

**ROUNDTABLE ON SUSTAINABLE PALM OIL  
NEW PLANTING PROCEDURES  
SUMMARY REPORT OF PLANNING AND MANAGEMENT**

**FOR**

**GHANA OIL PALM DEVELOPMENT COMPANY LIMITED  
(GOPDC OKUMANING ESTATES)**

**SUMMARY**

**KWAE, EASTERN REGION  
GHANA**

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## 1. Executive Summary

### Introduction and summary findings

The Ghana Oil Palm Development Company (GOPDC) Limited is a subsidiary company of the Siat Group. The Siat Group of companies have oil palm plantations in three main countries in Africa including Ghana (GOPDC), Nigeria (Presco and Siat) and Gabon (Siat). The Group has committed to ensuring that its operations meet international best practices as well as social and environmental sustainability requirements.

The Ghana Oil Palm Development Company (GOPDC) is engaged in large-scale cultivation of oil palm on nucleus estate and outgrower/small-holder schemes for local farmers as well as operating a 60-ton/hour capacity palm oil mill. As part of measures towards ensuring that the company maintains the production levels, GOPDC acquired about 5,600 ha of land at Okumaning which was originally leased to the erstwhile State Farms Corporation through the Divestiture Implementation Committee (DIC) and intends to develop a portion for a new oil palm plantations.

The GOPDC is located at Kwae in Kwabibirem District of the Eastern Region of Ghana about 112km north-west of Accra. The area is located in the High Forest Zone precisely within the Moist Semi-Deciduous Forest Zone of Ghana where timber production and cultivation of cash crops particularly cocoa, cola nuts and oil palm are the principal forest-land-use activities. Siat Ghana became the owner of the estate through the acquisition of erstwhile State Farm under the government of Ghana divestiture implementation programme. The State Farm was established by the government of Ghana in 1975 after acquisition of the land under an Executive Instrument-30 (EI. 30). The original lease agreement for the Kwae land consisting of land belonging to Kwae, Asuom, Anweam, Minta, Mamang and Otumi stools (lease agreement dated March 1976 taking effect from 1st April 1976 for a 50-year period). The GOPDC entered into lease agreement with the government of Ghana for the Okumaning concession on 15th December 2008 for a 50-year lease period also encompassing all that parcels of land belonging to Okumaning, Takorowase and Kusi stools. However, the Okumaning agreement takes retrospective effect from 1<sup>st</sup> January 2000. Although these concessions were officially established in 1976 for Kwae concession and 2000 for Okumaning, there are still around 5,395 ha of unplanted land available for planting oil palm.

As part of the company's strategy to develop the unplanted areas, GOPDC initiated a process for planting the undeveloped areas at Okumaning. As a member of the Roundtable on Sustainable Palm Oil (RSPO), GOPDC has committed to achieving full compliance with the RSPO requirements for sustainability in all of its existing and future operations. The company also intends to ensure all its new plantings are in compliance with the RSPO New Planting Procedure (NPP). Therefore, GOPDC engaged Proforest, a RSPO approved High Conservation Value (HCV) assessors to undertake a HCV assessment for the undeveloped areas prior to land conversion.

This report provides a brief summary and conclusions of the HCV assessment conducted in 2010 and the social impact assessment which was conducted in 2005 for the Okumaning Estate.

#### **Primary forests in the assessment area**

There are no primary forests in the landscape: Besides the gazetted forest reserves in the area, the estate is mainly a farmland with mosaic of cocoa, oil palm and citrus plantations interspersed with food crops such as maize, cassava and plantain. The forest reserves represent the main forest cover in the area although they are generally degraded. The forest reserves in the landscape include Auro River, Mamang, Bediako, Esukawkaw, Nsuensa and Aiyaola forest reserves. None of these reserves is located within the estate or adjoins it although they are within a range of 20 kilometres from the estates, all the other forest reserves are quite far from the estates. Besides, the gazetted secondary forest reserves including Nsuensa and Aiyaola which are a few kilometres from the estates, there are no primary forests in the landscape.

#### **Areas of peat soils**

There are no areas of peat soils in the estate or the landscape.

### **Local people's land**

The land was originally acquired by government for oil palm plantation development in 1975 and has since remained government land. There is **no local people's land within the boundaries of the concession** although local population have been using parts of the land for food crop farming since it was acquired. Patches of active farms on the land were duly recognised with the Government of Ghana through the Lands Commission and on behalf of GOPDC agreed with the affected parties for fair compensation rates that were have since been paid out to the affected farmers.

The findings of the social impact assessment carried out 2005 suggest that the proposed agro-industrial oil palm plantation development will create employment and other business opportunities for the local communities and the general population in the project catchment area and beyond. The intervention is also consistent with the Government of Ghana's vision and land use plan for the area which was acquired for the establishment of agro-industrial oil palm plantations.

This notwithstanding, conversion of the land to agro-industrial oil palm plantations was also identified to come along with some challenges for the local communities and the population who live in those communities. The challenges were identified to include displacement of squatter farmers, loss of farmlands and shortage of farmlands for food crop farming. The loss of farmlands could potentially affect food crop production which when occur could jeopardize the food security potential of the area and therefore trigger higher prices of food crops. However, the expected impact on agricultural lands and food security is expected to be very minimal since farmers were aware that they were using the land temporary. Also most native communities in the area have their farmlands located outside of the concession.

The outcome of the communities' Consultation during the social impact assessment indicated that majority of opinion leaders and inhabitants of communities fringing the concession area are much in favour of the project because of its contribution to local development.

From the environmental impact assessment carried out by AY & A Consult Limited it is discernible that the main environmental media to be influenced include ecology, soil, streams, landscape and air.

### **Assessment result**

The social and environmental impact assessments were professionally carried out and therefore generally very comprehensive and detailed. The resulting management plans include the findings of the various impact assessments conducted by separate independent consultants including the environmental impact assessment, the high conservation value assessment conducted by consultant accredited and approved by the RSPO to lead HCV assessments. GOPDC has thus adhered strictly to the RSPO New Planting Procedures and has documented the assessments and plans according to the RSPO templates issued in May 2011.

## **2. Reference Documents**

### **SEIA and HCV assessment reports**

- a. Social Impact Assessment of Okumaning Oil Palm Plantation Programme, December 2005
- b. Environmental Impact Assessment of GOPDC operations, May 2003
- c. The High Conservation Value Assessment for Kwae and Okumaning Estates for GOPDC, July 2010
- d. Compensation records from the Government of Ghana
- e. Biodiversity and socio-cultural survey for HCV assessment by Ghana Wildlife Society

### **List of legal documents and regulatory permits related to the areas assessed**

#### **Legal documents**

- a. Environmental Protection Agency Act, Act 490 of 1994
- b. Environmental Assessment Regulation of 1999

- c. Lands Commissions Act of 1994
- d. Lands Commission Act, Act 767 of 2008
- e. Labour Act, Act 651 of 2003
- f. Labour Regulation LI 1833 of 2007
- g. Environmental Assessment Regulations LI 1652 of 1999
- h. Environmental Assessment (Amendment) Regulations, LI 1703 of 2002
- i. Buffer Zone Policy of 2011
- j. National Wildfire Policy 2006

#### Regulatory permits and property deeds

The relevant legal documents, regulatory permits and property deeds reviewed as part of this assessment are listed in the Table below:

**Table 1: Relevant legal documents, regulatory permits for GOPDC**

Permits/legal document type	Remarks
Land acquisition by Government of Ghana under the Executive Instrument Number 30	Government Instruments for acquisition of land from traditional authorities in 1975
The lease agreement between the Government of Ghana and the Traditional Authorities	Lease agreement between the Government of Ghana and Traditional Chiefs dated March 1976 taking effect from 1st April 1976 for a 50-year period
The lease agreement between the Government of Ghana and the GOPDC	Lease agreement dated 15 <sup>th</sup> December 2008 for Okumaning effective 1 <sup>st</sup> January 2000
Divestiture Implementation PNDC Law 326 for SIAT to acquire initial shares of GOPDC	Agreement dated 1995
Environmental Impact Assessment and the management plan permit	Environmental Management Plans reviewed by EPA and environmental permit issued on 10 <sup>th</sup> of July 2014

Location maps – both at landscape level and property level

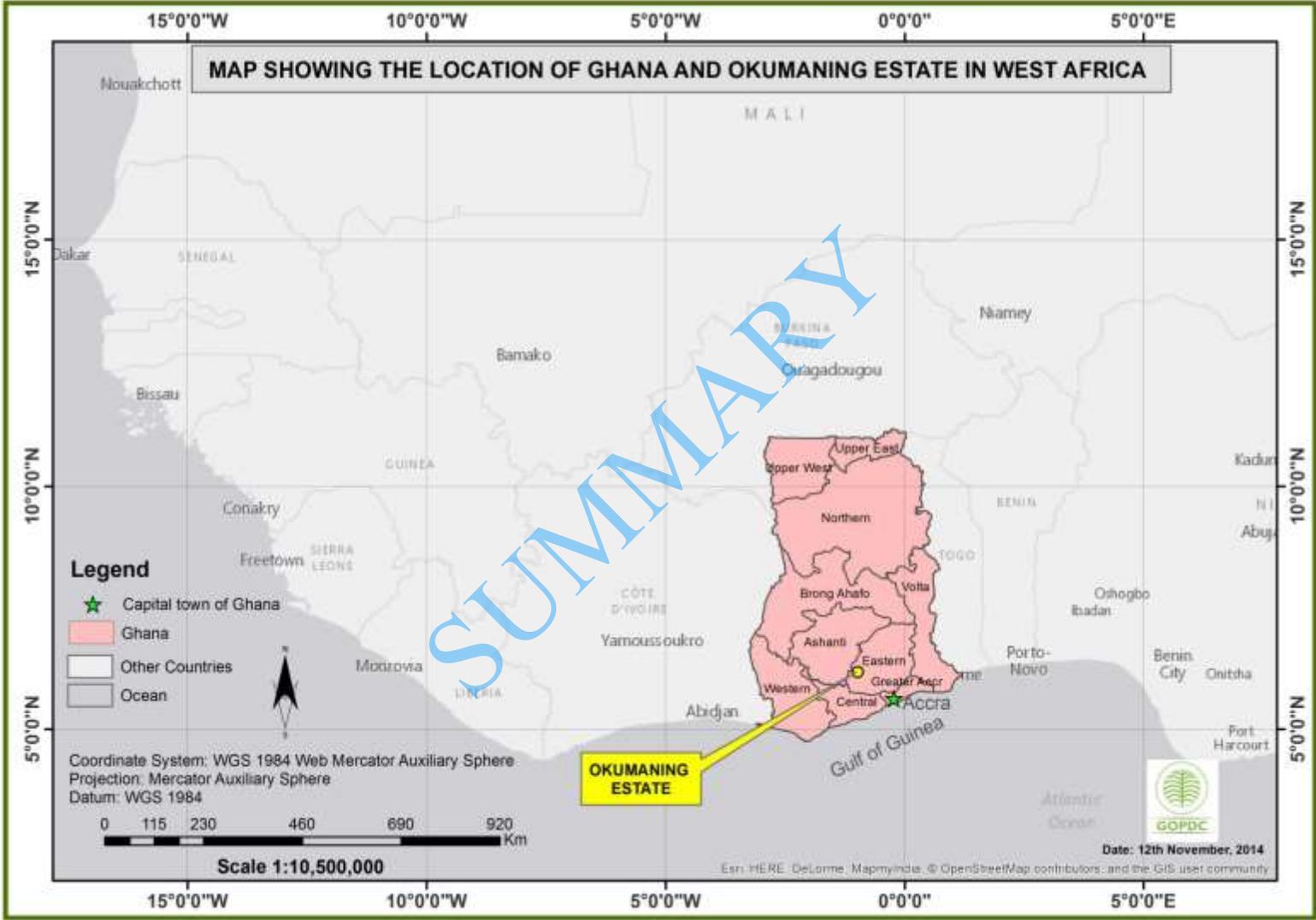


Figure 1: Map of West Africa showing the location of Ghana

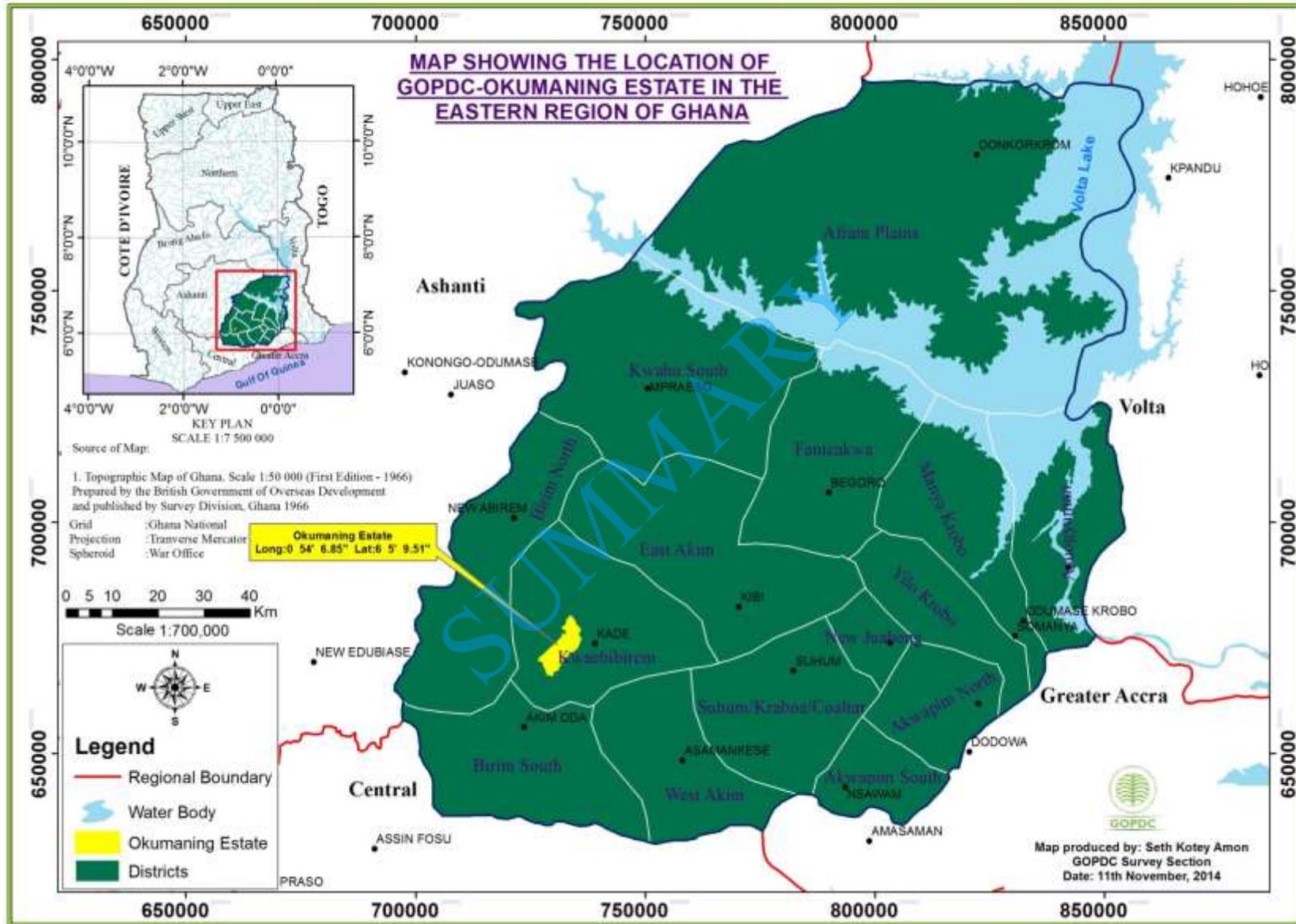


Figure 2: Map Ghana with location of GOPDC - Okumaning estate in the Eastern Region, Kwabebirim District, Ghana

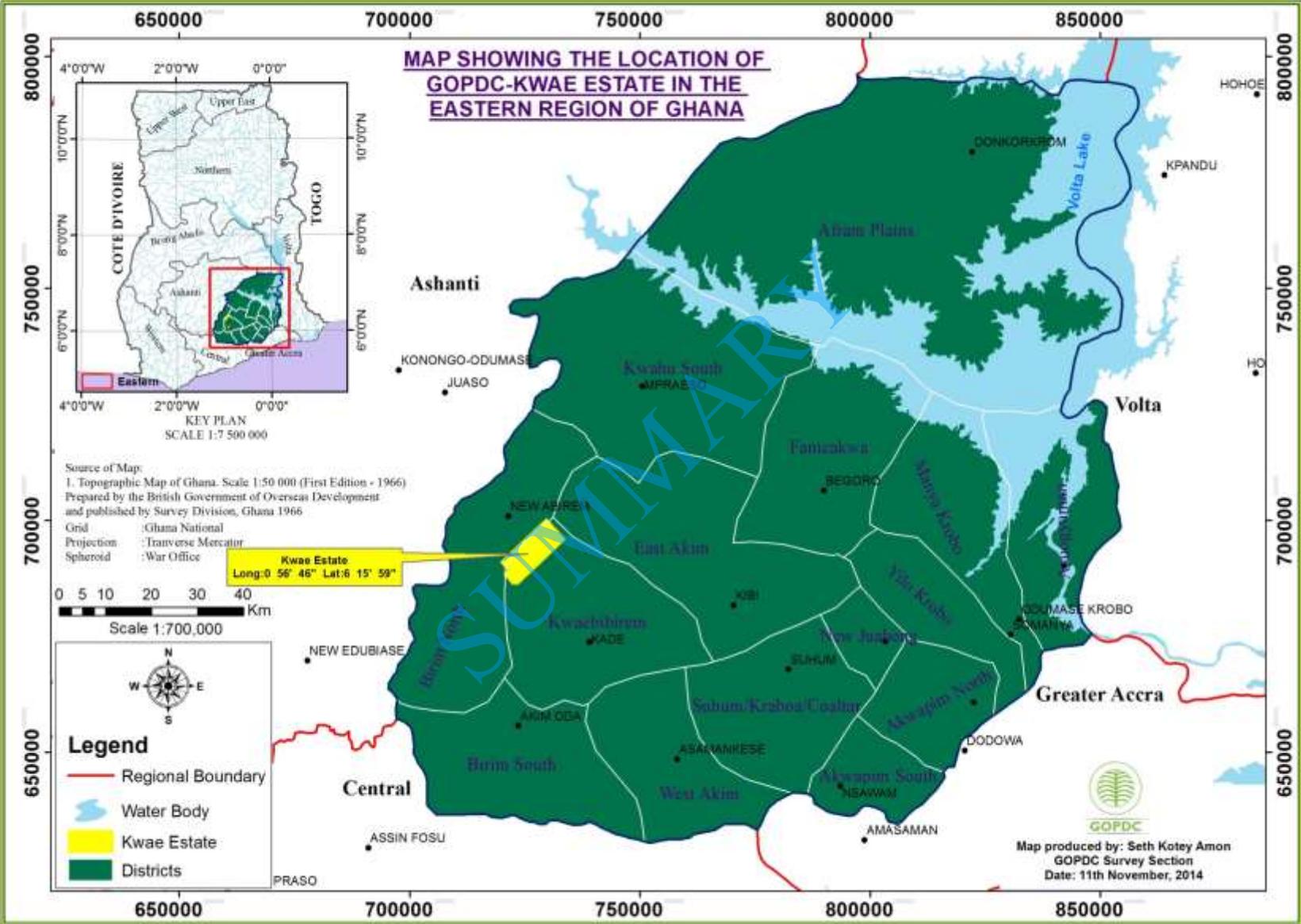


Figure 3: Map Ghana with location of GOPDC - Kwae estate in the Eastern Region, Kwabibirim District, Ghana

The estates are located within the High Forest Zone and in the Eastern Region of Ghana. The estates lie in a predominantly farming areas surrounded by a number of towns and villages. As shown in Figure 1 above, a number of forest reserves are located in the landscape with GOPDC concessions. Those reserves represent the main forest cover in the area, the remaining areas being agricultural land with high population density. Apart from Auro River, Mamang, Bediako, Esukawkaw, Nsuensa and Aiyoola forest reserves which are within a range of 20 kilometres from the estates, all the other forest reserves are quite far from the estates.

The GOPDC concessions were established in a landscape highly transformed by human activities, on lands that were already used for agricultural purposes. Figure 3 shows the position of the two concessions on a Landsat image. Although the actual date for this Landsat image is unknown, anecdotal evidence suggests that it was taken prior to land clearing at Okumaning by GOPDC in 2002.

### Areas of new plantings and time-plan for new plantings – Okumaning Estate

In line with the RSPO Procedure for New Planting Guidance document dated 12 May 2010, only the unplanted areas after 2010 is subject to the new planting procedure. This consists 2240,55ha of 51% of the total Okumaning estate. A total of 2069,2 ha representing 48% of the Okumaning estate was also planted during 2002 and 2009 and are also not subjected to the RSPO New Planting Procedures.

The entire Kwae estate was planted in 1970s and 1980s and is therefore not subject to the new planting procedure.

Tables below indicate time-plan for planting the areas assessed under this NPP

**Table 2: Summary of area planted before and after 2010**

Total area - ha - available for planting	4309,75
Unplanted area	1528,27
Total ha planted before 2010	2069,2
Total ha planted after 2010	712.3

**Table 3: Summary of area planted per year**

Year	Ha planted
2002	628,6
2003	504,6
2004	403,4
2005	321
2007	91,6
2008	120
2011	367,4
2013	325
2014	19,88

After the HCV assessment the total HCV area which needs to be set aside and monitored is 197.771ha. Per estate the information can be found below:

Total hectare for Kwae: 119.43ha

Total hectare for Okumaning: 78.34ha

	<b>Kwae</b>		<b>Okumaning</b>	
	<b>HCV specification</b>	<b>ha</b>	<b>HCV specification</b>	<b>ha</b>
<b>HVC</b>				
4	Bufferzone Bobri	41.58	Bufferzone Subinsa	34.56
4	Bufferzone Abena	22.51		
6	Labadi Shrine	0.911	Bunukesieso Shrine	4.85
6	Atobriso Shrine	2.03	Ntonmu Sacred Site Cemetery	4
6	Apaam Shrine	41.64	Aboabo River	34.93
6	Nsonieso Shrine	1		
6	Bobri Shrine	2.21		
6	Kwae Cemetery	4.65		
6	Anweam Cemetery	2.9		
<b>Total</b>		<b>119.43</b>		<b>78.34</b>

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### 3. SEIA and HVC Management and Planning Personnel

#### Organisational information and contact persons

**Table 4: Contact details of the company**

Company Name	Ghana Oil Palm Development Company Limited
Address	Kwae, Kwaebibirem District Eastern Region P.O. Box M428 Accra, Ghana
Contact person	Eric de Foresta
Telephone	+233244330090
Email	eric.deforesta@siat-group.com
Status	Foreign investment company
Status of Business land	Government Lease
Total Area	5,395 ha

#### Personnel involved in planning and implementation

The under-listed internal GOPDC staff and workers are involved in the planning and implementation of HCV management and monitoring protocols.

**Table 5 : List of personnel involved in planning and implementation**

Name of staff	Designation	Responsibility in HCV planning and implementation
	Chief Agric Officer	Follow up of HCV action plan implementation with involved agric staff
Emmanuel K. Wiafe	Okumaning Estate Manager	Overall Okumaning estate management, therefore the new planting development in Okumaning and existing HVC area – therefore execution of HCV action plan
Sowu Avogbedoh	Kwae Estate Manager	Overall management of Kwae estate, verification of respect of buffer zones and shrines by workforce in existing plantings, for future new plantings investigation in respect of new planting procedure and collaboration with HSE and survey department
Isabel Schlegel	HSE Manager	Verification in field and regular review and adjustment of HCV monitoring/ action plan, communication with involved site staff and Group sustainability manager
Charles Acquah Danso	R+D Officer	Implementation of HCV action plan, communication between involved staff
Seth Kotey	Survey	Delimitation of buffer zones and other HCV relevant areas in new planting areas
Bashir Manu	Community Relation Officer	communication of HCV relevant issues to communities

## Stakeholders to be involved

The below listed stakeholders are involved in HCV planning and implementation in the permit area.

**Table 6 : list of stakeholders to be involved**

Name of stakeholder institution	Contact person	Responsibility in HCV planning and implementation
Proforest	Isaac Aban-Mensah	Establishment of HCV report, follow up on implementation
Aboabo community	Aboabo chief	Bunkesesu shrine – was dedicated for community as worship grounds
Kwae community	Kwae chief	Bobri shrine - respect and maitenance/ burial ground
Asoum community	Asoum chief	Apaam shrine/ Misogrove - respect and maintenance
Anweam community	Anwaem chief	Burial ground - respect and maintenance

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#### 4. Summary of Management and Mitigation Plan (SEIA)

Based on the SIA and EIA report, negative impacts have been identified and the mitigation measures are suggested in the Tables below:

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**Table 7: Summary of GOPDC SIA ACTION PLAN (no status of implementation as the plan just started to be implemented)**

	Proposed Actions	Objective	Output	Timeline	Estimated budget (GH c)	Responsibility	Monitoring&Execution
<b>Minimizing damage to local roads</b>	1. Develop and implement a Road Maintenance Programme	Aim to avoid damage to roads as far as is practicable	Undertake more frequent road maintenance	To start in November 1st 2014 and end in February, 2015  Throughout the project	<b>(GH c55,000)</b>	General Services Dept.  Outgrower Manager  Community Relations Officer  District Assembly	Undertake frequent maintenance of roads  <ul style="list-style-type: none"> <li>• Keeping records</li> <li>• Periodically review the performances</li> </ul>
<b>Reducing pollution</b>	1- Complete construction of biomethanation plant that will utilize the POME 2- Assure boiler efficiency in respect to flue gas emission 3- Reduce GHG relevant emissions 4- Improve waste management	1 - Avoid discharge of partially-treated POME into plantation which can flow into streams  2- Reduce NOx/ PM10 and TSP emissions, assure compliance to EPA standards by doing monitoring  3- Identify and monitor GHG relevant activities within operations  4-Reduce waste which is transported to landfill due recycling and sorting, identify	1 - Assure all POME will be treated in the biogas plant and appropriate measures will be taken to discharge treated effluent which shall meet EPA requirements  2- regular maintenance of boiler, quarterly monitoring of ambient air, noise and flue gas (in case of non-compliance – corrective actions)	1 - September 2014 Commission Biogas plant, monthly monitoring of effluent parameters  2- continuous, quarterly for ambient air, noise and flue gas  3- 4 <sup>th</sup> Q 2014/ 2015 for implementation	<b>1- (GH c14million)+ 30,000GHc</b> <b>2- 30,000GHc</b> <b>4- To be defined</b>	Project & Utility Manager  Technical Director Manager  HSE manager	1. Pursue cleaner production in the mill 2. Reduces the amount of smoke released, monitoring reports for all mentioned aspects 3. GOPDC should device practical means of reducing dust pollution.  <ul style="list-style-type: none"> <li>▪ To review the EIA &amp; Mitigation Plan Document annually.</li> <li>▪ Respond to EIA</li> </ul>

		hazardous waste and dispose of in an environmental friendly manner, monitoring of waste sources and quantity	<p>3- Implement alternative operations which reduce GHG emissions and monitor closely GHG producing operations</p> <p>4-identified sources of waste production, implementing methods to re-use, recycle and dispose waste with EPA approved contractors</p>	4-1 <sup>st</sup> Q 2015			<ul style="list-style-type: none"> <li>Periodic audits will be conducted to identify possible wastes and to reduce same.</li> </ul>
<b>Employment Opportunities for Affected Inhabitants</b>	<p>Recruit affected inhabitants for plantation work.</p> <p>Provide environment for the affected inhabitants to provide other services on the Estate.</p>	To address unemployment problem and the short term problems associated with displacement.	For job opportunities priority of employment shall be given to affected inhabitants out of stool land communities subject to condition that they qualify for the skill needs.	Ongoing	-	<p>CRO</p> <p>HRM</p> <p>CAO</p> <p>NES manager</p>	<p>1.Keep employment data</p> <p>Affected inhabitant (ABS)</p> <p>2. Involved Community Development Committee</p> <p>3. Review meetings on employment opportunities</p>

<p><b>Provision of Infrastructure in the surrounding Communities</b></p>	<p>- Established Community Consultative &amp; Development Committee at the surrounding Communities to be involved in the Provision of Infrastructure.</p>	<p>Ensure additional Infrastructure provision in the surrounding Communities as social responsibility of GOPDC</p>	<p>Additional infrastructure and other amenities provided at the surrounding communities base on the CSR policy of the GOPDC.</p> <p>-Establishment of Community Consultative and Development Committee</p>	<p>1<sup>st</sup> Quarter 2015 start at least 3 projects</p>	<p><b>Based on 0.5% turnover and 0.5% net profit) allocated for CSR project activities , as per annual results and in line with CSR policy (estimated to be 250,000Ghc for 2014)</b></p>	<p>CRO MD</p>	<ol style="list-style-type: none"> <li>1. Facilitate community participation and decision making in-development project.</li> <li>2. Monthly visit to project site.</li> <li>3. Meetings with CCDC members</li> <li>4. Monthly reports on projects execution</li> </ol>
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Table 8 : Summary of GOPDC EIA ACTION PLAN

Proposed Actions	Frequency	Timeline	Status	Estimated budget (GH ₵)	Responsibility	Monitoring activities/ actions
<b>Compliance with legislation</b>						
Annual Environmental audit	Annual	2013-2015	Ongoing	3200	HSE	Monthly monitoring of legal requirements by Legal Counsel
Annual Environmental Report	Annual	2013-2015	Ongoing	6300	HSE	Monthly monitoring of legal requirements by Legal Counsel
Renew water use permit ESO	Triennial	2013	Done	3000	HSE	Monthly monitoring of

						legal requirements by Legal Counsel
Submission of environmental monitoring returns	Quarterly		Ongoing		HSE	Monthly monitoring of legal requirements by Legal Counsel
Acquisition of Environmental Permit for Rubber project and palm replanting	One off	2013	Done	30000	HSE	Monthly monitoring of legal requirements by Legal Counsel
Update of EMP	Triennial	2013	Done	9,432	HSE	Monthly monitoring of legal requirements by Legal Counsel
Environmental Monitoring		2015	Ongoing	90000	HSE	Monthly monitoring of legal requirements by Legal Counsel
<b>Raw Materials Handling and Storage</b>						
Keep records on seed nuts and agrochemical usage	Daily		Ongoing		HSE and Workshop Manager	Monthly check by HSE
Extension of the capacity of the agrochemical building	One off	2015	Under consideration	20000	Workshop manager	
<b>Gaseous Emissions Management</b>						
Carry out regular road dampening exercise within the Kwae and Okumaning estates, as well as roads that pass through local communities	Daily	2015	Ongoing	3000	Estate Manager	Daily check during dry season
<b>Solid Waste Management</b>						
Return of empty agrochemical containers/packaging and used polythene bags materials to suppliers/ contractors.	Continuous	2015	Ongoing	1500	Estate Manager	Monthly checks of delivering slips
Implement good housekeeping practices at the waste dump site to avert creating a habitat for mosquitoes and other vermin	Daily	2015	Ongoing	9000	Compound supervisor	Monthly check at workers housing and monthly clinic reports regarding disease
<b>Storm Water/Runoff Management</b>						
Maintain the vegetation in the buffer zone along the water bodies to 'sieve off' sediment from runoff that will enter	Continuous	2015	Ongoing	6000	Head Of Agric Division	Periodical inspection of buffer zones
Periodic inspection of drains, especially immediately following	Continuous		Ongoing		Estate	Periodical inspection of

significant rainfall events, to remove accumulated sediment and debris					Manager	drains
<b>Energy Management</b>						
Maintaining and analysing monthly records on the consumption levels of fuel	Monthly		Ongoing		Transport Officer	Monthly check of fuel consumption
Continue with routine vehicle maintenance/servicing of vehicles after every 5,000 km travelled and every 250 hours for heavy-duty machines	Continuous		Ongoing		Transport Officer	Keep a monitoring table for each vehicle
<b>Water Management</b>						
Monthly records on water consumption from all water meters installed will be maintained and analysed	Monthly		Ongoing		HSE	Monthly record of water consumption
Daily check on boreholes	Daily		Ongoing		HSE	Identify a team for checking boreholes and cleaning tanks
Quarterly cleaning and chlorination of tanks	Quarterly	2015	Ongoing	3600	HSE	Identify a team for checking boreholes and cleaning tanks
Biennial Borehole rehabilitation Biennial	Biennial	2015	Ongoing	20000	Workshop manager	Complete biennial report of borehole rehabilitation
<b>Ecological Management</b>						
Development of conservation corridors	Continuous	2015	Under consideration	2400	Estate Manager	Monthly inspection and reports of corridors, conservation areas
Habitat restoration of patches of degraded forest	Continuous	2015	Done	6500	Estate Manager	Monthly inspection and reports of corridors, conservation areas
Environmental education for workers and communities	Continuous		Ongoing	2000	HSE	Complete periodical talks and keep records
Plant trees within the buffer zones along streams in estates	Continuous	2015	Done	6000	Estate Manager	Monthly inspection of buffer zones and report survival rates
<b>Maintenance of Estate Roads</b>						

Continue with the schedule for bi-annual road maintenance	Biennial	2015	Ongoing	8000	Estate Manager	Biannual reports of road maintenance
Awareness creation and Environmental Training			Ongoing		HSE	Complete periodical training and keep records,

## 5. Summary of Management and Mitigation Plan (HCV)

**Table 9: Summary of GOPDC HCV ACTION PLAN**

Total hectare for Kwae: 119ha

Total hectare for Okumaning: 79ha

	Streams/HCV/BDP Title	Buffer Zone/BDP actions necessary (Action required)	GOPDC Action plan (Action taken by GOPDC)	Responsibility	Timeline action taken	Statu of implementation	Monitoring activities/ actions
<b>Maintaining water quality and the HCVs it supports</b>							
Protection of rivers/ streams	Apaam, Bobiri, Kotokobon, Abena, Aberewa, Kadepong, Subinsa, Aboabo and Apesika	Buffering of water bodies as well as all riparian areas.	Set aside buffer zones and included in GIS data base according to HSE SOP Management of sensible areas	Surveyor	Dec. 2014	Done	Daily and monthly monitoring of buffer zones area by Surveyor
	HCV 4.1 (Bobiri River and its riparian areas)	Accurate mapping of all HCVs and their management areas in the concessions should be carried out.	Availability of accurate maps of all HCVs' management areas.	Surveyor	Dec. 2014	In progress	
	All HCVs and riparian areas	Designation of a responsible person for all HCVs and riparian areas to provide training and ensuring that field workers adhere to management recommendations.		HSE	Dec. 2014	Done	Daily and monthly monitoring of buffer zones area by Surveyor
	HCV 4.1 (Bobiri River) and all riparian areas	Delineation of all buffer zones as well as HCV 5.	Painting of all riparian areas in blue oil paint, leaving about 18-27	HSE	Dec. 2014	In progress	Daily and monthly monitoring of buffer zones area by

			metres along each side of streams/rivers. Buffer zones included in GIS database	Surveyor			Surveyor
		HCV/buffer zone field team to delineate 60 meters buffer zones on each side of major rivers with width greater than 20 m. e.g. the Birim River)	Measure river width/buffer zone width Buffer zones included in GIS database	HSE	Not applicable	Not applicable	Daily and monthly monitoring of buffer zones area by Surveyor
Protection of rivers (HCV 4.1)	All riparian areas	Agric planting team and chemical application teams are trained to respect buffer zones.	Evidence of training and understanding of buffer zones management and monitoring.	HSE	Dec. 2014	In progress	Daily and monthly monitoring of buffer zones area by Surveyor
	All riparian areas	Replanting& maintenance teams are provided with maps of areas identified as protected areas.	Buffer zones are to be respected.	HSE	Dec. 2014	In progress	Daily and monthly monitoring of buffer zones area by Surveyor
	All riparian areas	Replanting& maintenance teams are trained to carry out felling laterally to buffer zones to avoid having it destroyed and blocked by falling trees and shrubs.	No impact on buffer zones	HSE	Dec. 2014	In progress	Daily and monthly monitoring of buffer zones area by Surveyor
	All buffer/riparian zones	Regular monitoring to ensure that buffer zones requirements are respected. If buffer zones are not respected, corrective actions must be taken immediately.	Corrective actions' records	HSE	Dec. 2014	In progress	Daily and monthly monitoring of buffer zones area by Surveyor
Monitoring of water quality	HCV 4.1 (Bobiri River)	Bi-annual surface water quality monitoring and Quarterly effluent monitoring testing for major rivers and all other rivers that are sources of water for host communities.	Test results	HSE		Done	Check bi-annual surface water quality monitoring and Quarterly effluent results
	HCV 4.1	Corrective/Preventive action to	Waste + Pollutant	HSE	Dec. 2014	Done	Check bi-annual

		be taken in case of degradation of water quality. Provision of alternative water supply for affected communities/ areas	Management Plan				surface water quality monitoring and Quarterly effluent results
<b>Respecting and Maintaining Local Communities' Cultural/Traditional Identity/Values</b>							
FPIC	HCV 6: Kwae: BDP 7, 8, 14, 15 (burial grounds), BDP 10 (Apaam Shrine) Okumaning: Bunkesesu Shrine	Identify appropriate management areas for those HCV 6 areas (e.g. burial grounds) and delineate those areas.	Social HCV areas included in GIS database and mapped.	Surveyor/ Community Relations Officer	Dec. 2014	Done	Biannual check of maintenance of HCV 6 areas by CRO and verify if grievances letters are not related to them
		Negotiate management decisions for HCV areas following the company's FPIC procedures.	Agreement with community/ concerned people	Community Relations Officer	Dec. 2014	Done	
<b>Fauna/Flora conservation programme</b>							
Monitoring of fauna/flora species and populations in the protected areas and other established Bio Diversity Plots	BDP 10 (Kwae) : Mieso Sacred Grove (Apaam Shrine) BDP 10 (Okumaning): Aperawa Junction	Periodic fauna survey of the set-aside areas.	Survey report	HSE	Dec. 2014	Done	Periodical survey by HSE
	Estate	GOPDC shall implement community education programme on hunting and during "no hunting seasons" as stipulated by law.	Records of any educational or any other programme undertaken to address issues with hunting. Records of community educations conducted.	Community Relations Officer /HSE	Dec. 2014	Under consideration	Monthly monitoring of poaching activities
	Estate	Develop and implement "no hunting / poaching" policy for employees including the use of snares and traps for hunting.	Company policy	Estate Managers/ HSE	Dec. 2014	Done	Monthly monitoring of poaching activities
	Estate	GOPDC shall strive to prohibit	Company policy	Estate	Dec. 2014	In progress	Monthly monitoring

		hunting within its concessions.		Managers /HSE			of poaching activities
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