in agriculture, forestry, and fisheries make up the largest occupational category (74,9%), followed by those in services and sales (8.2%), craft and allied trades, and then construction (6.7 %). Only 5% of the workforce was in high-skilled occupations including managers, professionals, and technicians. The most common occupation for men, with a male to female ratio of 77.3 percent, is skilled agricultural, forestry, and fishing labor (72.5 %). However, compared to men, there are more women working in the service and sales industries (13.6%) than there are men (3.1 %). Additionally, more women (4.1%) than men work in managerial and elementary positions (3.6 %).

Out of the 26,930 households, 81.7 percent representing 21,993 households are engaged in agriculture in the District. Comparatively, the District's proportion (81.7%) is considerably higher than the regional average of 36.6 percent and national average of 45.8 percent. Locally, rural households are substantially more likely to be involved in agriculture (83.3%) than are urban families (67.2 percent). 99.2 percent of agricultural households are engaged in crop farming, and 18.2 percent are engaged in animal keeping. Fish farming and tree farming are only practiced in very few families (0.8 percent each) (0.1 %). Additionally, 29.6% of all households involved in agriculture are involved in multiple forms of farming. For both urban and rural localities, crop production ranks first in farming activities, followed by animal rearing and tree planting. However, all the fish farming activities are undertaken in the rural localities (0.1%). About eight in ten (79.4%) and 72.5 percent of employed males and females respectively are in the agriculture, forestry and fishing industry. Despite the fact that

manufacturing (4.8%) and wholesale and retail (9.2%) are the next two biggest industries in which men work, the percentage of women employed in manufacturing is higher than that of males (6.6%). In other industries, such wholesale and retail, lodging and food service, other service activities, and home employment, women also predominate.

Per the district assemblies, cattle, goat, sheep, poultry and pigs are the major livestock reared in Ahafo Ano South. In 2011, there were 1,156 cattle in the entire herd. 2012 saw a further growth to 1,500, but 2013 saw a decline to 1,250. Goat stock increased overall from 6,800 in 2011 to 13,100 in 2013, with 7,549 goats recorded in 2012. Additionally, the whole stock of pigs rose, going from 318 in 2011 to 412 in 2012 and 760 in 2001. One may claim that from 2011 to 2013, there were more animals overall. Lack of veterinary officers in the Districts, which prevents farmers from accessing veterinary care, is the sector's biggest concern. This has a detrimental effect on the growth of the livestock business. Furthermore, the amount of cattle that may be raised here is significantly constrained by the forest environment.

Although there are more than five market centers in the Ahafo Ano South West District, none of them offer cutting-edge market facilities. At Kunsu, there is only one market day for the District (Fridays). During market day, farmers and dealers move their products and engage in lively trade. There are four weekly markets in the Ahafo Ano Sout East District. These are Sabronum (Thursday), Asuodei (Thursday), Pokukrom (Tuesdays), and Adugyama (Sundays) (Tuesdays).

Atwima Mponua District is predominantly rural as 87.6 percent of the population resides in the rural localities, with only 12.4 percent staying in the urban localities. There are 310 known settlements in the district. In respect to approximately 1,883.2 square kilometres land area, the 310 communities cover about 60 percent (1,129.92km^2) of the total land area of the District with Forest Reserves covering the remaining 40 percent (753.28km^2). The district assembly reports that 38,848 males (57.0 percent) and 33,324 females make up the 68,172 individuals aged 15 and over, or 57.2 percent of the district’s total population (119,180). (43.0%). The percentage of the population that is economically engaged (79.7%) is significantly larger than the percentage of people who are not economically active (20.3 %). About 97 percent (96.9%) of the economically active population is employed, compared to 3.1% who are jobless. Full-time schooling accounts for the majority of the economically inactive population, followed by

household responsibilities (20.3%), being too young or old (10.2%), and pensioners/retired (56.1%). (1.0%). In addition, it is worth mentioning that 6.4% were economically not active population because they are disabled/sick persons. Workers in skilled agriculture, forestry, and fishing constitute the largest occupational group (79.0%), followed by those in services and sales (6.4%), and in craft and related trades (6.2%). On the other hand, less than one percent of employed persons are in managerial position (0.6%), technical and associated professionals (0.5%) and clerical support services (0.2%) and other occupations (0.5%). In addition, only a small proportion of employed persons are in the elementary occupation (1.8%), professionals (2.1%) and plant and machine operators and assemblers (3.3%).

The most common occupation is skilled agriculture, forestry, and fishing labor, which has a higher male representation (81%) than female representation (76.8%). Craft and allied trades, operators and assemblers of machinery, professional and technical jobs, and associate professional and clerical support occupations are the only fields where there are more men than women (15.5%) (8.4%). However, compared to men, there are more women working in the service and sales industries (11.6%) than there are men (1.0%). The managerial and elementary occupations are also dominated by females (3.3%) than males (1.7%). The informal private sector is by far the largest employer of economically active persons in the District (96.1%), followed by public (government) sector (2.4%). Less than two percent of employees are in private formal (1.2%), NGOs (0.3%), semi-public/parasatal (0.01%), or other international organization (0.002%). Out of the 26,150 households, 85 percent representing 22,237 households are engaged in agriculture in the district. Comparatively, the District's proportion (85.0%) is considerably higher than the regional average of 36.6 percent and national average of 45.8%. In terms of localities, rural households are substantially more likely than urban families (87.3%) to be involved in agriculture (64.4%). This demonstrates that the district's sole economic activity is agriculture, which is characteristic of rural Ghanaian villages. Crop cultivation is practiced by the majority of agricultural households (98.6%). Animal raising accounts for just under one third (32.6%) of all activities. Fish farming (0.03%) and tree farming (0.5%) are only practiced by a very small percentage of families in the district. In addition, 31.7& of all households engaged in agriculture are into multiple farming activities in the district. With 71.3% of the workforce employed in cocoa cultivation, the district is the largest cocoa plantation in the region. Crop production is the most important farming activity in both

urban and rural areas, followed by animal rearing and tree planting. When compared to urban areas, however, the majority of livestock rearing is done in rural areas (34.9 percent) (12.8%).

The assembly reports that agriculture, forestry and fishing is the largest industrial sector, employing 79.2% of the economically active population. The other two major industries are manufacturing (4.8%), and wholesale and retail trade, repair of motor vehicles and motorcycles (4.8%). Nevertheless, less than two percent (1.4%) of the employed persons is engaged in mining and quarrying. In the District, there are 199,321 animals and 10,540 keepers. Chicken production accounts for the majority of livestock output (76.5%), followed by sheep and goat raising (9.3%%). (8.4%). The least common agricultural activity in the district is inland fishing (0.01%). Inferring that 19 animals are kept by each keeper, the average number of livestock per keeper is 19. Chicken keepers make up the majority of the population (54.0%), followed by sheep (19.5%) and goat (17.9%). There have been 237 (0.1%) and 570 (0.3%) registered grass-cutters and rabbits among the other livestock (non-traditional livestock).

The weekly market at Nyinahin in the district is a major marketing centre where commodities are sold.

There are 131 settlements in the Atwima Nwabiagya district, nine (9) of them are urban with population 5,000 and above. Some of the urban settlements are Abuakwa, Nkawie-Kuma (the district capital), Toase, Asuofua, Barekese, Atwima Koforidua, Akropong Atwima Manhyia and Asenemaso. In 2013, these 9 metropolitan communities were home to about 49% of the district's inhabitants, while 71 smaller settlements held 6% of the total. With around 68.5 percent of residents residing in the district's rural sections, it is primarily rural. The percentage of people who live in urban areas is just 31.5%.

More than two thirds (68.7%) of the inhabitants in the District who are 15 years of age and older are, according to the 2010 PHC, engaged in some form of economic activity. 92.2 percent of the economically active population is employed, 94.2 percent of which really worked during the reference period (7 days before to the census night), and 5.7 percent did not work but had a job to return to (5.5 percent) or performed unpaid voluntary work (0.2%). Males are more likely than males to be economically active (70.6%) (67.0%). The majority (23.6%) of people who are employed are skilled laborers in agriculture, forestry, and fisheries. Persons engaged in service and sales constitute 28.3 percent of the working population. Craft and related trade

workers form the next highest (18.6%) in terms of occupation. The majority (25.1%) of the employed population is employed in wholesale and retail commerce in terms of their industry of employment. Those who work in agriculture, forestry, and fishing come next (24.8%). Of those who are employed, the majority (60.8%) are independent contractors. Males (52.3%) are more likely to be employees than females (29.4%), whereas females (69%) are more likely to be self-employed without employees (12.9%). The vast majority (84.8%) of people who are employed are employed in the private, unregulated sector. Those working in the public and private formal sectors constitute 7.5% and 7.0% respectively of the working population. 93.7% of women and 89.8% of men work in the private sector. Despite the district's peri-urban setting, agriculture continues to be its leading industry, employing roughly 50.76 percent of the labour force, according to the district assembly. The industrial sector comes next, with 17.41% of the labour force employed there. Buying and selling, or trading, employs 14.43% of the labour force. About 17.40 percent of the labour force is employed in the service industry, which includes jobs in transportation, hairdressing, hospitality, and other fields.

The main types of agricultural activities in the district are crop farming and livestock rearing. There is some fishing done, but it is very little. The district's primary agricultural activity is crop growing. The principal crops farmed in the area include maize, cassava, yam, cocoyam, ginger, oil palm, rice, citrus, cocoa, and plantains. The majority of these crops are grown on a small scale. Only a small number of people are involved in medium- to large-scale farming. Aquaculture and grass cutter rearing are two additional farming practices carried out in the district that merit special attention and encouragement. The district can also boast of the presence of large-scale poultry farms. These include Darko Farms, Topman Farms, Asare Farms, Anikora Farms and Mfum Farms. There are also many medium and small scale poultry farms scattered all over the district. Other small-scale livestock like goats, sheep, pigs, cattle, grass cutter, etc. are also reared. Most of these small-scale livestock rearing activities are meant to supplement nutritional requirements and to earn additional income.

In the Municipality, there are two (2) main marketplaces where various kinds of agricultural and manufactured goods are sold. At Nkawie and Toase, there are markets. To feed their family, farmers raise a lot of food crops, poultry, and livestock, and they sell the extra to the general public. Produced goods are also offered for sale on the market.

2.5.1 Tourism

There are a number of tourism opportunities in the HIA. The known ones in Ahafo Ano South are Mpasaaso Waterfall at Mpasaaso and Elongated Cave at Sabronum. Important traditional/historical sites in the Atwima Mponua district are the Mud-Fishes in the Amanano River at Nyinahin, Yaa Asantewaa Museum at Sreso Tinpom and two River Falls at Nyinahin and Kyerewere. Tourism potentials also exist in the Atwima Nwabiagya district. The Owabi and Barekese dams continue to attract a large number of tourists into the district. Major forests reserves such as Gyamera Forest Reserve and the Owabi and Barekese Water Works Forest Reserve, Komfo Anokye footprints at Nkakom, are some of the notable tourist potentials in the district. The district can also boast of the presence of an Agriculture Fair site located at Nkawie. It has conference, restaurant and bar facilities. Other important tourist sites in the district are caves located at Barekese, where the 'Golden Stool is believed to have been hidden at the time the British wanted to seize it. It is also believed to be the place where war guns of the Asantes were stored in the olden days. These sites are not developed as their potentials are hindered by lack of investment.

2.6 Forests & threats

2.6.1 Forest Reserves

There are six (6) main forest reserves in the Ahafo Ano South. These are Tinte Forest Reserve and Tano Forest Reserve in Ahafo Ano South West, Opuro River Forest Reserve, Kwamisa Forest Reserve, Part of Asufufu Basin and Offin-North Forest Reserves in Ahafo Ano South East. These forest reserves are viewed as a significant asset for future generations as far as human settlements are concerned. The forest produces timber that is used by the District and the Central Government as a source of income and foreign currency. As a source of industrial raw materials to fuel the regional industries like carving, sawmilling, and a variety of others in and outside the District, it also provides work to certain loggers. Farmers that grow food for human consumption rely on the forest as well. Since people obtain their firewood and charcoal from the forests, the forests as a whole serve as a significant source of energy for cooking. Additionally, trees and shrubs in the forest have therapeutic uses.

There are four forest reserves in the Atwima Mponua District stocked by valuable timber species such as Wawa, Sapele, Esa, Asafena, among others. The reserves include Asanayo

Forest Reserves, Gyemara Forest Reserves, Tano–Offin Forest Reserves and Offin Forest Shelter. The flora and fauna are varied and include a variety of game and wildlife species as well as ornamental and economic tree species with variable heights. There is a very large economic potential for industrialisation that adds value using wood and for decorative uses. Land clearing for indigenous agriculture is nonetheless difficult and expensive due to the deep forest.

In the Atwima Nwabiagya District, certain forest reserves have been set aside specifically for the conservation of wildlife. These include the Barekese Water Works Forest Reserve and the Owabi Water Works Forest Reserve, which safeguard the Offin and Owabi rivers' watersheds. Additionally, the region includes a portion of the Gyemena Forest Reserve. Farmers, sand-winners, and unauthorized chainsaw users have invaded the Barekese and Owabi forest reserves. The offin and Owabi Rivers, as well as the Barekese and Owabi reservoirs, are still in danger due to these practices.

Human activities have severely disrupted the HIA's vegetation, depriving the district of priceless tree species and other forest products. The primary vegetation is rapidly being replaced by secondary forest. This is a result of excessive and careless tree cutting, mainly by illegal chainsaw users. Inadequate farming methods such shifting cultivation, unchecked bushfires, and sand-winning activities also contribute to the forest's depletion. The degradation of forest reserves in the district due to careless bush burning has had an impact on the eco-system and green economy. Some villages are facing environmental degradation as a result of the district's misuse of its environmental resources. However, there have recently been initiatives to promote healthy agricultural practices and intensify reforestation.

2.7 Activities/Interventions in Ahafo Ano South HIA

2.7.1 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).

2.7.1.1 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 are 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.

2.7.1.2 Enrichment Planting

Enrichment planting is 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 Ahafo Ano South - Atwima Mponua - Atwima Nwabiagya 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.

2.7.1.3 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.

2.7.2 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 Ahafo Ano South - Atwima Mponua - Atwima Nwabiagya 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.

2.7.3 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 Ahafo Ano South - Atwima Mponua - Atwima Nwabiagya 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.

2.7.4 Some key project outputs in the Ahafo Ano South – Atwima Mponua – Atwima Nwabiagya HIA

I. Development of the Ahafo Ano South – Atwima Mponua – Atwima Nwabiagya landscape governance structure and systems leading to MoU & Partnership formation.
II. Developed National Climate Smart Cocoa Standard with the Government of Ghana, Civil Society and Cocoa Companies.
III. 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 is the National Focal Point for United Nations Convention on Climate Change (UNFCCC) and is responsible for all National

NAME OF ORGANIZATION / PARTNERS	CORE CAPACITY AND ROLE
(EPA)	Communication to the UNFCCC. EPA ensures that the programme's accounting is reflected 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

NAME OF ORGANIZATION / PARTNERS	CORE CAPACITY AND ROLE
	nutrition, climate-responsiveness, and community development, in collaboration with farmers, miners, workers and local communities.
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.
Mondelez International	One of the largest snack companies in the world with global net revenues of approximately $28.7 billion in 2021. They hold the #1 global position in biscuits (cookies and crackers) and #2 in chocolate, while are growing rapidly in baked snacks. They also make and sell gum & candy as well as various cheese & grocery and powdered beverage products in certain markets. They have operations in more than 80 countries and employ around 80,000 in their factories, offices, research & development facilities and distribution activities around the world. Mondelēz International's ultimate goal is to sustainably source all the company's cocoa supply, mainly via Cocoa Life. By working in partnership with farmers, NGOs, suppliers and government institutions, Cocoa Life is part of Mondelēz International's Impact for Growth – a commitment to driving business growth with positive change in the world. Through Cocoa Life, Mondelez will lead project implementation and contribute $5 million USD over five years to the program.

NAME OF ORGANIZATION / PARTNERS	CORE CAPACITY AND ROLE
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.
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.
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.

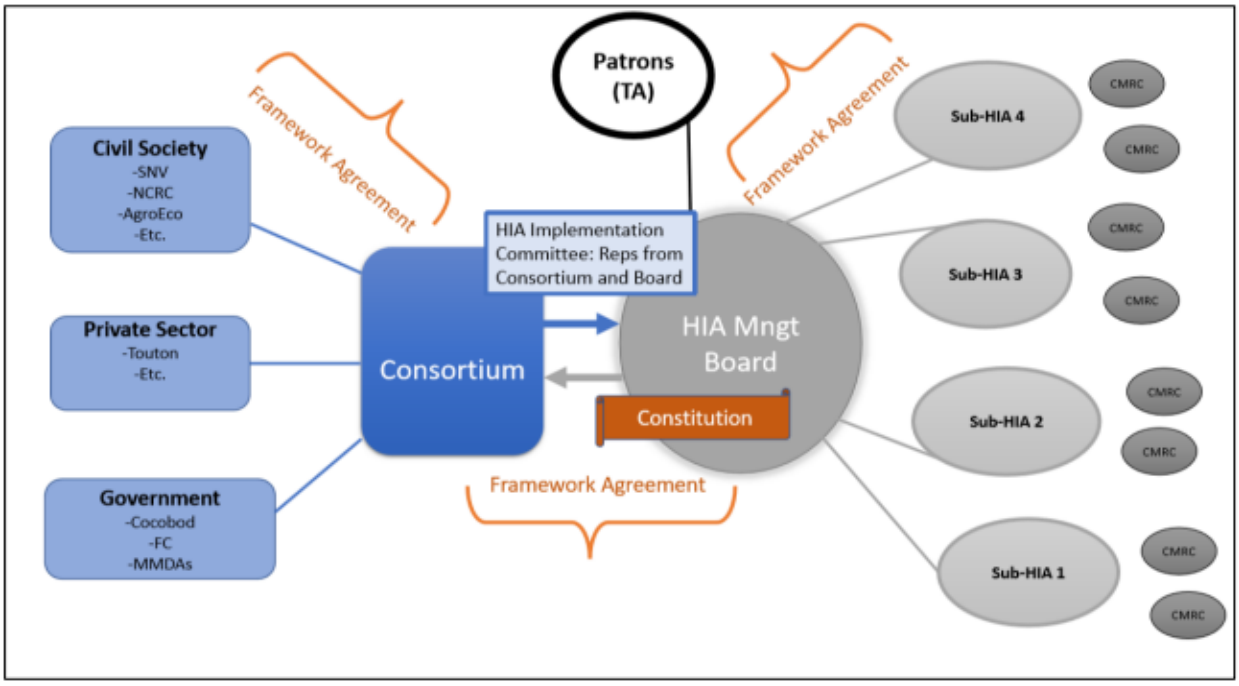


Figure 5: Collaboration within the HIA

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.

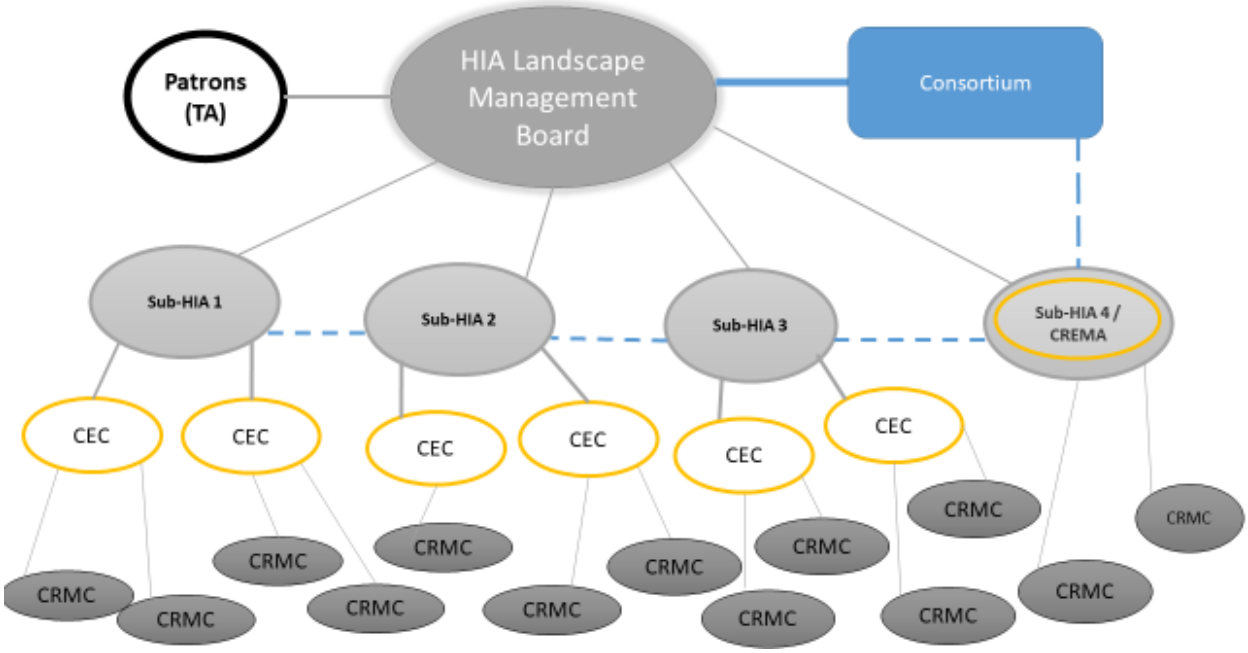


Figure 6: Tiers of the governance structure within the HIA

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). 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 Ahafo Ano South - Atwima Mponua - Atwima Nwabiagya HIA has four Sub-HIAs: Ahafo Ano South, Ahafo Ahafo North, Atwima Mponua and Atwima Nwabiagya. 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. 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. • Can lobby others to join forces to	• Municipal and District Assemblies (MDAs) • Cocoa Forest Initiative Secretariat • Civil Society Organizations

		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.

Box 16: Public Consultation 16

Engagement of Local Actors on Ghana Cocoa Forest Redd+ Programme (GCFRP) Benefit Sharing Plan (BSP)

A team from the NRS undertook stakeholder consultation workshops on the GCFRP Benefit Sharing Plan (BSP) in the Ahafo Ano South, Atwima Mponua, and Atwima Nwabiagya HIA from July 06-07, 2021. The workshops provided an opportunity to explain the transparent and extensive consultative process with which the BSP was developed. Participants were taken through the benefit sharing distributions as well as the Fund Flow Mechanism.

Box 17: Public Consultation 17

Consultative workshops to inform on governance arrangements and benefit-sharing plan for GCFRP

The National REDD+ Secretariat (NRS) undertook a consultative workshop and field mission from 8th to 18th February, 2022 to inform stakeholders on Governance arrangements and benefit- sharing plan for the Ghana Cocoa Forest REDD+ program (GCFRP). This exercise also served as an important opportunity to ensure continuous engagement with local actors, which is needed to secure well-functioning landscapes. The main purpose of the engagement was to monitor the development of HIA governance arrangement in Asunafo- Asutifi and Ahafo Ano South HIAs and inform them on the GCFRP Benefit Sharing Plan (BSP) while soliciting feedback.

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

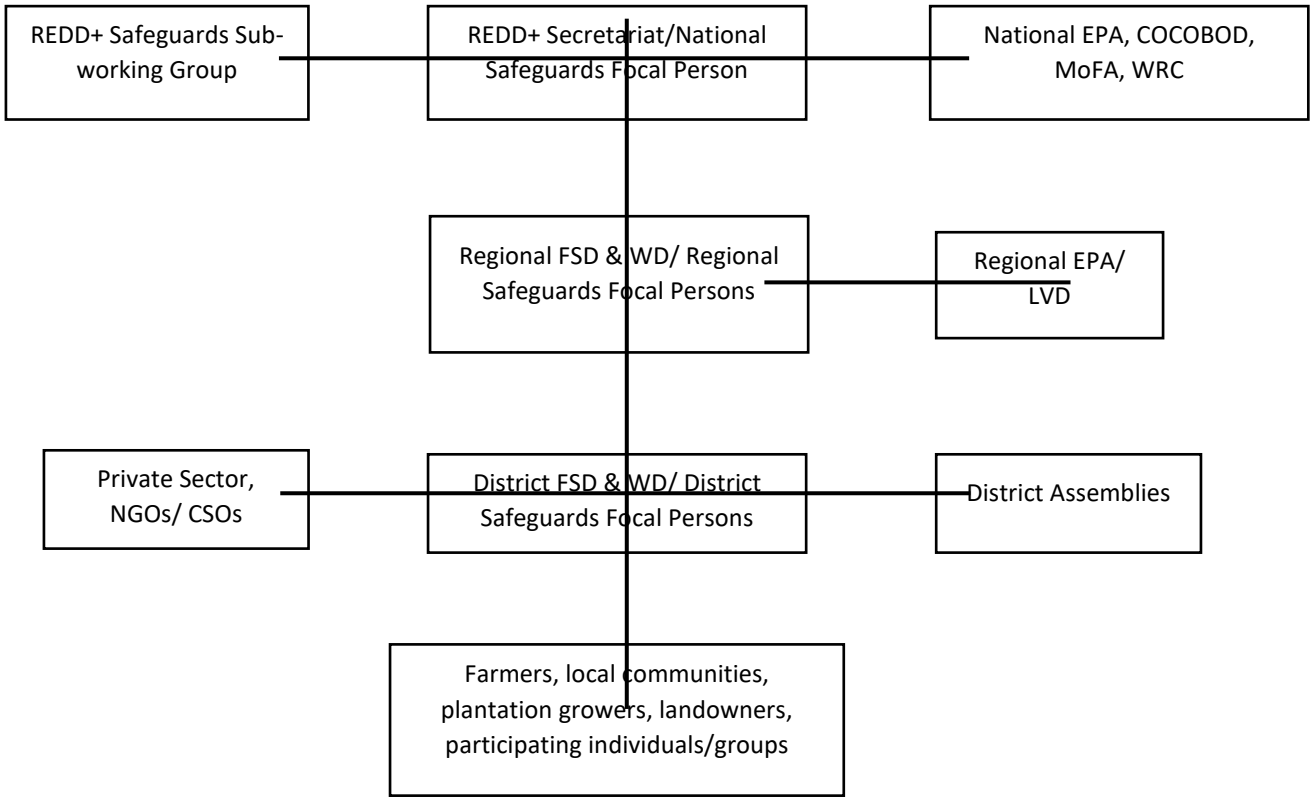
- Coordinating environmental and social safeguards across the HIAs;
- Providing leadership across the regional and district levels for the implementation of safeguards;
- Providing guidance and project level info and tools on safeguards for all stakeholders;
- Managing the environmental and social safeguard 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 Ahafo Ano South - Atwima Mponua - Atwima Nwabiagya 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 a number of 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.

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 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 • Fire was used only in situations where this was effective and least environmentally	• Site observation • Records of PPEs provided • FGRM	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			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.	operationalized	
	Reverse gains from carbon sequestration – adding carbon into the atmosphere		• Minimized burning of biomass as much as possible • Fire was used only in situations where this was effective and least environmentally damaging	• Site observation	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
	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 this helped minimize the use of inorganic fertilizers and herbicides that are major contributors to soil and surface water	• Site observation	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			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 fertilizers and herbicides that are major contributors to soil and surface water quality deterioration	• Site observation • Training report	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			• 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 • Labour-intensive approach using simple farm tools like hoes and cutlasses was employed.		

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
	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	
	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	• Site observation	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			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.		
	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. • 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	• Site observation • Number of farmers trained • Training report	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			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 • 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		

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			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 • 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	• Training report • Awareness creation materials displayed • List of approved and unapproved agrochemicals shared	
	Risks of disposal of polybags		• Education and sensitization on the proper disposal of polybags	• Site Observation	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
	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 solutions and taking corrective measures as appropriate	• Forest Management plan • FGRM operationalized • On-site verification with farmers	
	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	• Engagement report • Forest Management plan	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			• Equal opportunity was given to all abled bodied persons who wanted to participate		
	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 regarding the Project is received and responded to in a timely manner, providing solutions and taking corrective measures as appropriate	• On-site verification with farmers • FGRM operationalized	
	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		• Workers were required to wear suitable	• Records of PPE	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
	no/limited use of personal protective equipment		Personal Protective Equipment (PPE) as appropriate. • Education and sensitization were done on the need for and proper usage of PPEs	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 • Workers were required to wear suitable Personal Protective Equipment (PPE) as appropriate.	• On-site verification with farmers • Confirmation with workers	
Enrichment Planting	Improper disposal of polybags	4.01 Environmental Assessment 4.04 Natural Habitats	• 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	• Confirmation with communities	
	Poor record keeping of contract workers				

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			updated as appropriate		
	Unavailability and no/limited use of personal protective equipment	4.36 Forests	• 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 including paying attention to chemical handling was done • Workers were required to wear suitable Personal Protective Equipment (PPE) as appropriate.	• Confirmation with communities • 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	• Environmentally sensitive sites and unnecessary exposure or access to sensitive	• Site observation	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
		Assessment 4.04 Natural Habitats 4.09 Pest Management 4.36 Forests	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 • 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				

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
	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-shadowing of cocoa farms.		• Farms were mapped to determine farm sizes and site/area specific conditions to avoid over supply of seedlings • 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	• FGRM operationalized • Reports	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			taking corrective measures as appropriate • Appropriate sanctions were applied on offenders including fines and jail sentences		
	Failure to register farmers		• Records of farmers are kept	• Records of farmers	
	Limited awareness creation on health and safety including tools and equipment handling		• 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	• Training report • On-site verification with 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 • Training report	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
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 4.09 Pest Management	• 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 possible. Where possible, mechanical weed control was considered instead of the use of weedicides.	• Records of PPE supply • Training report	
	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	• Site observation • Records of PPEs provided	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			possible, mechanical weed control was considered instead of the use of weedicides.		
	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 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	• Site observation	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			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 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	• Site observation	
	Risks of accelerated erosion		• Sensitive sites with high erosion risk were identified and were not cultivated.	• Site observation	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			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		
	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	• Site observation • Training report	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			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 • 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		

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			quality deterioration		
	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	• Training report • Site observation	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			compliance		
	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 weed control was considered instead of the use of weedicides.	• Training report • List of approved and unapproved agrochemicals shared	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			• 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 • 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	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			• Farmers trained and encouraged to involve in alternative livelihood programs to prevent the risk of expansion in to protected areas.		
	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 • Trained spraying gangs (farmer) on how to wear PPEs and the essence of PPEs.	• 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)				
	Improper disposal of hazardous waste				
	Poor storage of hazardous chemicals				
	Recycle of hazardous				

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
	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 solutions and taking corrective measures as appropriate • Stakeholder consultations done to identify best practices and guide implementation in partnership with traditional authorities	• FGRM operationalized • Forest Management plan • Engagement/training Reports • Records of admitted farms	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			• 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	• DA by-laws	
	Unavailability and no/limited use of personal protective equipment		• Workers were required to wear suitable Personal Protective Equipment (PPE) as appropriate. • Sensitization was done on the need for and proper usage of PPEs	• Confirmation with workers	
	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	• Training report • On-site verification with farmers	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			• Workers were required to wear suitable Personal Protective Equipment (PPE) as appropriate		
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 4.09 Pest Management 4.36 Forests	• 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 • FGRM operationalized	
	Exposure of workers / communities to smoke generated during land		• Minimized burning of biomass as much as possible • Fire was used only in situations where this	• Site observation • Records of PPEs • FGRM	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
	preparation for vegetable farming		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 solutions and taking corrective measures as appropriate	operationalized	
	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	• Site observation • Training report	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			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 • Organic farming practices (planting nitrogen-fixing species, agroforestry practices, composting, application of organic		

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			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		
	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	• Site observation • Training report	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			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		
	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	• Site observation • Records of PPEs provided • Training report • FGRM operationalized	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			timely manner, providing solutions and taking corrective measures as appropriate		
	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 • List of approved and	

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.	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 solutions and taking corrective measures as appropriate	• FGRM operationalized • Forest Management plan • Engagement/training	

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
			• 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	Reports • Records of admitted farms • DA by-laws	
	Low percentage of women in livelihood improvement activities		• 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	• Records of farmers	
	Prioritization of a few demographic in terms of labour				

ACTIVITY	RISKS	OP TRIGGERED	MITIGATION MEASURES	INDICATOR/ MEANS OF VERIFICATION	COMMENTS
	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 Ahafo Ano South - Atwima Mponua - Atwima Nwabiagya 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.

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.

- 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.

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.

- Ghana Cocoa Board and the Forestry Commission jointly embarked on HIA-level capacity building on Climate-Smart Cocoa and Farmer Business School training for selected cocoa farmers within two (2) HIAs (Kakum and Juaboso) in 2020. In ensuring continuous capacity building, another round of training on CSC and FBS was done in two (2) HIAs (Asunafo-Asutifi and Ahafo-Ano South). Beneficiaries were selected from the project catchment areas. The training was organised during the month of October with COCOBOD leading the implementation and staff from Forestry Commission (National REDD+ Secretariat) attending the training sessions. A total of 180 cocoa farmers benefited from the FBS training whiles 252 cocoa farmers participated in the CSC training across the project Regions, with 159 being men and 93, women. Resource persons were drawn from the Cocoa Health and Extension Division of COCOBOD. The monitoring team from the head offices of COCOBOD and FC participating in the training sessions took the opportunity to sensitize cocoa farmers on the importance of intensification and climate smart agriculture.

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.

- The World Bank in conjunction with the CCD aim at building capacity of newly established HIA Governance Structures in connection with implementation of the GCFRP. Consultancy was awarded to lead the process in July 2021. All related agencies participated in the identification of ten prioritized topics which were used to design a training programme. Resource persons were vetted and selected to develop training materials. The field training events took place between March and June 2022 in the Ahafo Ano South and Asunafo – Asutifi HIAs. A training team of approximately 3-4 people, drawn from the NRS and NGO/Civil Society Organizations, carried out the training and capacity building program.

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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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 feed/grievance had been reported. In all cases responsible institutions had taken steps and had resolved those cases. The table below highlights on cases reported and the processes used in resolving them.

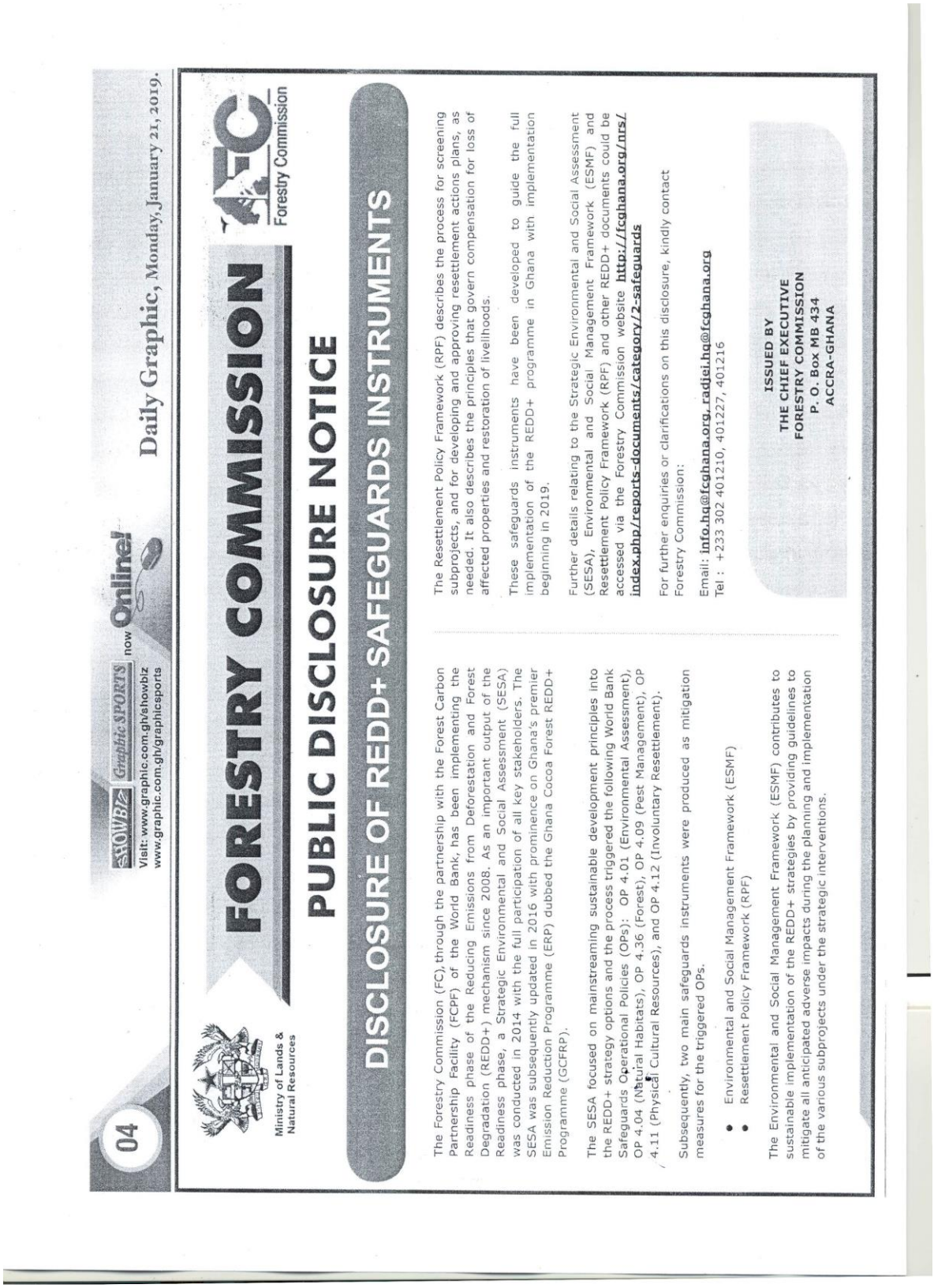
Table 7: FGRM recorded

The Republic v. Kwadwo Adom	The Nkawie Circuit Court fined the suspect an amount of GH¢2,000.00 and the lumber confiscated by the state	16/01/2020	Ahafo Ano South Atwima Mpoua Atwima Nwabiagya
The Republic v. Emmanuel Nanum and Kwame Motrim	The affected area is yet to be replanted by the suspects as directed by the office	29/03/2020	Ahafo Ano South Atwima Mpoua Atwima Nwabiagya
The Republic v Afia Amponsah, Kofi Poku & Kwasi Mensah	Suspects have been granted bail pending further investigations.	02/11/2020	Ahafo Ano South Atwima Mpoua Atwima Nwabiagya
Unknown	Ninety (90) pieces of Wawabima lumber (2"x12"x14') were evacuated to Range Quarters, Nyinahin	15/01/2021	Ahafo Ano South Atwima Mpoua Atwima Nwabiagya
Unknown	Lumber of Cedrela (4"x6"x14' = 109pcs) and Ofram (4"x6"x14' = 18pcs) were seized and kept at the Kobeng	15/2/2020	Ahafo Ano South Atwima Mpoua Atwima Nwabiagya

	Chief's palace for safekeeping		
The Republic v. Nana Kwaku (Excavator operator)	Suspect was arrested but was released with the intervention of Galamstop Force.	8/01/2020	Ahafo Ano South Atwima Mpoua Atwima Nwabiagya
The Republic v. Dauda Mohammed and Emusa Seidu	Suspects arrested and handed over to Nkawie police to assist investigation	29/01/2021	Ahafo Ano South Atwima Mpoua Atwima Nwabiagya
The Republic v. Owusu Festus, Dickson Bonsu and Kwabena Mensah	Suspects swore an affidavit at the Nkawie Circuit Court to cover up all dug holes in the mined area not later than 31/03/2021	05/02/2021	Ahafo Ano South Atwima Mpoua Atwima Nwabiagya
Unknown	200 pieces of Otie and Bonsamdua lumber (2"x12"x14') were evacuated to Range Quarters, Nyinahin	08/02/2021	Ahafo Ano South Atwima Mpoua Atwima Nwabiagya
Unknown	500 pieces of Kyenkyen, Koto and Esa lumber (4"x12"x14') were evacuated to Range Quarters, Nyinahin	11/02/2021	Ahafo Ano South Atwima Mpoua Atwima Nwabiagya
The Republic v. Edward Boadi, Dagati Kwame, Gerald Tugri, Abass Tahiru and Kwame Gyamfi	Suspects swore an affidavit at the Nkawie Circuit Court to cover up all dug holes in the mined area not later than 31/03/2021	17/02/2021	Ahafo Ano South Atwima Mpoua Atwima Nwabiagya

The Republic v. Akwasi Antwi, Emmanuel Agyei and Borga	Suspects swore an affidavit at the Nkawie Circuit Court to desist from such an act within a Forest Reserve	22/03/2021	Ahafo Ano South Atwima Mpoua Atwima Nwabiagya
The Republic v. Kwaku Duah and Akwasi Yeboah	Suspects have been granted bail by the Nkawie Circuit Court to reappear before the court on 25/10/2021	25/05/2021	Ahafo Ano South Atwima Mpoua Atwima Nwabiagya
The Republic v. Asami Abdul-Salam	The suspect has been convicted and fined 3,600 penalty unit (equivalent to GH¢43,200.00) and in default serve 8 years imprisonment by the Nkawie Circuit Court	07/04/2022	Ahafo Ano South Atwima Mpoua Atwima Nwabiagya
The Republic v. Adjei Dominic, Baiden Stephen & Antwi Oteng Amoako	Suspect was arrested and taken to Nkawie police for further investigation and prosecution	12/04/2022	Ahafo Ano South Atwima Mpoua Atwima Nwabiagya

Annex 3: Public disclosure



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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:

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Figure 7: Disclosure of REDD+ safeguards instruments

FORESTRY COMMISSION

PUBLIC DISCLOSURE NOTICE

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

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

le of REDD+ Readiness Activities, Ghana has developed its premier ductions Program dubbed the Ghana Cocoa Forest REDD+ Program ich has been accepted into the Carbon Fund of the FCPF for potential payments. The Forestry Commission (FC) and Ghana Cocoa Board intly coordinate this Programme with the support of private sector nmunities.

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

y, an Emission Reductions Payment Agreement (ERPA) which he conditions of sale and purchase of any Emission reductions (ERs) FRP was signed between the Government of Ghana (GoG) and the as a trustee for the Carbon Fund in June 2019 for a period of six

ion for signing the ERPA is for Ghana to finalise its Benefit Sharing full execution of the programme and eventual receipt of payments onstrated ERs as a mandatory Safeguards tool.

herefore is to inform the public that the BSP document, which has d and developed through extensive stakeholder consultations as

transparently and accountably as articulated by the Program fully completed and endorsed by the Carbon Fund (CF). It des beneficiaries, their eligibility, roles and responsibilities whi scale and modalities for distribution. Additionally, the BSP d of benefits to be transferred to beneficiaries, the timing of the the conditions to be satisfied for the payment of the benefits. appropriate indicators for monitoring, measuring and verifying modalities for distributing benefits to beneficiaries.

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

Further details relating to the Final BSP for the GCFRP could be the Forestry Commission website http://fcghana.org/librar http://reddsis.fcghana.org/admin/controller/publicatio BSP_Ghana_%20March%202020.pdf

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Figure 8: 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 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 13: 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-	3 Bags/ acre

	7CaO+45+6MgO+0. 3(B+Zn)	
Ferta Agra Cacao Sup	NPK 3-21e20+10CaO+55+5Mg O+0.5(B+Zn)	3 Bags/ acre
So Aba Pa	NPK 4-22-18+4CaO+45+5MgO +0.5B+0.2Zn	3 Bags/ acre
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

o 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)

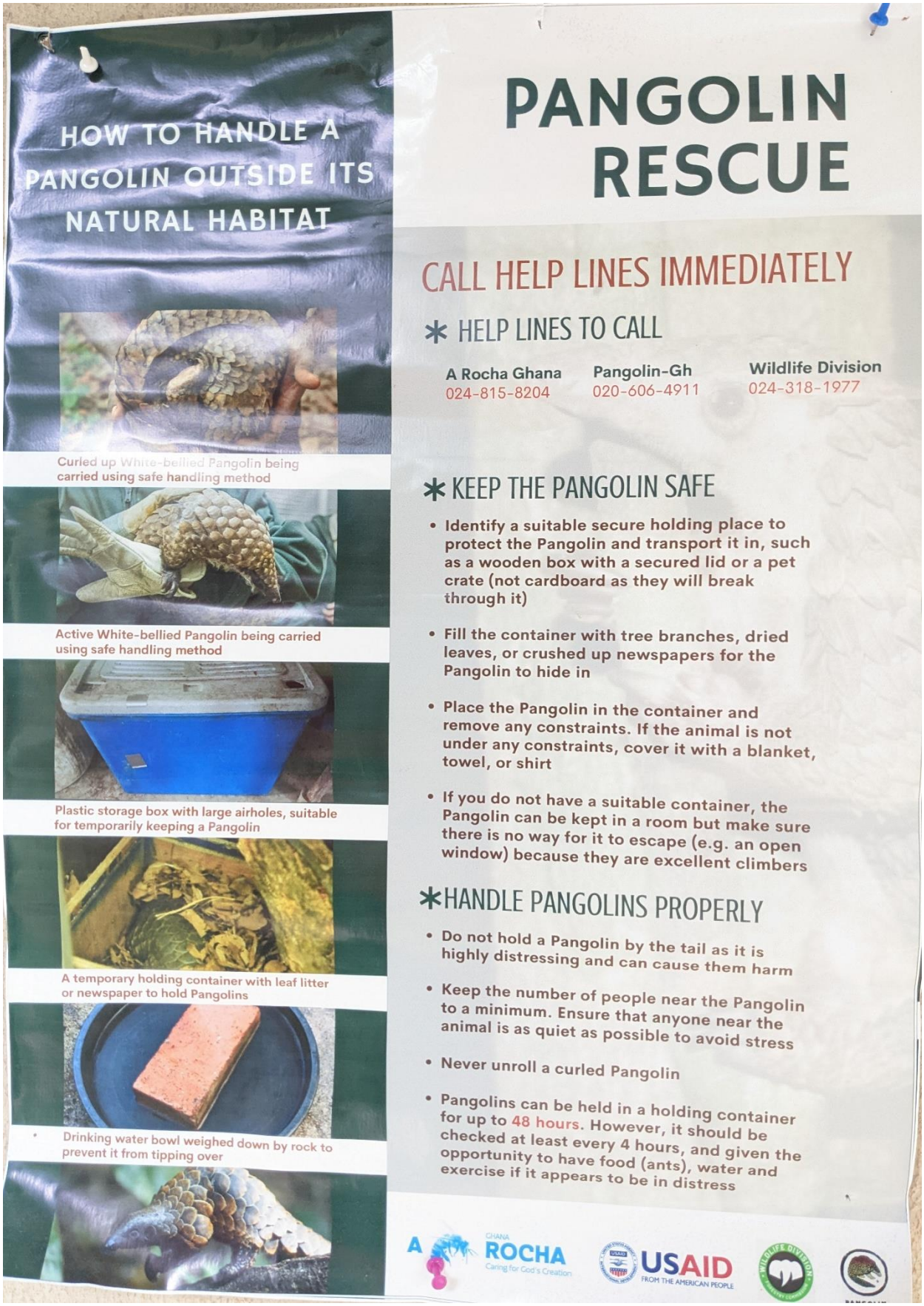
21. Methyl-parathion (emulsifiable concentrates (EC) with at or above 19.5% active ingredient and dusts at or above 1.5% active ingredient)

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/l)

Annex 6: Awareness materials 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)

TOUTON ELIHO

OUR GOAL IS TO REDUCE THE LEVEL AND DEPENDANCY OF PESTICIDE USAGE IN OUR FARMS.

THE USE OF CHEMICAL PESTICIDES SHOULD BE THE LAST RESORT

High reliance on pesticides and low reliance on natural

High reliance on natural solutions and low reliance on chemical pesticides

UNDESIRABLE FOREST TREES

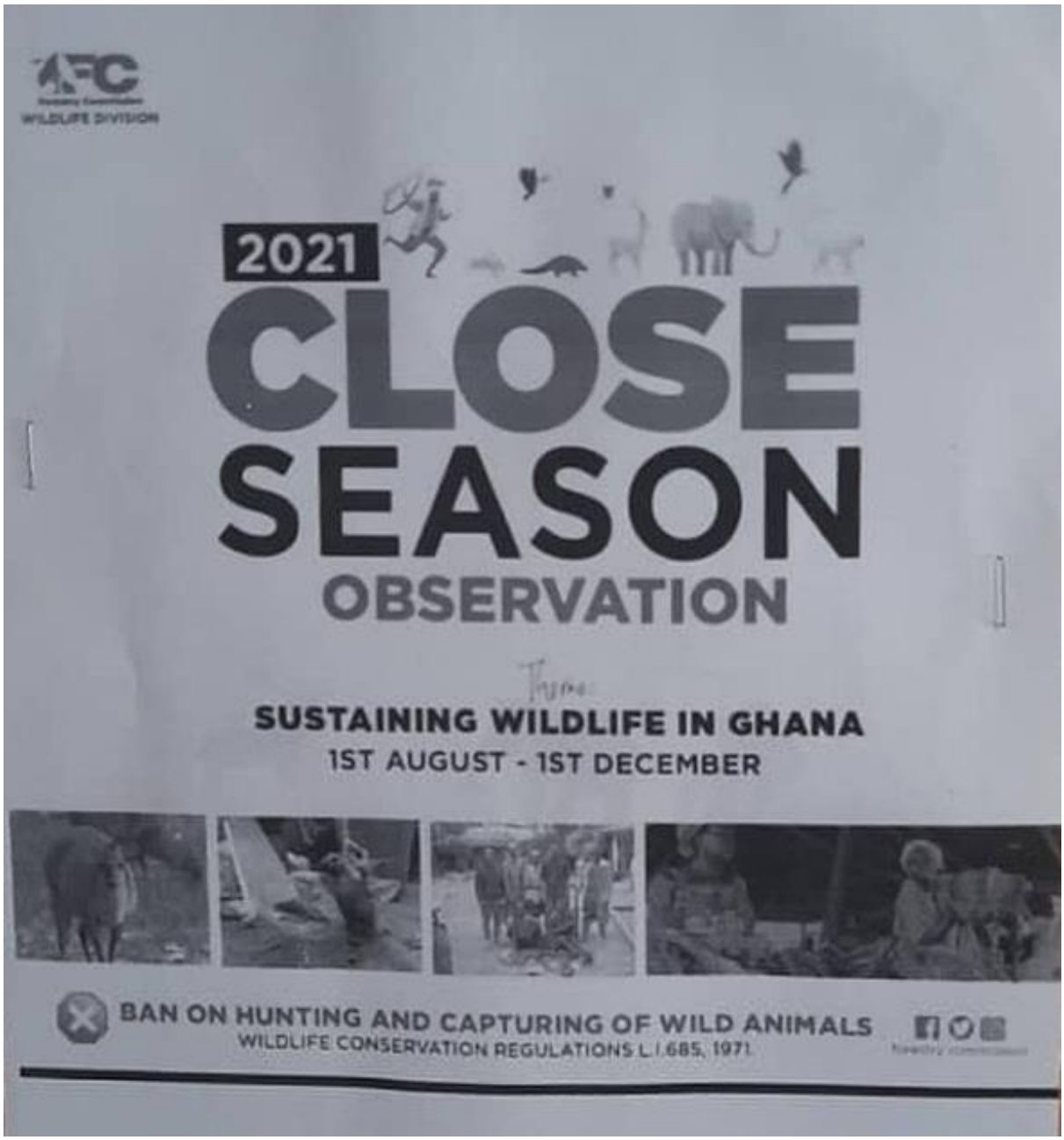
BOTANICAL NAME	TWI
Piptafeniastrumexecelsia	Danhoma
Myrianthusarboreus	Anyankoma
Loconiodiscuscupanoides	Dwindwera
CarapaOprecera	Kwakuo – bise (sabise)
Ceibapentandra	Onyina
Canthiumglabriflorum	Ntateadupon
Cola gagantea	Watapuo
Adansoniadigitata	Odadee
Cola chlamydantha	Kra-bise , Asenkrobia
Musagacecropoides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

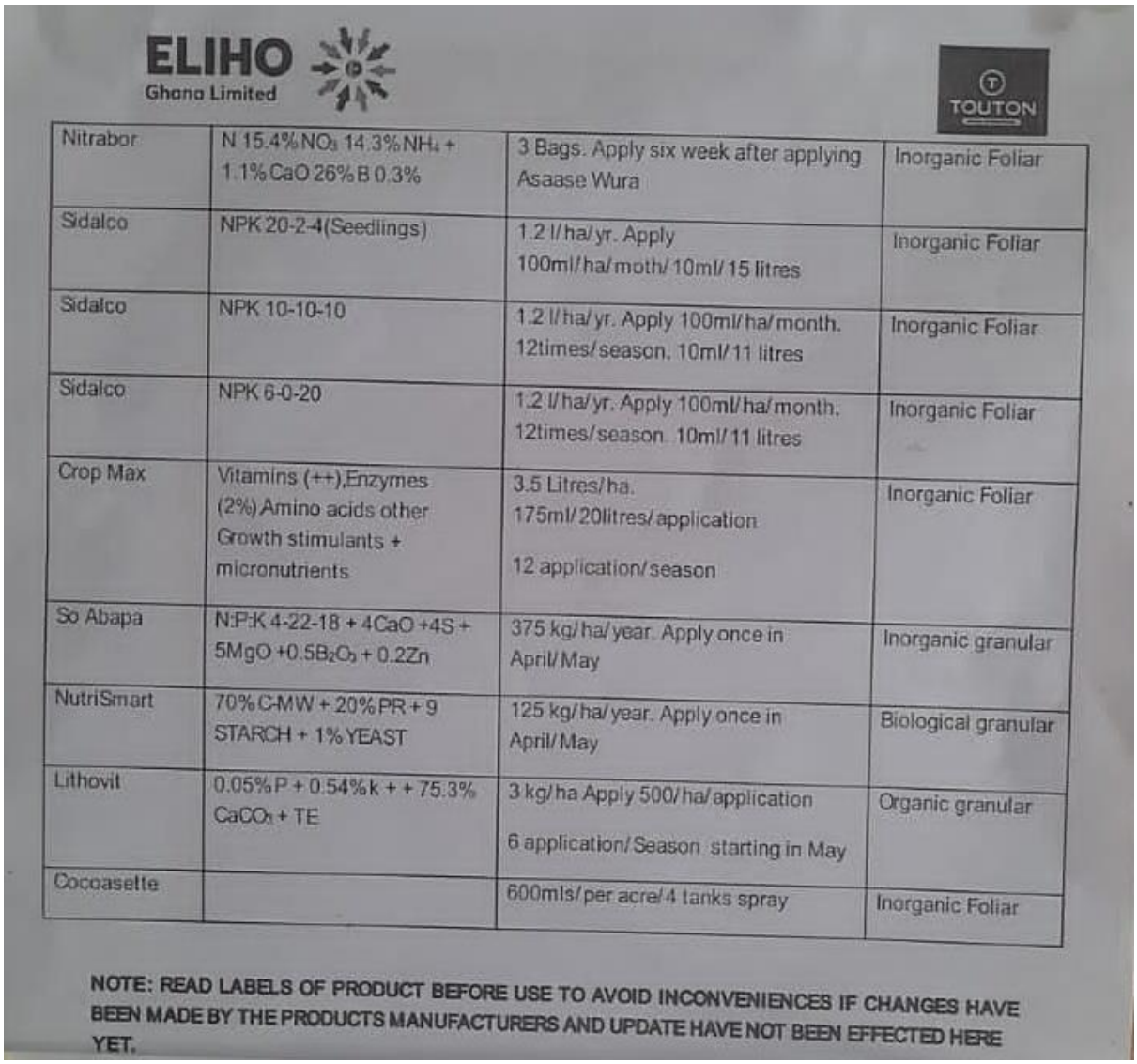
UNDESIRABLE FOREST TREES

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

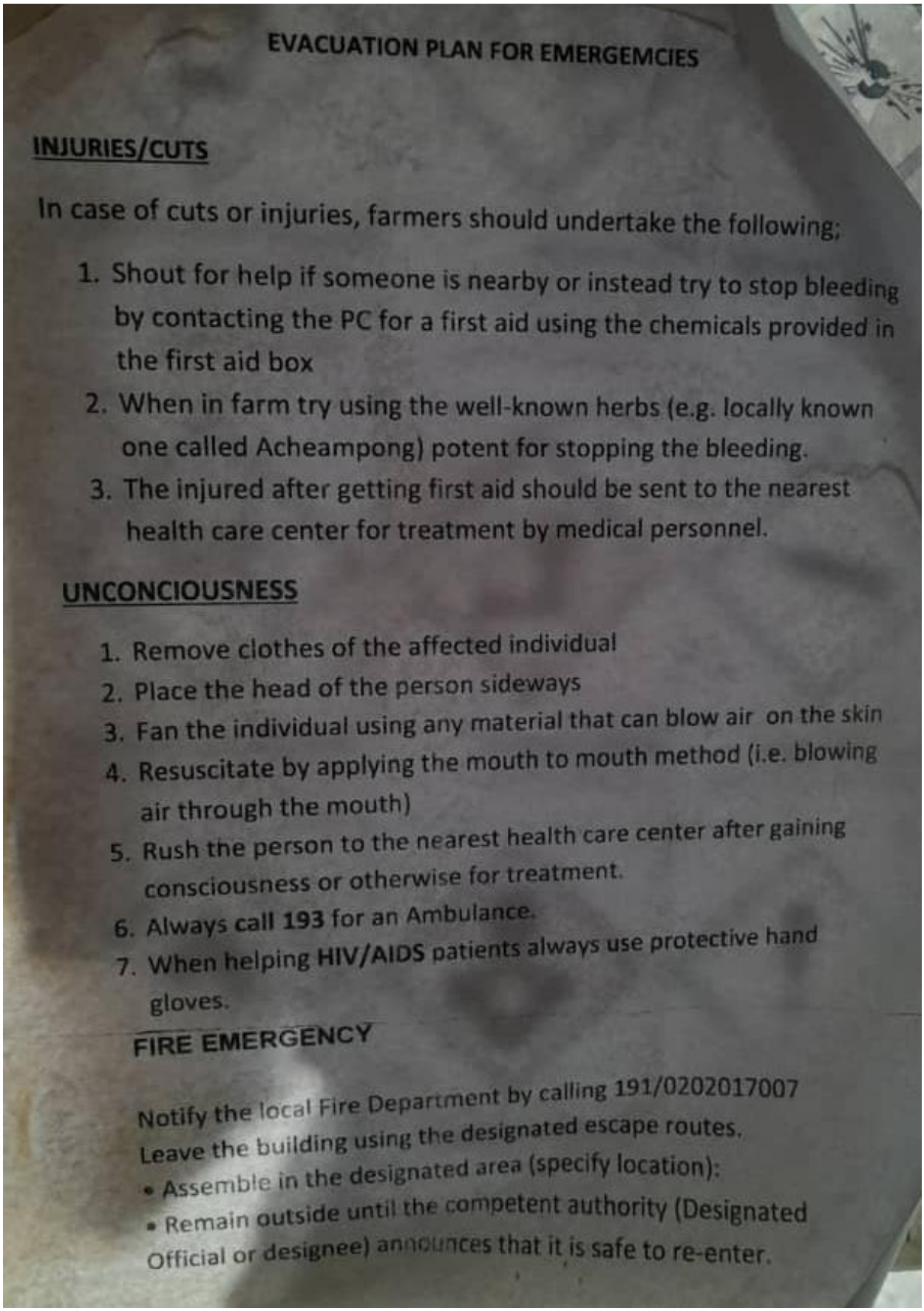


ELIHO Ghana Limited

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


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

Annex 7: 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		
Adjoining Land Uses or Land	South	
	North	

Cover	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

	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)	(L,M,H)
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