

# ENVIRONMENTAL AND SOCIAL IMPACT STATEMENT (ESIS)

FOR THE PROPOSED PALM OIL MILL WITH A MAXIMUM CAPACITY  
OF 60 METRIC TONNES PER HOUR (MT/HR)  
AT DABOASE IN THE WASSA EAST DISTRICT OF THE WESTERN REGION OF GHANA



Plantations **SOCFINAF**  
Ghana (PSG) Limited

*Prepared by: HS+E Consulting Ghana Limited  
(c) April, 2018*

## EXECUTIVE SUMMARY

### *General Overview*

This document presents the Environmental and Social Impact Statement (ESIS) for a proposed Palm Oil Mill (POM) with a maximum capacity of 60 metric tonnes per hour (MT/ hr) to be located on a six (6) hectares (ha) parcel of land near Daboase in the Wassa East District of the Western Region of Ghana. Plantations Socfinaf Ghana (PSG) Limited, a registered Ghanaian Company of the SOCFIN Group and a major player in sustainable commercial oil palm and rubber plantations in Ghana, will develop the Proposed Project.

PSG acquired 18,000 ha of land through the divestiture of the defunct Subri Industrial Plantations in the then Mpohor Wassa East District<sup>1</sup> of the Western Region. PSG has established approximately 6,000 hectares (ha) of oil palm plantation since 2012, which has contributed significantly to rural wealth and employment creation in its operational area. PSG's intention is to install a state-of-the-art processing mill to process palm fresh fruit bunch (FFB) into crude palm oil (CPO) for export. The implementation of the Proposed POM will help bridge the deficit that exists in the production of CPO in Ghana<sup>2</sup> and generate more revenue through foreign exchange and payment of taxes to improve the Ghanaian economy. The implementation of the Proposed POM will also generate more jobs and ensure a sustainable social cohesion within the nearby communities.

### *Environmental and Social Impact Statement (ESIS) Objective*

The objective of this ESIS is to ensure that the potential impacts from the Proposed POM and related activities to be undertaken are identified; their significance assessed and appropriate mitigation measures proposed to minimize or eliminate identified impacts. This will help improve environmental sustainability and aid in concrete decision-making.

### *Legal and Regulatory Requirements*

Applicable Ghanaian environmental, legal and other statutory laws and regulations that are likely to have direct or indirect bearing or influence on the Project are assessed. The legal and regulatory framework is intended to inform the discussions on the state of environmental laws, policies and regulations with respect to the Proposed POM. Few of these legislations and policies 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);
- National Environmental Quality Guidelines;
- Fees and Charges (Amendment) Instrument, 2015 (LI 2228);
- Factories, Offices and Shops Act, 1970 (Act 328);
- Ghana National Fire Service Act, 1997 (Act 537);
- Fire Precaution Premises Regulations, 2003 (LI 1724);

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<sup>1</sup> Currently Wassa East District

<sup>2</sup> MASDAR. (2011). Masterplan Study on the Oil Palm Industry in Ghana, Ministry of Food and Agriculture, Ghana. [http://mofa.gov.gh/site/?page\\_id=10244](http://mofa.gov.gh/site/?page_id=10244)

- Ghana Standards Authority (GSA) Act, 1973 (NRCD 173);
- Water Resources Commission Act, 1996 (Act 522); and
- Public Health Act, 2012 (Act 851).

The development of the Proposed POM is expected to conform to the following international requirements:

- Round Table on Sustainable Palm Oil (RSPO);
- World Bank (WB) Operational Policies (OP); and
- International Finance Corporation (IFC) Performance Standards.

### *Project Description*

The Proposed Project involves the construction and operation of a POM with a maximum capacity of 60 MT/hr. The Site for the Proposed POM is located on a six (6) ha parcel of land near Daboase. The Site is part of the land acquired for large-scale plantation development by PSG. The Proposed POM will process oil palm fruits from the PSG oil palm plantations in Daboase and Manso into CPO of acceptable quality for the international palm oil market.

Operation of the POM commences with the harvesting of Fresh Fruit Bunches (FFB) and transportation to the storage section. FFB are weighted, sorted and sterilised. Steam is used to sterilise the FFB. After sterilization, FFB are sent to the thresher to remove the fruits from the bunches. The removed fruits are sent to the digester where rotating beater arms pound the fruits under high temperature to release the palm oil in the fruit through the breaking down of the oil-bearing cells. The empty fruit bunches (EFB) are sent to the plantation to be used as manure.

From the digester, the digested material is fed to a screw press to squeeze out the oil. The squeezed oil, which contains other impurities like water, cell debris, fibrous material and 'non-oily solids', is screened to remove coarse fibre. The mixture is boiled for one or two hours and then allowed to settle by gravity. The CPO is clarified into a reception tank. Wastewater from the process is channelled to an effluent pond for treatment.

Palm kernels are recovered from the residue of the digester. In the kernel recovery process, nuts contained in the press cake are separated from the fibre in a depericarper. They are then dried and cracked in centrifugal crackers to release the kernels. The kernels are normally separated from the shells using a combination of winnowing and hydrocyclones. The kernels are then dried in silos to a moisture content of about seven percent before packing. The residue fibre and kernel shells are used as biomass.

### *Description of Environmental and Social Baseline Information*

The Project District lies within the low-lying areas of the Western Region with most parts below 150 metres (m) above sea level. The landscape is generally undulating with most parts of it being highlands. Three main categories of rock and soil types underlie the Project District, namely: Lower Birimian, Cape Coast granite and Tarkwaian. More than half of the soil consists of Cape Coast granitic soils.

The vegetation of the Wassa East District is predominantly tropical rainforest. Therefore, the District has a number of forest reserves including Subri River Forest Reserve where the Proposed Project will be sited. The

Project Site falls within a modified habitat consisting of natural and plantation vegetation. The Site was initially used as a rubber nursery and is currently overlain with ground cover plants. Fauna within the Project's AoI are limited to common insects, mammals, amphibians and birds. It was reported that large mammals, mostly monkeys and antelopes, are periodically sighted within the PSG plantation especially around the biodiversity buffers maintained by PSG within the plantation. Significant impacts on biological resources due to implementation of the Project are not likely.

The Project's AoI falls within the tropical climate zone characterised with considerable sunshine, and with excessive rainfall, providing ideal growing conditions for luxuriant vegetation. The AoI lies within the Pra River Basin with the closest natural waterbody (Wiafe Stream), located 2 kilometres (km) (straight-line distance) northeast of the Project Site. The closest surface water body is the irrigation pond developed and maintained by PSG, for which a water use permit has been obtained. The pond is located about 600 m (straight-line distance) northeast of the Project Site. It will serve as the primary source of water to the Proposed Project during construction and operation.

According to the 2010 Population and Housing Census (PHC)<sup>3</sup>, the Wassa East District has a total population of 81,073 with a sex ratio of 102.2 compared to 100.0 and 95.2 for Western Region and Ghana respectively. The total age dependency ratio for the District is 87.3, the age dependency ratio for males is higher (91.1) than that of females (83.5). Agriculture is the major occupation of the inhabitants of the District. An analysis of the population structure reveals a high economically active population of 50.6 percent, which indicates an immense human resource potential for development and for the provision of unskilled or semi-skilled labour for the Proposed Project.

#### *Stakeholder Engagement*

Stakeholder participation is necessary for minimizing or avoiding public controversy, confrontation and delay, and can make a positive contribution towards the successful implementation of the Proposed Project. Various institutions including the EPA, Physical Planning Unit of the Wassa East District Assembly (WEDA), Ghana National Fire Service (GNFS), Ghana Water Company Limited (GWCL), inter alia were consulted. Locally, the Chiefs and elders, opinion leaders and nearby community members have been actively involved in the stakeholder consultation programme. The stakeholders and their representatives were present for an open forum organised at PSG on February 27, 2018. The issues discussed, concerns raised, recommendations proposed and the ways forward are presented in the minutes attached as Appendix E.

#### *Potential Impacts Identification and Assessment*

Long and short-term positive and negative impacts of various magnitudes are expected to arise from development of the Proposed POM. Potential positive impacts from the Proposed Project include promotion of rural development, direct and indirect employment and increase in revenue for the WEDA through the payment of local taxes and levies.

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<sup>3</sup> Ghana Statistical Service (GSS). 2014. *2010 Population and housing census, district analytical report: Wassa East District*. GSS: Accra

Potential negative impacts identified include minimal loss of biodiversity, land degradation, increase in ambient noise levels, aerial emissions and localized vibrations, impact from solid and liquid waste generation and fire risks. These impacts are classified and assessed according to the pre-construction, construction and installation as well as the operation and maintenance phases of the POM. The ESIS suggested that the potential impacts mentioned would be possible to control with proper mitigation or management measures.

#### *Mitigation Measures for Identified Impacts*

Mitigation measures are proposed for all the potential impacts arising from the Proposed Project to minimize or reduce high negative impacts while improving upon positive impacts. Mitigation plans proposed include use of regularly serviced trucks and machinery, restricting project development to project boundaries, reuse of solid waste as biomass and for plantation applications, provision of natural anaerobic and aerobic effluent treatment pond, among others. The mitigation plan will ensure that the construction, installation and operation of the POM comply with all technical, regulatory and institutional requirements.

#### *Provisional Environmental Management Plan*

A Provisional Environmental and Management Plan (PEMP) has been included to highlight the commitment of PSG to sustainable implementation of the Proposed POM. The PEMP provides a delivery mechanism to address adverse environmental impacts and social risks of the POM during its pre-construction, construction and operation. It also consolidates the mitigation and management measures that PSG is committed to implementing to minimise potential impacts of the Proposed Project on the environment. Implementation of the PEMP will ensure that negative or adverse impacts of the POM are mitigated while positive impacts are enhanced.

#### *Environmental Monitoring Plan*

The Environmental Monitoring Plan comprises of compliance monitoring and impact detection programme to help, determine and align the Proposed POM development activities to conform to environmental laws and regulations as well as project mitigations. This will facilitate decision-making and environmental sustainability. This plan will cover all activities from the pre-construction to the operation phase of the POM.

#### *Emergency Preparedness and Response Plan*

The Emergency Preparedness and Response Plan identify the emergencies and prescribe appropriate response mechanism to prevent major losses because of the emergency. The scope of this plan is intended to encompass all hazards. A number of emergencies including injuries and illness, fire outbreak, electrocution, leakages or spillages, vehicular accident, plant or equipment failure and burn have been identified and assessed. Responsibility for the control and coordination of emergencies have also been ascribed and reference to external response agencies determined.

#### *Decommissioning/ Reclamation*

A decommissioning plan has been included as part of the ESIS irrespective of the fact that the decommissioning of the POM is not foreseen in the short to medium term. The objective is to demonstrate that PSG is fully aware of its responsibility and the degree of planning and inputs required to safeguard the environment in the long term. The decommissioning plan is in accordance with EPA statutory requirements. PSG will contact EPA and the WEDA once the decision to decommission is reached. PSG shall pursue

environmentally sustainable alternatives that will favour protection of the environment and promote socio-economic development options of the Project Site.

### *Conclusion*

PSG acknowledges its responsibility to the general environment in which it operates through Act 490 and LI 1652. Management of PSG has therefore put in place necessary measures to mitigate the environmental impacts of the Proposed POM and to ensure sustainable development during all phases of the Project. PSG will implement management plans aimed at improving environmental compliance and sustainability through judicious and efficient environmental management systems.