











ENVIRONMENTAL & SOCIAL IMPACT STATEMENT

FOR THE PROPOSED 1,007.21 HECTARES OF OIL PALM PLANTATION AT MANSO IN THE MPOHOR WASSA EAST DISTRICT OF THE WESTERN REGION OF GHANA

SOCFIN Plantations SOCFINAF Ghana Limited

Prepared by:
HS+E Consulting Ghana Limited

1007.21 Hectares of Oil Palm Plantation: Environmental & Social Impact Statement (ESIS)

October, 2015

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EMP	Environmental Management Plan
EPA	Environmental Protection Agency
EPC	Environmental Protection Council
ESIA	Environmental and Social Impact Assessment
ESIS	Environmental and Social Impact Statement
GWCL	Ghana Water Company Limited
GWRC	Water Resources Commission
km	kilometre
LAC	Liberian Agricultural Company
LI	Legislative Instrument
NRCD	National Redemption Council Decree
PAPs	Project Affected Persons
PNDC	Provisional National Defence Council
PNDCL	Provisional National Defence Council Law
PSGL	Plantations SOCFINAF Ghana Limited
SA	South Africa
SEA	Strategic Environmental Assessment
SIPL	Subri Industrial Plantations Limited
SSNIT	Social Security and National Insurance Trust
ToR	Terms of Reference

EXECUTIVE SUMMARY

General Overview

The tropical climate of West Africa offers a suitable potential for oil palm cultivation in meeting the global supply deficit in the near future. Oil palm is a native species to West Africa and a major source of vegetable fat and oil worldwide and accounts for approximately 32% of total global supply of edible oils. Besides its food potential, oil palm production is an essential raw material anchor for in the manufacture of soap, cosmetics, plasticizers, detergents and biofuels among others.

In Ghana, beyond the market potential it holds for local communities, oil palm constitutes an integral part of the culture of the local people. It is a source of food and medicines, its sap is used to make palm wine (a traditional drink), and its leaves and fibre are an important raw material for making brooms found in almost every home in Ghana. The surge in demand is particularly evident in view of the growing use of vegetable oil for biodiesel production, increased consumption of vegetable oil in developing countries, particularly in densely populated countries like China, Russia, Mexico, Bangladesh and Brazil.

It is within this context that the Socfinaf Group; an investor in the agro-industrial sector, focuses its operations in the development of agro plantations particularly rubber and oil palm in most countries of sub-Saharan Africa. Plantation SOCFINAF Ghana Limited (PSGL) is a subsidiary of the SOCFINAF Group of Companies headquartered in Luxemburg. The company is the operating investor for the diversified Subri Industrial Plantations (SIPL) following the diversification of the defunct SIPL because of several operational challenges including financial liabilities.

In the year 2012, Socfinaf Group expressed interest in 18,000 hectares of forest reserve and 1007.21 hectares of agricultural land plantations and subsequently acquired the stake of the company in the same year. Plantations Socfinaf Ghana Limited was then registered and incorporated as an operational branch of the company under the companies' code of 1963 on the 25th September, 2012. The company prior to development of the diversified plantations was mandated to register their operational intentions with the Environmental Protection Agency and to obtain a valid permit before commencement of the plantations

development. The company commissioned HS+E Consulting Ghana Limited to undertake Environmental and Social Impact Assessment of the 18,000 Hectares for rubber and oil palm plantations and to assist the investor to obtain an environmental authorisation to commence the development of the plantations.

The scope of the assessment was on the 18,000 hectares within the Subri Forest Reserve excluding the 1007.21 hectares of agricultural land. After all due processes in line with the Environmental Assessment Regulations 1999, LI 1652, the company was issued an environmental permit number CF00570102 dated 13th March, 2015 covering the defined scope. As per clause 6.7.2 of the environmental permit, the permit holder is expected to "notify EPA of any major changes in the planned development contrary to the information provided in the final EIS." In compliance with this condition, PSGL informed the EPA of the proposed cultivation of an additional 1007.21 hectares of agricultural land for an oil palm plantation.

This report is therefore being prepared to seek environmental authorization from EPA to commence the proposed establishment of an oil palm plantation on 1007.21 hectares of agricultural land in Manso, a town in the Mpohor Wassa East District of the Western Region of Ghana.

Project Objective

The objective of this report is to enable Plantations SOCFINAF Ghana Limited design, develop and maintain the plantation activities in an environmentally friendly way through the adoption of environmental management strategies. The report will guide Plantations SOCFINAF Ghana Limited to further evaluate and confirm the feasibility of the project by the effective application of standard methods to screen for potential environmental impacts, mitigation of impacts; and outline steps for monitoring of potential impacts, which will trigger subsequent environmental assessments, where necessary, including institutional responsibilities for the afore-mentioned activities.

Legal and Regulatory Requirements

The legal and regulatory framework is intended to inform the discussions on the state of environmental laws, policies and regulations with respect to the 1007.21 hectares Oil Palm plantation project. Few of these legislations, policies and bye-laws are enumerated as

below;

- 1992 Constitution of the Republic of Ghana
- Environmental Protection Agency (EPA) Act, 1994 (Act 490)
- Environmental Assessment Regulations, 1999 (LI 1652)
- Fees and Charges (Amendment) Instrument, 2014 (LI 2216)
- Wild Animal Preservation Act, 1961 (Act 43)
- Land Commission Act, 2008 (Act 767)
- Ghana Investment Code, 1985 (P.N.D.C.L 116)
- Control and Prevention of Bush Fires Act, 1990 (P.N.D.C.L. 229)
- Ghana's Environmental Policies
- National Land Policy, 1999
- National Wild Life Management Policy, 2006

Project Ownership

The proposed 1007.21-hectare oil palm plantation project is fully owned by Plantations SOCFINAF Ghana Limited (PSGL). PSGL is registered and incorporated under the Companies' Code of 1963 in Ghana as a branch of the SOCFIN Group and focused on the development of rubber and oil palm plantations under the supervision of SOCFINAF SA.

Project Location

The site for the proposed plantation in the Mpohor Wassa East District is located near Manso. It is an irregularly shaped parcel of land besides the Sekondi Waterworks (Block III) Forest Reserve which the project land shares boundaries with, the nearest protected area, Subin River Forest Reserve, is about 8.11 km north of the proposed project site. Other conserved areas worth mentioning are the Pra Suhyen (Block I & II) Forest Reserves (32.16 km northeast); Ben West Block Forest Reserve (50.75 km north) and Ben East Block Forest Reserve (50.63 km north).

Project Description

The development of the proposed oil palm plantation involves these main stages:

Pre-Development Stage

This stage involves feasibility studies, application/ acquisition of land, preparation of ESIA, and survey of boundary and plantation blocks. It will also include soil studies and other

assessments needed to ascertain the viability of the proposed plantation in the given environmental and social setting

Site Clearing and Land Preparation

The existing vegetation would be cleared and the land prepared for transplanting. Activities such as removal of tree stumps, terracing and tilling would be involved.

Establishment of Nursery

This stage involves the establishment of a nursery to nurture good quality oil palm seedlings. Seeds are planted in a pre-nursery where germination and sprouting occurs in a controlled environment mostly managed by women in the nearby community. After three (3) months of growth in the pre-nursery, the seedlings are transplanted to the main nursery where they further development for six (6) months before been transplanted into the main field.

Field Establishment

Matured, suitable and viable seedlings from the main nursery are then planted out in the main field where they will grow to maturity incorporating standard practices during creation of planting holes and transplanting

Maintenance and Harvesting

The oil palm trees will be maintained by applying manure/ fertilisers, controlling pests, weeds and diseases as well as watering and pruning. Weed and pest control will be carried out using agro-chemicals, which will be applied in patches around each oil palm plant to mitigate impact on non-target species. The harvesting of oil palm fruits are expected to commence within two and a half to three years after planting. Harvesting ripe clusters will be done using conventional tools such as cutlasses, long arm sickles and chisels.

Replanting / Abandonment

When the oil palm trees mature beyond their useful life span, they will be felled for secondary uses such as palm wine tapping for direct consumption or for traditional brewing of Akpeteshie. The land can then be regenerated for replanting of oil palm seedlings for another cycle

Description of Environmental Baseline Information

An environmental and social baseline data has been collected to serve as framework for adequate consideration of project designs, alternatives and identification of project impacts.

The information contains data on Mpohor Wassa-East District bio-physical environmental features such as its climatic conditions, topography, geology, vegetation, hydrology in terms of ground water resources, major and sensitive wetlands, flora and fauna as well as air quality.

The topography of the project area has a rugged terrain as evident in the elevation profile shown in figure 3-2. The topology has a minimum, mean and maximum elevation of 53 m, 68 m and 85 m respectively.

Geological baseline study identified four main categories of rocks found in the Project District, which are lower and upper Birimian rock formations; Dahomeyan and the Tarkwaian rock. The lower Birimian formation consists mostly of phyllites with intrusive quartz veins while the upper Birimian formation consist predominantly of volcanic rocks and relatively minor amounts of phyllites. The Dahomeyan rock formation is the largest formation in the Project District while the Tarkwaian crops up in the north-eastern part of the project District. The proposed project site is extensively underlain with Dahomeyan rocks.

The dominate soil at the project site is Acrisols as shown in figure 3-5 below. This soil is clay-rich and is associated with humid, tropical climates. These soil types support the growth of food and tree crops and together with the rainfall patterns, will form suitable conditions for the cultivation of oil palm.

No perennial or intermittent river/ stream traverses the land earmarked for the proposed project. Due to the topology of the land, ephemeral streams are found at several locations on the land. These losing streams have water in them only during and immediately after a rainstorm possibly due to their positions above the water table.

The proposed project land is an agricultural land initially used for commercial cultivation of "*Gmelina arborea*". Adjacent landscapes within the potential area of influence of the proposed oil palm plantation are extensively covered by forested areas with trees. Residential land use patterns can also be observed within the 5 km buffer around Manso, Adansi, Edaa and Mampong.

The project site has a limited diversity of terrestrial and aquatic fauna species due to anthropological activities within the project land and initial use of the land for agricultural

purposes. Aquatic fauna species are limited due to the lack of an aquatic habitat/ permanent water body. Species of terrestrial fauna are also limited to insects, rodents, birds and reptiles which are typical of areas within the tropical rain forest belt.

The rainfall pattern, temperature, humidity, wind speed and sunshine were the climatic conditions considered for the project area. The mean annual rainfall is 1500 mm, largely due to the active vertical convection of air that takes place as a result of seasonal changes. The rainfall pattern is favourable for agricultural activities but makes it difficult to physically have access to areas with un-tarred roads, especially during the rainy seasons. Humidity levels are highest during June, July, August and September. Temperatures rarely exceed 35 ˚C and a daytime maximum of 32 ˚C is common. This high level of temperature is maintained with little variation throughout the year.

The ESIA report also entails a broad overview of the socio-economic conditions of the Mpohor Wassa-East District with focus on the project affected communities. The social baseline of the report discusses the main features of the project are in terms of demographics, education, public health features, local economy, religion and agricultural activities.

Potential Impacts Identification and Assessment

Long and short-term positive and negative impacts of various magnitudes are expected to arise because of the development of the plantation to affect the environmental and socio-economic components.

At the Pre-Development phase of the project, the significant impact was payment of compensation to the Project Affected Persons (PAPs). At the Plantation Development phase of the project, the significant impact anticipated was improvement of livelihood of employed local residents and immigrant, the loss of flora due to vegetation clearing activities and bush fire outbreaks. Impacts from solid waste generation, bush fire outbreaks and Occupational Health and Safety (OHS) hazards were also identified as significant during the maintenance and harvesting stage of the project.

Quantitative assessment of the impacts was done using the Conesa-Fernandez-Vitora quantitative method in cognisance of applicable legislative requirements.

Mitigation Measures for identified Impacts

The mitigating plans recommended for the project activities are to serve as a general environmental and social management framework. Mitigation measures are proposed for all the potential impacts arising from the proposed project to minimize or reduce high negative impacts whiles improving upon positive impacts. The mitigation plan will ensure that the development of the oil palm plantation complies with all technical, regulatory requirements such as the Roundtable on Sustainable Palm Oil (RSPO) and the Forest Stewardship Council (FSC).

Environmental Monitoring Plan

The chapter provides an environmental monitoring program comprising of compliance monitoring and impact detection monitoring to help, determine and align the proposed oil palm project development activities to conform to environmental laws and regulations as well as project mitigations to improve decision-making and environmental sustainability. This plan will cover all activities from the pre-development to the maintenance and harvesting stage of the project.

Provisional Environmental Management Plan

This chapter of the report seeks to provide an Environmental Management Plan, which provides a delivery mechanism to address the adverse environmental impacts of the project during nursery establishment stage to the harvesting stage. It also consolidates the mitigation and management measures that management of Plantation SOCFINAF Ghana Limited is committed to implementing to minimise potential impacts of the project on the environment.

Emergency Preparedness and Response Plan

The Emergency Preparedness and Response Plan identifies the emergency situations and prescribe appropriate response mechanism to prevent major losses as a result of the emergency. The scope of this plan is intended to encompass all hazards. A number of emergencies including injury/illness, bush fire outbreak and attack from wild animals among others have been identified and assessed. Responsibility for the control and coordination of emergencies have also been ascribed and reference to external response agencies determined.

Stakeholder Consultations and involvement

Stakeholder participation is necessary for minimizing or avoiding public controversy, confrontation and delay. The consultation also made a positive contribution towards the successful implementation of the proposed plantation due to its sensitive location. Various institutions including the EPA, Town and Country Planning Department, Water Resource Commission and the Ghana National Fire Service, Chief and elders, opinion leaders and nearby community members have been actively involved in the stakeholder consultation programme.

Conclusion

Plantation SOCFINAF Ghana Limited (PSGL) acknowledges the responsibility to the environment in which it operates through the Environmental Protection Agency Act 1994, Act 490 and the Environmental Assessment Regulations 1999, LI 1652. Management of PSGL has therefore put in place necessary measures to mitigate the environmental impacts of the 1007.21 hectares Oil Palm Plantation project and to ensure sustainability development during all stages of development