



Roundtable on Sustainable Palm Oil

RSPO NEW Planting Procedures Summary Report of SEIA and HCV Assessment

**SG Sustainable Oils Limited,
Brewaniase, Nkwanta South District of the Volta Region, Republic of Ghana.**

1.0 Executive Summary

SG Sustainable Oils Ghana Ltd (SGSOG), a wholly owned subsidiary of Herakles Farms, is developing approximately 3,715 hectares of sustainable oil palm plantations in Republic of Ghana. SGSOG was incorporated within Ghana in 2008. SGSOG is a subsidiary of Herakles Farms, which was previously known as SG Sustainable Oils (SGSO). SGSO has been a member of RSPO since March 2008, and recently an application by the parent company to RSPO for its membership to be recognized under Herakles Farms has been approved. The company's palm oil estate is located in the Volta Region, near the village of Brewaniase, Nkwanta South District, Republic of Ghana. This document outlines the Social and Environmental Impact Assessment (SEIA) and High Conservation Value (HCV) Assessment process and documentation for SGSOG's oil palm development summarized by assessors from SAL Consult Limited and Ghana Wildlife Society.

A comprehensive and participatory independent SEIA and HCV Assessment which included internal and external stakeholders were completed. The results incorporated into planning, management and operational ongoing work. The independent assessments recognised the following:

There was no primary forest in the location.

All area required to maintain or enhance one or more HCV.

There was no peat soil identified.

All peoples' private land.

Abbreviations Used

EIA	Environmental Impact Assessment
EPA	Environmental Protection Agency
HCV	High Conservation Value
IUCN	International Union for Conservation of Nature
RSPO	Roundtable on Sustainable Palm Oil
SGSOG	SG Sustainable Oils Ghana
SEIA	Social and Environmental Impact Assessment
SIA	Social Impact Assessment

2.0 Scope of SEIA and HCV Assessment

SG Sustainable Oils Ghana Ltd (SGSOG) is a wholly owned subsidiary of Herakles Farms. SGSOG was incorporated within Ghana in 2008. SGSOG is a RSPO member (№: 100500800000) developing oil palm plantation at Brewaniase, Nkwanta South District of the Volta Region in Republic of Ghana.

General Data of the Company

Company Name	: SG Sustainable Oils Ghana Ltd (SGSOG)
Deed of Incorporation	: Certificate of Incorporation dated 7 October 2008.
Business license	: Certificate to commence business dated 10 November 2008 in compliance with sec. 27 and 28 of the Companies code, 1963.
Director	: Carmine Farnan
Company Address	: Brewaniase, Nkwanta South District of the Volta Region, Box 0S 514, OSU-ACCRA, Accra, Republic of Ghana.

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Type of business	: Oil Palm Plantation and Palm Oil Mill operation.
Status of business land	: Leased Land dated 11 January 2009 for a period of 50 years with provision to extend for another 25 years.
Location Size	: 3,715 ha.
Contact person	: Carmine Farnan (Farnan@heraklescapital.com)
Geographical Location	: Brewaniase, Nkwanta South District of the Volta Region, Republic of Ghana.
GPS Reference	: 0° 35' 0" E and 7° 56' 0"

Location maps – both at landscape level and property level

Location maps are prepared and presented in the SEIA and HCV assessment reports to include all the assessment findings. Location maps showing the project location and boundary are in Figure 1, 2 and 3 below. The SEIA and HCV summary reports includes additional maps showing the topography, landscape, HCV and land use. HCV maps prepared to include areas set aside for buffer and riparian reserve, roads, housing, peoples' private land.

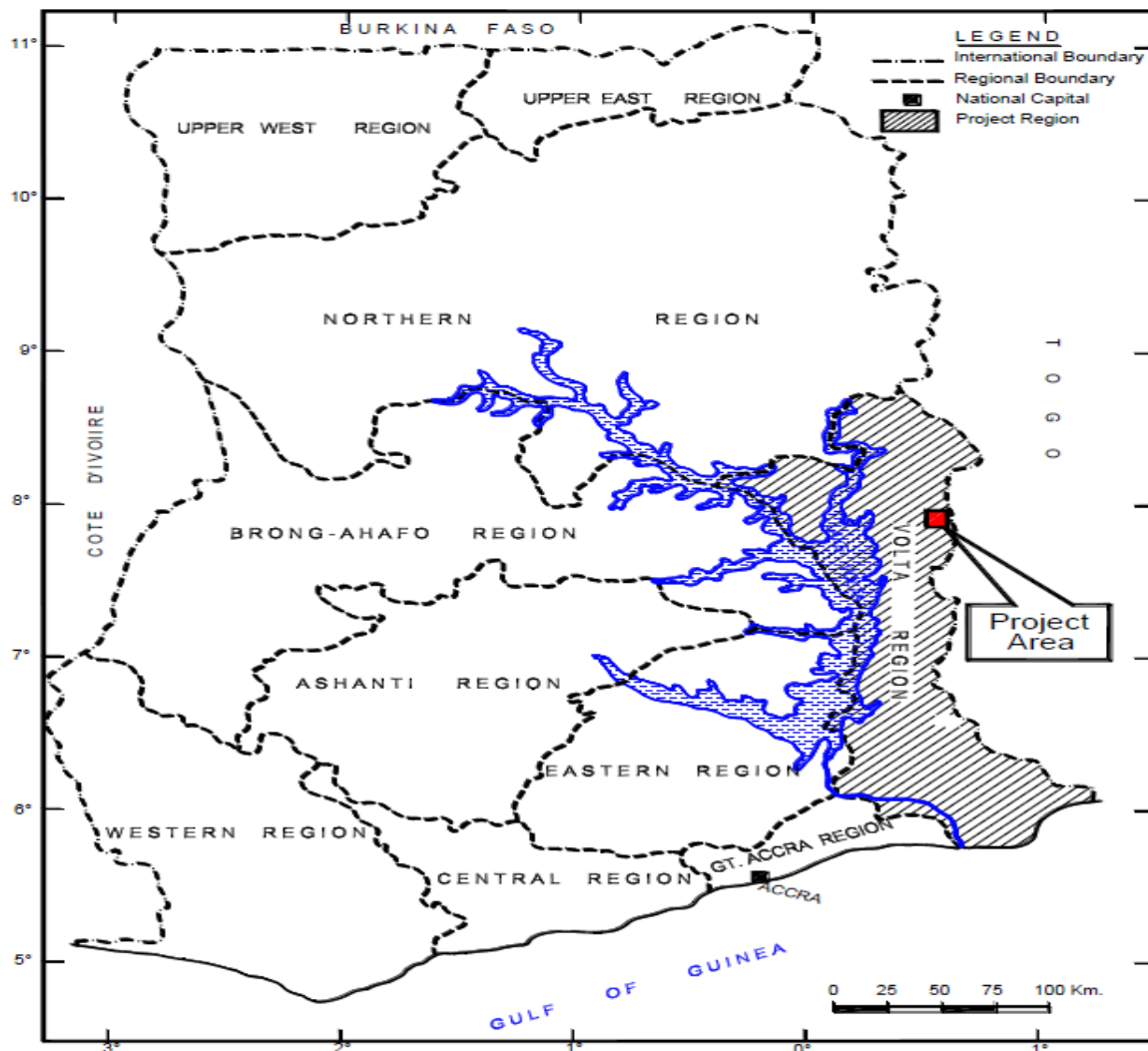


Figure 1. Geography location of SGSOG oil palm plantation in Republic of Ghana.

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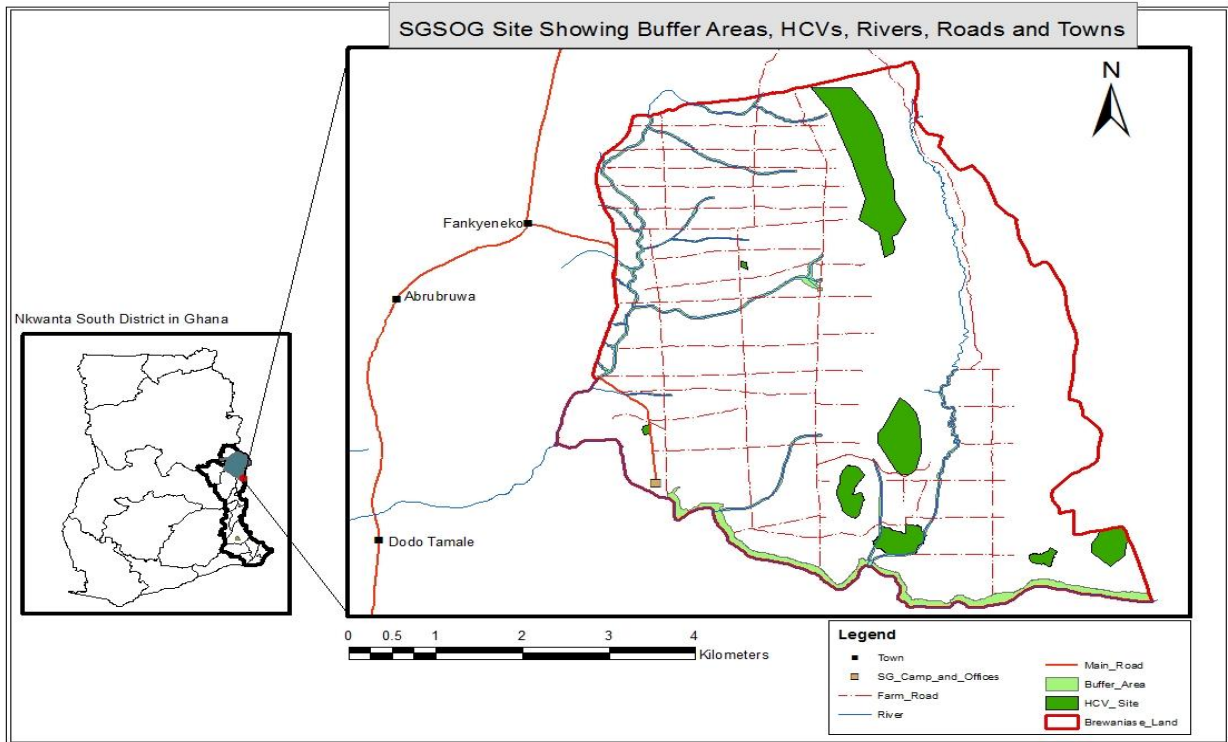


Figure 2: SOSOG location in Nkwanta South District in Republic of Ghana.

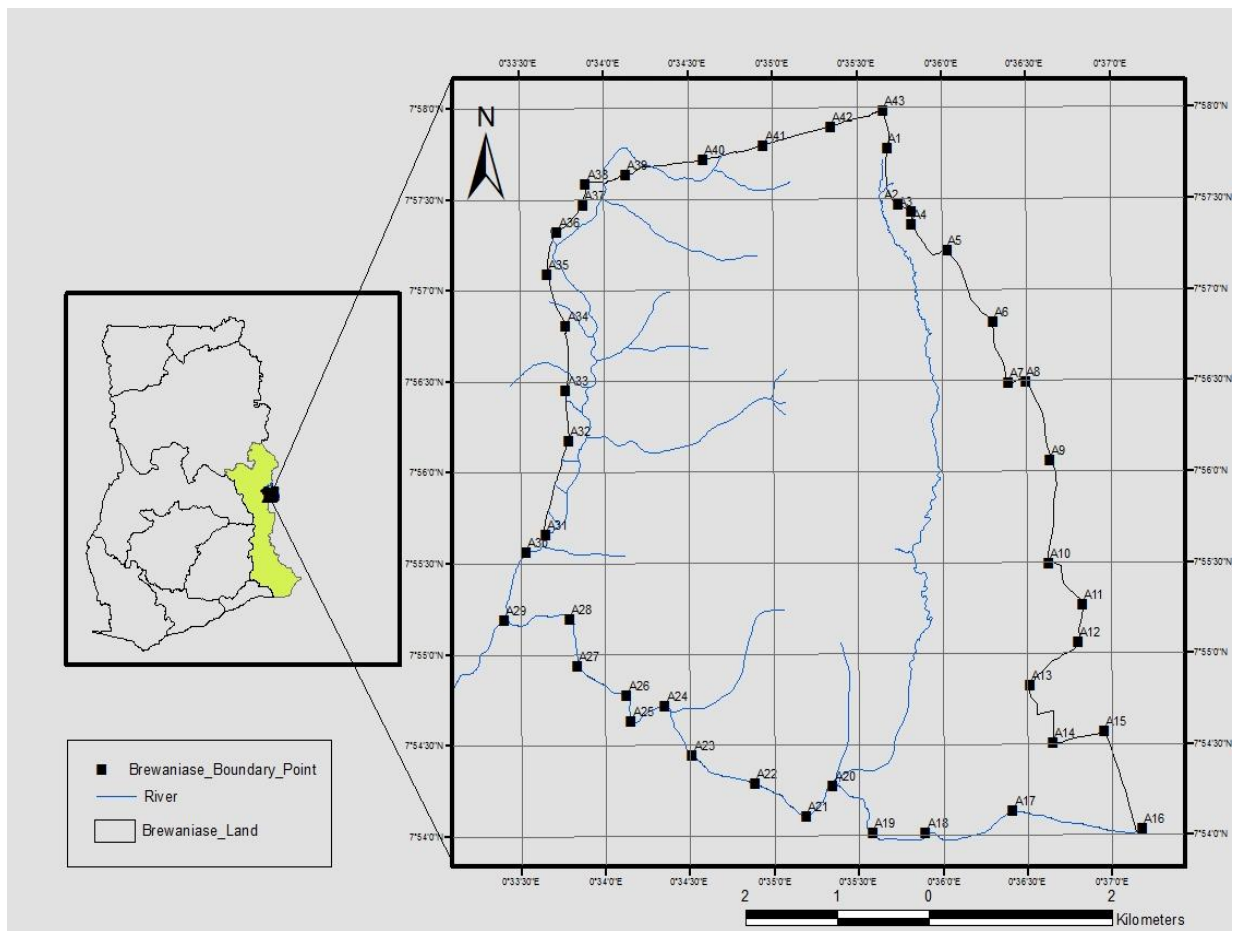


Figure 3. SGSOG boundary with GPS reference.

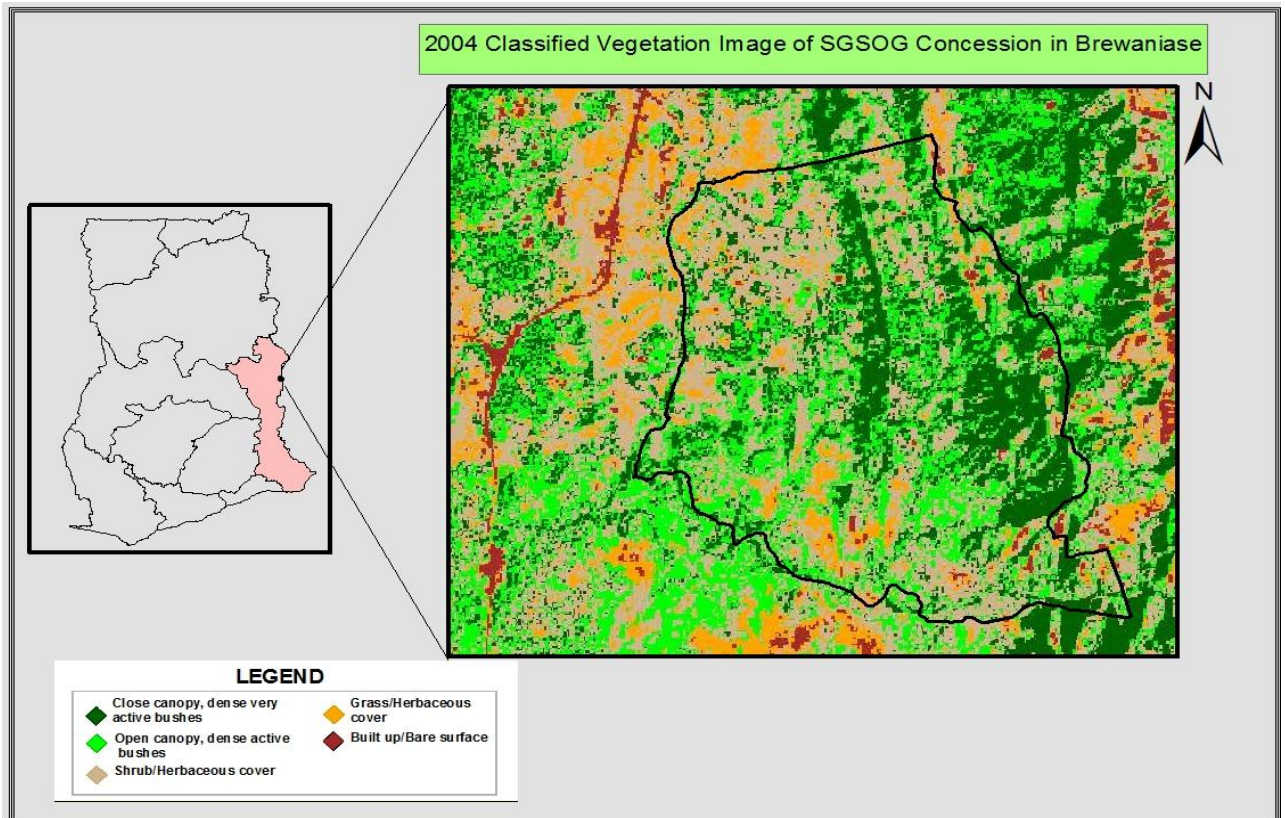


Figure 4. Vegetation map of SGSOG Concession.

List of Legal Documents

The permits that have been obtained by the company are listed in the Table 1 below. These include EPA permit and approval of SEIA report.

Table 1. List of Legal documents and Regulatory Permits.

No.	Legal documents and permits
1.	Certificate to commence business dated 10 November 2008 in compliance with sec. 27 and 28 of the Companies code, 1963.
2.	Certificate of Incorporation dated 7 October 2008.
3.	Initial registration of the new development with Ghana EPA dated 27 November 2008.
4.	Land lease dated 11 January 2009 for a period of 50 years with provision to extend for another 25 years.
5.	Ghana EPA Nursery permit dated 30 March 2009.
6.	SEIA Report approved by Ghana EPA on November 2009.
7.	Ghana EPA plantation and mill permit dated 25 February 2010.
8.	Fire permit dated 15 December 2010.
9.	Water permit dated 13 January 2011.

Area and time-plan for new plantings

The area of the new planting is 3,715 hectare. Total area planted to date is 1,619 hectare. The planting will continue through 2013. 160.9 hectare is classified as biodiversity and HCV plots. It is an ongoing planting. Initial work was started with setting up of the nursery in Brewaniase in 2009 with land clearing to set up the nursery once the Ghana EPA permit for the nursery obtained on 30 March 2009.

3.0 Assessment Process and Procedures

3.1 SEI Assessment

Plantation developments in Ghana require the completion of a *Social and Environmental Impact Assessment (SEIA)*, which is approved by the Ghana Environmental Protection Agency (EPA). The SEIA for the Brewaniase site included 3,715 hectares for plantation development and a proposed 25 tonnes/hour Palm Oil Mill. The scope of the SEIA included the establishment, operations and decommissioning of the plantation and mill. The SEIA was developed by SAL Consult Ltd. Ghana EPA approved the SEIA in November 2009.

Assessors and their credentials:

The SEIA was completed by S.A. Larmino as a Principle Consultant from SAL Consult Ltd. He was the team leader and assisted by the following assessors throughout the SEI assessment:

Name	Position	Qualification	Contribution to Report
J. Adomako	Associate Consultant, Terrestrial Biologist	Ph.D. (Ecology), University of Ghana, Legon.	Flora and Fauna Studies
J. Amakye	Associate Consultant, Aquatic Biologist	Ph.D. (Biological Sciences), K.N.U.S.T., Kumasi	Aquatic Studies
Regina Aikins	Consultant, Biophysical Environment, Socio-economic Environment	MSc (Environmental Resources Management), K.N.U.S.T., Kumasi	-Consultations -Baseline Studies -Project document review -Drafting of Report
R.Y. Amoako	Senior Consultant, Biophysical Environment, Socio-economic Environment	MPhil (Environmental Science), University of Ghana, Legon	-Consultations -Air Quality/Noise Level Assessment -Water Quality Assessment
E. K. Acquah	Senior Consultant, Resettlement related issues	MSc (Environmental Policy), University of Hull, UK	-Consultations -Baseline Studies -Resettlement issues
N.Y. Otu-Ansah	Consultant, Socio-economic Environment	MPhil (Environmental Science), University of Ghana, Legon	-Consultations -Baseline Studies
J. Payne	Consultant, Hydrology and Water Resources	MSc (Water Supply & Environmental Sanitation), K.N.U.S.T., Kumasi	-Water Resources -Baseline Studies -Project document review

Social Impact Assessment on the ground was carried out as follows:-

The Social and Environmental Impact Assessment (SEIA) covered the whole lifecycle of plantation and mill development. It involved environmental sampling, aquatic studies, terrestrial studies, land use studies, and socio-economic studies. The assessment was based on field inspections and surveys, consultations with stakeholders and desktop literature studies. The assessment provided the basis for an environmental monitoring plan. The assessment was completed by SAL Consult Ltd.

The approach adopted for the study included:

Reconnaissance survey of the proposed project area

Field Study (Aquatic, Terrestrial biodiversity and physical, Land use and Socio-economic studies)

Consultations with relevant stakeholders

Review of available literature

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Stakeholder consultation

The SGSOG concession is made up of family-owned land and involves stakeholders from Breawaniase, Dodo Tamale, Abuburuwa and Fankyenko. The concession land is owned by total of seventeen families. In January of 2009, the land owners and the company entered into a long-term lease agreement which was subsequently endorsed and recognised by the government of Ghana. The terms of the lease are for 50 years with provisions made for further extensions of 25 years.

The social consultation process, which began in January 2008, was lead by SAL Consult Ltd., a Ghana-based expert on environmental and social project support, with significant inputs from Dan Beringer (Consultant for Herakles Farms) other management staff, and local village representatives. Compensation for affected farmers was based on the company's "Policy Statement for Compensation and Resettlement for Persons Affected by SGSOG Farming Activities". Further to that "A Resettlement Action Plan", provides a background to the communities affected, the compensation process and action plan.

The purpose of engaging local communities and project-affected-persons on the resettlement/compensation process is to ensure that local community members and project affected persons and other interested parties are provided with clear information about the Project, are given the opportunity to express their views and concerns, negotiate on resettlement and compensation issues, and make suggestions as to how design and implementation of the Project might reduce negative social impacts.

Community involvement is a key social risk management tool that enables parties' interests, concerns and areas of potential conflict to be identified and resolved before they lead to disruption in the operation of the project and/or loss of goodwill amongst the host community.

SGSOG paid for an attorney to provide legal council to the 17 landowner families to assure that a free and fair agreement was reached between the parties. The Land Commission ensured that there were no other claims on the land, performed regulatory checks, and fully registered the lease agreement. The final land lease was also acknowledged and witnessed local chiefs. (A scanned copy of the signed lease was available for verification).

All relevant stakeholders were engaged during the consultation process consisting communities, landowners, farmers, opinion leaders, local political authorities, and government agency regulators. The consultation process was conducted via various one-on-one meetings, focus group discussions and key person interviews. Details of the consultation process are in the EIA report under Annex 3: Stakeholder Engagement, Annex 4: Consultations and Annex 4a: Stakeholder and Compensations. This documents made available during the verification.

Public Meetings at Local Communities:

Table 1. Summary of stakeholder consultation schedule

Date	Meeting	Number Attended
3/04/2010	Crops compensation	19
5/04/2010	Landowners Association (LOA)	25
19/05/2010	LOA / farmers	65
25/05/2010	Farmers	50
28/05/200	Compensation Committee	19
3/08/2010	Land Valuation Board	3
22/10/2010	Land Valuation Board	4

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Table 2. List of Stakeholders Consulted in Resettlement & Compensation Process

List of Stakeholders consulted
Chief/Elders of Abru Bruwa;
Paramount Chief and elders of Ntruboman;
Land Owners;
Settler communities on the concession;
Nkwanta District Assembly;
Ghana EPA Ho Regional Office;
Land Valuation Board, Ho; and
Officials of SG Sustainable Oils Ghana Limited
Forestry Services Division of Forestry Commission, Nkwanta Office
Wildlife Division of Forestry Commission, Nkwanta Office
Water Resources Commission
Ministry of Food and Agriculture, Nkwanta Office
Nkwanta South District Assembly
Abru Bruwa Assembly members
Brewaniase Assemblyman

List of Legal, regulatory and other guidance referenced.

This environmental and social impact assessment, commissioned by SGSOG is in compliance with the Environmental Protection Agency (EPA) Act 490 of 1994 and Environmental Assessment Regulation Act of 1999 (LI 1652), a prerequisite for obtaining Environmental Permit (EP) for the implementation of the project. The relevant Ghanaian laws and regulations applicable to the implementation of the project referred include:

Ghana Investment Promotion Centre Act, 1994, Act 478;
Environmental Protection Agency Act, 1994, Act 490;
Environmental Assessment Regulations, 1999, LI 1652;
Environmental Assessment Regulations (Amendment), 2002, LI 1703;
Water Resources Commission Act, 1996, Act 522;
Water Use Regulations, 2001, LI 1692;
Local Government Act 1993, Act 462;
Factories, Offices and Shops Act 1970, Act 328;
The New Labour Act 2003, Act 651;
Fire Precautions (Premises) Regulations 2003, LI 1724;
Food and Drugs Law 1992, PNDCL 305B;
Constitution of the Republic of Ghana 1992;
State Lands Act, 1962 Act 125;
Workmen's Compensation Law, 1987;
Forestry Commission Act 1999 (Act 571);
Wildlife Conservation Regulations 1971, LI 685;
Administration of Lands Act, 1962, Act 123;
Pesticides Control and Management Act, 1996, Act 528;
National Effluent Quality Discharge Guidelines;
National Ambient Air Quality Guidelines;
National Ambient Noise Level Guidelines;
Immigration Act 2000, Act 573
HCV interpretation toolkit for Ghana (Proforest, 2006)
National Wildlife Conservation Regulation
IUCN Red List of threatened animals (2008)
The 1962 State Lands Act

3.2 HCV Assessment

Assessors and their credentials

The HCV assessment was completed by Mr. Augustus Asamoah of the Ghana Wildlife Society, an RSPO approved HCV assessment Team leader with specialised in Biodiversity, Hydrology/Soil and Social. He obtained PhD in Biodiversity Studies, Department of Animal Biology and Conservation Science, University of Ghana, Legon. He is a conservation ecologist with expertise in environmental research and environmental resources management. His specific expertise are in natural resources management, field ornithology, habitat appraisal, conservation planning and high conservation value assessment, design and implementation of baseline biodiversity and environmental studies. With over twelve years functional professional experience in conservation ecology and natural resources management, he is currently coordinate and lead all the biodiversity conservation research programs of Ghana Wildlife Society (GWS).

He was assisted by a team of appropriately qualified and experienced team members. They are Nathaniel Annorbah and Reuben Ottou. Nathaniel Annorbah is a Conservation Biologist with M. Phil. (Biodiversity Studies option) and B.Sc. Zoology degrees from the University of Ghana. He is also hold a Certificate in Conservation Science from the Acopian Center for Conservation Learning, USA. He have extensive knowledge and experience in undertaking faunal, especially, avifaunal surveys having worked in all of Ghana's habitat types ranging from the coastal zone through the forest ecosystems to the savannas of northern Ghana and southern Burkina Faso. He led and taken part in various studies both while working with the Zoological Society of London Wildlife Wood Project – Ghana and currently the Ghana Wildlife Society. Reuben Ottou holds M.Sc in Environmental and International Development with over eight years experience in Community Based Natural Resources Management, where he developed key skills in participatory natural resources management and rural development. His expertise include local capacity building in participatory natural resources management, management of Integrated Conservation and Development Projects, protected Area Management Planning, networking and building partnerships for conservation.

Assessment Methods

HCV Identifying Methods.

The High Conservation Value Assessment (HCVA) entailed a systematic evaluation of the conservation value of the ecological, biodiversity and cultural elements at the proposed concession for oil palm plantation using the Ghana national HCV interpretation toolkit (Proforest, 2006). The assessment included field surveys, consultation with local communities and desktop studies. The assessment also referred to the detailed studies carried out during the SEIA. The assessment made appropriate recommendations to safeguard the ecological, biodiversity and cultural entities of high conservation value identified on the concession. The assessment was completed by Augustus Asamoah of the Ghana Wildlife Society, an RSPO-approved HCV Lead Assessor.

4.0 Summary of Assessment Findings

4.1 Summary of SEI Assessment

Summary of key findings in respect of socio-economic impacts to country, region and local communities.

The SGSOG project is located at Brewaniase in the Nkwanta South District of the Volta Region. The District covers a land area of 4,530km², which represents about 22.02% of the total land area of the Volta Region, which is about 20,570km². The land use on the proposed site is basically fallow land, bushy land, crop farms and farm houses (hamlets).

Climate

The District is characterized by a tropical climate with dry and humid weather conditions. The extreme annual rainfalls range between 922mm to 1874 mm. The mean annual maximum

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temperatures range between 24°C to 39°C, while the mean annual minimum temperatures range between 11°C to 26°C.

Geography

The relief of the area is classified as mountainous southern portion lying along the eastern border with the Republic of Togo and the undulating northern part with altitudes between 100m to 200m above sea level. There are three types of vegetation in the project area namely; semi-deciduous forest zones (covering about 30%), savanna woodland (covering about 50%), and the grassland savanna (covering about 20%). The original vegetative cover has been reduced to secondary forests due to logging, farming and cutting of fuel wood and charcoal production.

Geology & Soils

The area is underlain by the Voltaian, the Buem Volcanic formation and the Togo series. The Voltaian, which is mainly shale and mudstone beds and sandy pebbly beds occupy the eastwards of the Volta Lake and takes about a quarter of the District. The Togo series consist of quartzites, phyllites, sandstone, shale, schist and silicified. Limestone is found on the eastern border forming the Buem - Togo ranges. The Buem - Volcanic formation consisting of Basaltic, Andesitic and Trachytic lava occupies about two-thirds of the District. Soils found in the area are laterite and the forest Ochrosols and Oxisols mostly found in the forest zone. There are no peat areas found onsite.

Water Resources

The main rivers that drain the area include the Oti River, which covers about 1% of the surface area of the District, the Kpassa, Sabu, Bonakye and Chai Rivers. The proposed site is drained by a number of streams including the Dibem, Tomgbah and the Kpafia Streams which all flow into the Asukokoo river.

The Asukokoo River, which is a perennial, lies to the southern border of the project. It is proposed that water may be abstracted from the Asukokoo and also groundwater, for the operations of the plantation. It has been observed from the ten year period that minimum monthly flow is about 5.13m³/s. About 86m³/day of water will be required to establish the nursery while the mill itself will use about 150m³/day for fruit processing. Abstraction amounts will vary with the wet and dry seasons and will be confirmed from interactions with the Water Resources Commission, who is mandated to manage the country's water resources. SGSOG will ensure that abstraction from boreholes is set at sustainable level in order not to adversely affect other groundwater users within the catchment.

Aquatic Biology

The two sites selected for the study were upstream and downstream of the proposed location of the Mill showed that the Asukokoo River is of good quality. Anabaena sp. a blue-green algal species that is indicative of polluted waters was absent. River Asukokoo lacked zooplankton belonging to the Micro Crustacea. The zooplankton encountered was the rotifer Synchaeta. Nine species of fish were recorded during the study. None of the fish species recorded in the river is listed on the IUCN Red List of threatened species.

Terrestrial Biodiversity

The proposed project area falls within the dry semi-deciduous vegetation zone, but the existing vegetation on the proposed project site is a mosaic of secondary forest with open and discontinuous canopy in most places, gallery forest along the river banks, savanna woodland, fallow land and patches *Tectona grandis*, *Gmelina arborea* and *Sena siame* plantations. Flora study recorded a total of 80 species from 72 genera and 41 families. The plants recorded are predominantly green star species with few pink and red star species. None of the flora species recorded in the study is of any global conservation significance. Disturbances from logging, farming as well as wild fire have led to the replacement of most of the original dry forest vegetation with transition woodland vegetation. The habitat of the proposed project area is generally degraded.

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Results of fauna study showed that the project site is rich in fauna diversity. Several species of mammals, reptiles, amphibians and birds were recorded on the proposed project site and adjoining areas. A total of about thirty (30) medium to large mammal species were recorded in the study of which eight (8) species are listed on the IUCN Red List of threatened animal. Seven of the eight threatened species are in the Near Threatened category and one species (*Panthera leo*) is listed as Endangered. The study also recorded a total of 155 bird species on the site but none of them is of global conservation concern. Fifteen of the bird species are listed as Wholly Protected in Schedule I of the Wildlife Conservation Regulation of Ghana. Also included in the fauna species recorded in the study are twenty-six (26) herpetofauna species comprising of twenty-three reptiles (12 snakes and 11 lizards) and three amphibians. Two of the herpetofauna species *Kinixys homeana* and *Crocodylus cataphractus* are globally threatened and listed as Data Deficient and Vulnerable respectively on the IUCN Red List of Threatened species.

Socio-economic Conditions of Nkwanta South District

The District has a population of 153,276 according to the 2000 Population and Housing Census with a growth rate of 3.0. The population density of the District is estimated at 33 persons/ km². Nkwanta South District is basically rural with over 76% of the population living in rural areas and in scattered settlements.

Agriculture and animal husbandry employs about 81.5 of the total population who are economically active with other profession employing the remaining 18.5%.

There are nine health facilities in the Districts. The staffing position at all the health facilities in the area is not encouraging. There is only one doctor in the District with some facilities without any health personnel at all. Malaria is the commonest disease in the area. There are 48 pre-schools in the District, 93 Primary Schools, 46 Junior Secondary Schools and 3 Senior Secondary Schools. Potable water coverage in the area is just about 44% with a total of 266 boreholes.

Socio-economic Conditions at the Proposed Project Site

There are 10 small hamlets within the concession with a total population of 77 people. The people in the hamlets are mostly farmers who grow variety of food crops mainly for subsistence and also for sale at relatively small scale. Crops that are commonly grown include oil palm, yams, plantain, cassava, groundnuts, maize, tomatoes, garden eggs, pepper and okro.

There is only one dusty road lying at the western edge of the concession and this serves as the only link to New Fankyeneko. The other hamlets can only be reached on foot.

Households consist typically of at least two bedrooms and a kitchen made of mud with either thatch roof or aluminum sheet. Some kitchens are roofed with bamboo. There are no schools or health facilities at the proposed project site. Children from the hamlets attend school at New Fankyeneko, which is about 4km from Asukokoo Zongo the main hamlet on the concession. There is no cemetery on the concession but there exists an old burial ground at Asukokoo Zongo which has not been used in the last forty years.

Main sources of energy are kerosene for lighting lanterns and firewood for cooking. The Asukokoo River and its tributaries such as the Kpafia stream are the sources of drinking water for the inhabitants of the hamlets.

Significant Environmental and Social Impacts

In summary, the **significant** negative environmental impacts that are likely to arise during the land development to operational phases for plantation and mills are related to:

- Land acquisition and land ownerships;
- Loss of biodiversity;

- Occupational health and safety;
- Water pollution.

Summary of key findings in respect of socio-economic impact in respect of emergent Communities.

No resettlement of any of the population was necessary and a limited number of people have remained within the concession. Ten huts and their associated farmlands have been allowed to be maintained. These huts have been identified and their locations mapped out.

Several dozen farmers (some were land owners, others were non-leasing tenant farmers) had active farm plots within the concession. SGSOG developed a crop compensation plan under the approval and oversight of the Ghana Land Valuation Board. Some farmers were compensated in 2010 and the remainder will receive compensation in 2011. This is an on-going process and the names of these farmers will be finalised and validated by the Land Commission. A Grievance Committee, comprising 9 committee members, which includes representatives of the company, community and the farmers, has been established to handle any grievance and complaints arising from this process. A grievance procedure which details communication methods and contact personnel is in place. To date, there have not been any disputes.

Issues raised by stakeholders and assessors comments on each issue.

Resettlement/compensation issues discussed as well as concerns expressed and the outcome of the engagement are presented in the table below.

Key Stakeholders	Discussions and issues raised	Outcome/Follow-up action
<i>Traditional authorities</i>		
Chief/Elders of Abru Bruwa	1. It was revealed that land belongs to families. The traditional authorities/land owners want compensation for the land to be adequate. 2. The families indicated that each family will confirm the head or the one to receive the compensation on its behalf.	1. SG Sustainable Oils Ghana proposed to pay land compensation in cash and annually and the land owners agreed to this proposal. 2. SG Sustainable Oils Ghana has engaged a legal counsel for the land owners to assist them in their negotiations with the company. The consultant indicated details of compensation payment procedures will be captured in the RAP.
Ntruboman Paramount Chief, Elders and Land Owners		
<i>Settler communities/farmers and opinion leaders</i>		
Asukokoo Zongo	1. On land acquisition, the settler communities/farmers stressed the need to be given some plots of land to enable them continue with their farming activities. 2. The indigenes on the concession revealed that they are now prepared for resettlement if the package is acceptable.	1. SG Sustainable Oils Ghana has agreed to allow them to live and farm on the same plots of land that they have now. Without impacting their rights to farm. 2. SGSOG does not envisage any resettlement. The Company intends to allow the local communities to stay within the plantation for the next 5 years to see how feasible it will be.
Old and New Fankyeneko		
Abru Bruwa and Brewaniase Assembly men		
<i>Government Agencies</i>		
Nkwanta South District Assembly, Nkwanta	1. The District Assembly confirmed that land in the District is family owned, and there is therefore the need to have adequate consultations with the families for them to	The consultant proposed that a representative of the chief and or the Assemblyman will be part of the RAP Management Team that will administer the compensation money if applicable but since no resettlement will be undertaken no payments will be made.

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	<p>agree to release their land for the project.</p> <p>2. It is important to have witnesses (e.g. Chiefs) when agreement is being made between the proponent and land owners over compensation.</p>	
Land Valuation Board (LVB), Ho	The LVB is prepared to assist in the valuation exercise if consulted. The compensation rates could be negotiated further using the LVB rates as threshold.	SGSOG accept the proposal.
Ghana Environmental Protection Agency (EPA)-Regional Office, Ho	<p>1. The Regional officers stressed the need to continually engage and inform the local communities about the project.</p> <p>2. The compensation package should be adequate to prevent stealing of palm fruits and the beneficiaries should be educated on the judicious use of compensation money.</p> <p>3. The officers visited the project site twice with the consultant to observe field conditions, interact with local communities and to confirm the level of consultations carried out.</p>	<p>1. Prepared separate reports to the Head Office in Accra.</p> <p>2. SG Sustainable Oils Ghana affirmed its commitment to employ project affected persons to enable them enhance their living conditions.</p> <p>3. The consultant proposed that sensitisation and education should form part of the RAP activities.</p>
<i>Project Proponent</i>		
SG Sustainable Oils Ghana	<p>1. The original plan was not to remove or relocate settlements on the concession.</p> <p>2. Proposed the annual payment of compensation for land. This will prevent the situation where onetime payment is made and the money is misused.</p> <p>3. Is assessing the option of resettling the scattered communities in one area on the concession.</p> <p>4. The company is in favour of officially using a local person as a liaison officer.</p>	<p>1. The company and landowners have agreed to the annual payment.</p> <p>2. The company will re-engage the communities if firm decision is taken on the resettlement package.</p> <p>3. The company periodically engage a local person as the Community Liaison Officer and will soon confirm his appointment as permanent employee for SG Sustainable Oils Ghana.</p>

4.2 Summary of HCV assessments

SG Sustainable Oil Ghana (SGSOG) one of the emerging oil palm companies in Ghana is proposes to develop a 37km² oil palm plantation at Brewaniese in the Nkwanta South District of the Volta Region. The company hopes to achieve sustainable palm oil production by adopting and applying the criteria of High Conservation Value (HCV) as well as the Principles and Criteria of the Round Table on Sustainable Palm Oil (RSPO) in the development of the Brewaniese oil palm plantation.

SGSOG engaged Augustus Asamoah of the Ghana Wildlife Society to conduct HCV assessment of the 37km² concession at Brewaniese using results of baseline biodiversity and socio-economic study carried out by SAL Consult between December 2008 and March 2009.

Besides the baseline study results, a follow up habitat assessment was also carried out by Augustus Asamoah in August 2010 to verify and confirm various ecological, landscape and cultural elements on the concession for the purpose of the HCV assessment.

HCV assessment entailed a systematic evaluation of the conservation value of the ecological, biodiversity and cultural elements at the proposed concession for oil palm plantation using the Ghana national HCV interpretation toolkit. The assessment made appropriate recommendations to safeguard the ecological, biodiversity and cultural entities of high conservation value identified on the concession.

Overall HCV identification and proposed measures to maintain and enhance those identified.

The baseline biodiversity assessment recorded a total of 155 bird species but none of them is listed as threatened on IUCN Red List of threatened animals. Seven (7) of the twenty-two (22) large mammal species recorded in the study are of global conservation concern, with one of the seven species *Panthera leo* being listed as Endangered on the IUCN Red List of Threatened species. Two of the twenty-six (26) recorded in the baseline study are globally and listed on the IUCN Red List of threatened species.

There was no globally threatened or black star species among the 80 plant species recorded on the concession and no wildlife protected area or habitat critical for the long term survival of nationally rare or globally threatened was identified on the concession.

There exist habitats that are critical for water catchments as well as area critical for the control of erosion along the steep sided hills on the concession and two sacred sites for traditional religious rituals and worship as well as an old burial ground which has not been used for about 40 years.

Baseline biodiversity study did not consider the concession as a key habitat for a population of any fauna and flora species. The study did not also identify any habitat within the concession area to be critical for the long term survival of any nationally rare or globally threatened fauna or flora species.

Ecologically sensitive areas on the concession such as watersheds of streams and rivers as well as steep sided slopes of hills that are prone to erosion should be set aside as biodiversity plots. Where necessary there should be enrichment planting of trees to enhance the vegetation cover of such areas.

The forest around the two shrines and the old burial ground should be excluded from land clearing and given adequate buffer of vegetation. The two sacred sites should be managed in consultation with the custodians of the shrines.

The study however acknowledged that the development of the oil palm plantation and its ancillary activities will impact on the local fauna and flora. Most of the existing habitat in the target area is expected to be destroyed.

To avert the erosion of local fauna and flora through habitat loss associated with the oil plantation development, it is recommended that land clearing be carried out in phases according to the annual

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planting schedule. Establishment and management of biodiversity plots to serve as refuge for remnant fauna and flora on the concession should be an integral part of the plantation management.

There should be adequate buffer of about 20 meter of vegetation around the rivers and streams and the buffer vegetation should left intact and free from any habitat degrading activities. This will eventually develop into a gallery forest and prevent the siltation and drying up of the streams and rivers.

It is also strongly recommended that SGSOG adopts and enforces a policy of no burning, and no hunting on the concession and most especially in the biodiversity plots. Adequate fire prevention measure such as fire breaks comprising of road clearing round the biodiversity plots should be established.

Decisions on HCV status and related mapping.

The HCVA was based on desktop and field assessments conducted between December 2009 and June 2010. Both the initial and follow up assessment reports have been made available. The HCVA was guided by the Ghana National HCV Toolkit (2006). The HCVA identified a number of HCVs (biodiversity and social) which have been included as *biodiversity plots* that will be protected by SGSOG. A summary of this is provided in the table below.

Table 2. Summary of Identified HCV's (Biodiversity and Social)

Area	Estimated Land area (Ha)	Description	HCV Criteria
<i>Kpetebu stream headwater</i>	4.1 Ha	A relatively small area of approximately 4.1 hectares of relic moist semi-deciduous forest located at the south-western corner of the northern section of the Kpetebu Hills.	4
<i>Kpetebu Hills</i>	10.4 Ha	This is a steep sided slope hill situated almost in the middle of the leased area. The hill is separated into southern and northern section by a valley.	4
<i>Kpafiao Hills</i>	93 ha	A long hill range located in the middle of the concession and extends northwards to the northern limit of the concession. This HCV area comprising of the steep sided slopes and the flat summit of the hill has an estimated area of about 93 hectares.	4
<i>Hill Pillar 86</i>	40 Ha	Part of a range of hills that extends into Togo and constitutes the headwaters of several streams including the Tomgbah and other tributaries of the Asukokoo River. Hill Pillar 86 along with the adjacent Tomgbah hill together have an area of about 40 hectares and they are considered HCV areas on the basis of the vulnerability to erosion and importance as source of streams.	4
<i>Tomgbah Sacred Grove</i>	9.4 Ha	A grove surrounding the Mfekla Shrine of the Agyawure Family of Brewaniese and comprises of a relic of moist semi-deciduous forest and the Tomgbah stream. With an estimated area of 9.4 hectares, the grove comprises of an old cocoa plantation within which is a small patch of secondary forest in relatively good condition.	6
<i>Logbah shrine</i>	2 Ha	Located within a small grove (2 ha) in the middle of the concession. Unlike the <i>Mfekla shrine</i> which belongs to one of the land owing families of the SGSOG Breweniese Concession, the Logbah shrine belongs to a local fetish priest.	6

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<i>Old Fankyeneko</i>	2 ha	Burial ground with an estimated area of about 2 ha is located to the south-western corner of the concession. The site served as the burial ground of the Old Fankyeneko until the village relocated to its present location along the main Kedjebi-Nkwanta trunk road.	6
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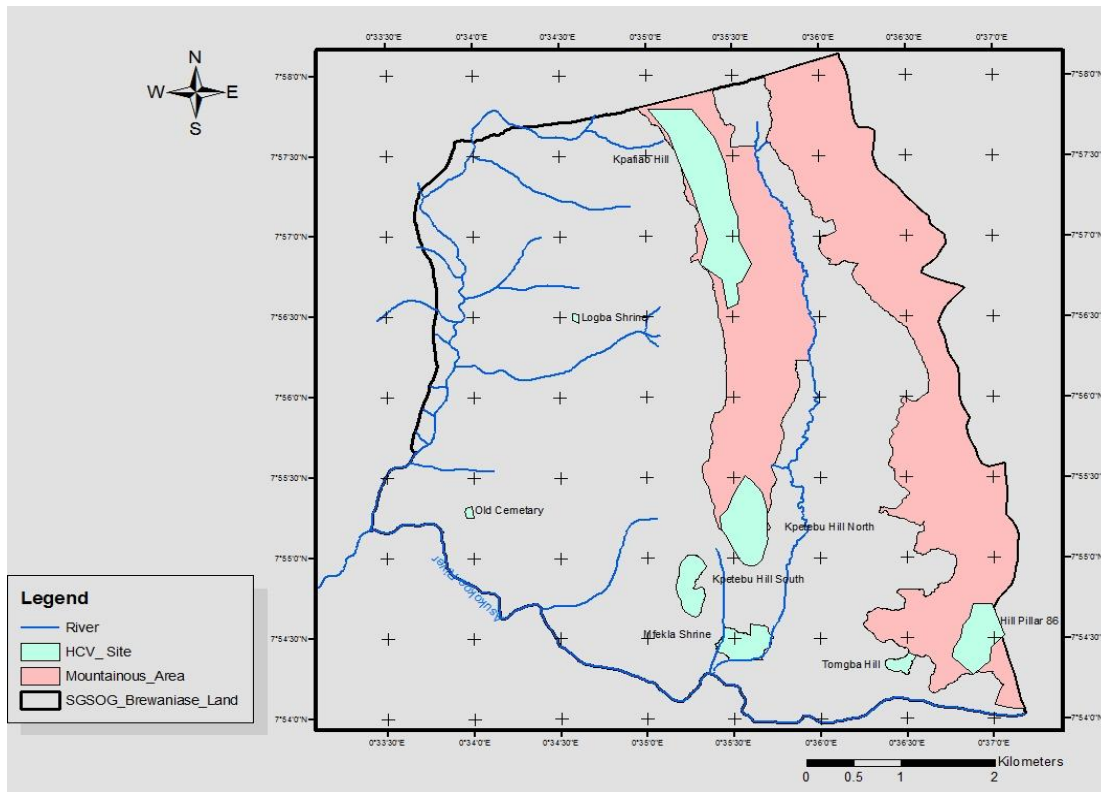


Figure 5: Findings of HCV area in SGSOG Concession.

General Recommendations for HCV Management:

The SGSOG, Brewaniase oil palm plantation is located within an area that is prone to human-induced bush fire. It is therefore imperative that measures are put in place to prevent fire outbreak on the plantation during the dry season. Causes of bush fire in the area include palm wine tapping, hunting and land clearing for farming. There is a regular incidence of Fulani herdsmen deliberately setting fire to dry vegetation to induce regeneration. This practice has the potential to destroy unintended areas. Other habitat degrading human activities in the area include logging, which was identified to be very rampant throughout the area. The following measures have therefore been proposed as management interventions to avert further habitat degradation of the biodiversity plots.

Establishment of Biodiversity Plots

Each of the seven high conservation areas should be clearly delineated from the rest of the concession by external boundary line using the GPS coordinates. The plots should be clearly isolated from the areas to be planted and maintained as biodiversity plots. Each plot should be properly labeled with the ecological or socio-cultural importance for which it has been set up. The plot label should clearly spell out human activities that are prohibited from the plots.

Construction of Firebreaks

Interactions with some land owners in the area revealed that the bush fires that usually ravage the area, often originate from far off areas. It is therefore strongly recommended that effective fire breaks in the form of transect or road clearing be constructed round each of the proposed biodiversity plots to prevent fire from entering into concession and the biodiversity plots from outside. The fire breaks should have a width of about 4 metres and should be regularly maintained and cleaned of all vegetation at all times especially during the dry season.

Hunting and Farming

Hunting and farming are two major causes of bush fire in Ghana and it is important that adequate measures are put in place to prevent these practices in the concession and in particular within any of the biodiversity plots. Hunting by any method should be prohibited from the concession and more so in the biodiversity plots. Although there is general paucity in large mammal fauna in the concession, complete cessation of hunting would allow fauna wildlife to recover and build up in the area. Crop farming activities should not be allowed anywhere on any of the biodiversity plots as it would defeat the essence of the plots, apart from being a major potential source of fire outbreak.

Cattle Grazing

Active and adequate signs of cattle grazing were observed on the concession and specifically on the Kpetebu Hills (north) and on the Kpafiao Hills. The grazing could be coming from a Fulani herdsman village located at the northern end of the concession. It was also found out during the field evaluation that some Fulani herdsman also cross over from across the border from neighboring countries during the dry season.

Replanting of indigenous tree species at Degraded Areas of Proposed Biodiversity Plots

The slopes and summit of the Hill Pillar 86 is highly degraded and completely covered with grass in sharp contrast to the semideciduous forest in the valleys at the foot of the hills. The prevalence of grass on the hill promotes wild fire during the dry season when the habitat completely dries out. To stabilize the landscape and prevent erosion along the hill slopes, it is highly recommended that a mix of indigenous tree species be planted on the summit and along the slopes of Hill Pillar 86 and associated hills.

Palm Wine Tapping

Palm wine tapping activities were observed all over the concession where the habitat assessment was carried out. Wild oil palm trees were observed throughout the concession. This situation implies a propensity for palm wine tapping by local people from surrounding communities. In view of the potential danger of fire out break from palm tapping activities, it is important that this activity is prohibited on the concession particularly in the biodiversity plots. The proposed biodiversity plot 5, which has a significant presence of wild oil palm trees, should particularly be guarded against palm wine tapping. Wild oil palm trees located within any of the proposed biodiversity plots should be paid for and left to stand.

Logging

Harvestable economic trees within any of the high conservation values areas should not be harvested or felled. It was observed in the course of the habitat assessment that extensive harvesting of economic trees had previously been carried out on the concession, resulting in severe degradation of the isolated patches of forest. Further removal of trees from within these areas would aggravate the current situation. Logging should therefore not be permitted in any of the potentially high conservation areas on the concession.

It is strongly recommended that all the high conservation areas be set aside as biodiversity plots and be managed as integral part of the oil palm plantation with the prime objective of safe guarding their ecological, landscape and socio-cultural importance. These areas should also be managed to enhance the fauna and flora diversity of the area by serving as refuge for wildlife. As part of the management

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of the biodiversity plots, a monitoring scheme should be put in place to monitor and evaluate measurable habitat conditions such as vegetation structure, fauna composition etc. The periodic monitoring results should inform further changes in management interventions.

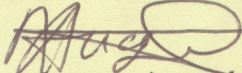
5.0 Internal responsibility

Formal signing off by assessors and company

This document is summary of assessment result on High Conservation Value (HCV) and Social Impact Assessment (SIA) in SGSOG and has been approved by the Management of SGSOG.

On behalf of the assessment team, I acknowledge that the HCV assessment was done independently and all potential HCV sites have been identified and mapped. A pre-cautionary approach has been taken and management and monitoring guidelines have been provided to enable the company to undertake site management. The assessment is subjected to the following constraints, remoteness, data availability and time allocated.

Signed on behalf of HCV Assessment Team

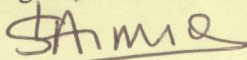


Name: Augustus Asamoah
Designation: Lead Assessor

Date: November, 2011
Company: Ghana Wildlife Society

On behalf of the assessment team, I acknowledge that the SEIA assessment was done independently and all potential impacts have been identified and assessed. A pre-cautionary approach has been taken and management and monitoring guidelines have been provided to enable the company to undertake site management. The assessment is subjected to the following constraints, remoteness, data availability and time allocated.

Signed on behalf of SEIA Assessment Team

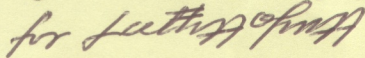


Name: Seth Larmie
Designation: Principal Consultant

Date: November, 2011
Company: SAL Consult, Ltd.

On behalf of the company, I acknowledge the responsibilities of the company to implement the management and mitigation plans which are principally to ensure that the conservation areas are fully identified prior to land clearance and that they are fully monitored and protected after planning

Signed on behalf of the Company



Name: Carmine Farnan
Designation: Director

Date: November, 2011
Company: SG Sustainable Oils Ghana (SGSOG)