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# SUMMARY REPORT OF PLANNING AND MANAGEMENT

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**LIBINCO**

Palm Bay Estate, District #4  
Grand Bassa County

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## LIST OF ACRONYMS

CI	CONSERVATION INTERNATIONAL
CES	COASTAL AND ENVIRONMENTAL SERVICES
EPAL	ENVIRONMENTAL PROTECTION AGENCY OF LIBERIA
EPO	EQUATORIAL PALM OIL
EPA	ENVIRONMENTAL PROTECTION AGENCY
ESHIA	ENVIRONMENTAL SOCIAL AND HEALTH IMPACT ASSESSMENT
FFI	FAUNA AND FLORA INTERNATIONAL
FPIC	FREE PRIOR AND INFORMED CONSENT
GOL	GOVERNMENT OF LIBERIA
GPS	GLOBAL POSITIONING SYSTEM
HCV	HIGH CONSERVATION VALUE
HCS	HIGH CARBON STOCKS
HR	HUMAN RESOURCE
IPM	INTEGRATED PEST MANAGEMENT
LME	LAND MINES AND ENERGY
LPD	Liberian Palm Development Limited
LWSC	LIBERIA WATER AND SEWER CORPORATION
MOU	MEMORANDUM OF UNDERSTANDING
NGO	NON-GOVERNMENTAL ORGANIZATION
PPE	PERSONAL PROTECTION EQUIPMENT
RSPO	ROUND TABLE ON SUSTAINABLE PALM OIL
SAMFU	SAFE MY FUTURE FOUNDATION
SCNL	SOCIETY FOR THE CONSERVATION OF NATURE IN LIBERIA

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## 1.0 Executive Summary

This Planning and management report is a critical tool in managing mitigation plans for the effective monitoring and management of the different negative and positive environmental conditions addressed in this report. The management report pursues also to address those identified HCVs, in reference to their management and monitoring and the responsible persons accountable to it.

The rehabilitated plantation which has undergone replanting activities was cultivated in the '60s when the Government of Liberia and Liberian Operations Inc. (LIBINC) entered into a concession agreement on December 14, 1965 for the development of oil palm and other related agricultural products on a tract of land situated in the New Cess area, Grand Bassa County. Since the agreement, LIBINC made considerable investment in the concession area, the cultivation of the plantation continued until 1989, when Liberia was engulfed in civil conflicts. The investments were destroyed, damaged or remained in a state of dormancy as a result of the civil unrest which plagued the country for over 15 years. In line with the concession agreement, the Board of Directors of LIBINC on October 4, 2007 resolved to transfer its rights in the said 1965 Concession agreement to LIBINCO. LIBINCO, a company operating under the laws of Liberia is rehabilitating and developing the 13,962ha LIBINCO Palm Bay Oil Palm Estate, based upon a ratified concession agreement reached in 2008 between the Government of Liberia (GoL) and Liberian Palm Development Limited LPD. This agreement allows LIBINCO to expand by an additional 50,000 acres (20,234ha) after the completion of development in the existing concession area. Since the 1960's, this land has been deeded by Palm Bay. However, following the restoration of activities by the company, a resurvey was conducted in which there was a reduction of the land to 13,006.88 hectares. An Environmental, Social and Health Impact Assessment (ESHIA) was initiated by the management of LIBINCO. Therefore, in 2012 an ESHIA was conducted by Coastal and Environmental Services and completed in April 2013. The company in January 2014 requested for the conduct of a High Conservation Value Assessment (HCV) within the non-cleared area bordering the already rehabilitated and replanting area. The assessment area covers the 8,370 hectares areas, of which only 1,570 hectares is set for new planting activities. The rest of the areas make up the areas cultivated since the late 1960 for oil palm plantation which was abandoned and engulfed by shrubs and other wild woody growth. Within this remaining area, the redundant oil palm plantation has been cleared for replanting; building and other infrastructures like roads, bridges, schools, health center, etc. covered 202 hectares, while HCV areas of proposed farmlands, graves and sacred site including rivers buffers covered an area of 340 hectares. Most of the 340 hectares HCVs area falls within the proposed new planting block.

The ESHIA covered the geology of the area, the topographical landscape of the area, the hydrology, soil condition, air quality, land use and the social economic condition of the area as well as the impacts which are likely to arise as a result of oil palm operation. The study also detailed the mitigating method to be used to avoid or reduce such impacts. In order to conduct the HCV study, the draft National Interpretation HCV toolkit for Liberia, the Proforest HCV Toolkit and that of the HCV RN Common Guidance 2013 were instruments used for the identification of the six HCVs. However, as a result of the draft National Interpretation for Liberia January 2013, heavy reliance on the HCVs identification and interpretation is cast on this toolkit. The results of the HCV assessment are as follow:

HCV	Description Present	Potentially	Present	Absent
1.1	Protected areas			✓
1.2	Concentrations of rare, threatened or endangered species	✓		
1.3	Concentration of endemic species	✓		
1.4	Critical temporal concentrations of species	✓		
2	Landscape - level ecosystems and mosaics			✓
3	Ecosystems and habitats			✓
4.1	Areas critical to water catchments		✓	
4.2	Areas critical for erosion control	✓		
4.3	Areas critical for fire prevention			✓
5	Areas fundamental to meeting basic needs of local communities		✓	
6	Areas critical to cultural identity (values)		✓	

The PROJECT AREA is located between latitudes 5°48'3" N and 5°53' N and between longitudes 9°43'30" W and 9°51'30" W. The new planting block borders the rehabilitated and replanting oil palm estate in District #4, Grand Bassa County. Most of the area lie in vegetation which has been impacted greatly by slash and burn agriculture. Apart from the fragmented late secondary forest found in the north of the new planting block, the remaining areas lie within agriculturally degraded and agriculturally impacted areas. The area covered a mixture of different vegetation types including degraded land, agriculture land mixed with patches of young bushes and secondary forest, and wetland vegetation, old and new towns and villages among others. Most of the land area, however of the LIBINCO project area lies in places where agriculture activities(shifting cultivation) is taking place or have taken place years ago. These areas are dominated by old farmlands, young bushes, regenerating forest area as a result of years of shifting cultivation, patches of forested vegetation with young trees due to extraction of timber for logging activities and swamps. In more general terms, the LIBINCO project area is mostly flat though with some undulating hills. Approaching most streams, the area is slightly steep, 25<sup>0</sup> and around wetlands and mangroves parts of the area appear sandy.

## 2.0 Reference Documents

### ESHIA and HCV Assessment Reports

The ESHIA reports (24,057ha) and HCV assessment reports (13,006.88ha) were the two reference document. The HCV assessment report has had also to rely on these two ESHIA reports, permitted by the EPAL for information relevant for the HCV report. Notwithstanding, other document reference was the draft National Interpretation HCV Toolkit for Liberia.

**Table 1: List of Legal documents and regulatory permits related to the areas assessed.**

List Of Legal Document	Issue By And Through	Code Number And Date
Government of Liberia and LIBINCO. Ratified Concession Agreement	Republic of Liberia by Authority Ministry of Foreign Affairs Monrovia, Liberia	Approved May 22, 2008 and published and printed August 6, 2008
Business Registration Certificate	Ministry of Commerce and Industry	Code: 10152013 October 13, 2012/2013
LIBINCO ESHIA Permit (24,057ha)	Environmental Protection Agency of Liberia (EPAL)	EPA/EC/EIS/001-0611
Import permit for plants or other goods governed by the Phytosanitary Regulation	Ministry of Agriculture (MOA)	Permit Number:030112 March 1, 2012
Import permit for plants or other goods governed by the Phytosanitary Regulation	Ministere De L'Agriculture De L'Elevage Et De La Peche Benin	Code: RL/NOES-012612 January 26, 2012
Import permit for plants or other goods governed by the Phytosanitary Regulation	Ministry of Agriculture (MOA)	Permit Number:041212 April 12, 2012
Reliance on other key document of authority nationally was also considered. Among these document include but not limited to the following:		
Document	Authority	Date
An Act Creating the Environment Protection Agency of the Republic of Liberia	Senate and House of Representative of the Republic of Liberia and published by authority Ministry of Foreign Affairs	November 26, 2002
The National Environmental Policy of Liberia	Senate and House of Representative of the Republic of Liberia and published by authority Ministry of Foreign Affairs	November 26, 2002

An Act Adopting the Environment Protection and Management Law of the Republic of Liberia	Senate and House of Representative of the Republic of Liberia and published by authority Ministry of Foreign Affairs	November 26, 2002
Document	Authority	Date
The New Forestry Reform Law	Senate and House of Representative of the Republic of Liberia	2006
An Act for the Conservation of the Forests of the Republic of Liberia	Senate and House of Representative of the Republic of Liberia	1953
Act Supplemental to “An Act for the Conservation of the Forest of the Republic of Liberia	Senate and House of Representative of the Republic of Liberia	1957
An Act for The Establishment of A Protected Forest Areas Network and Amending Chapter 1 and 9 of The New National Forestry Law, Part II Title 23 of the Liberian Code Of Law Revise	Senate and House of Representative of the Republic of Liberia	2003
Draft Wildlife and Protected Area Management Law	Forestry Development Authority	2009
Draft Land Right Policy	Approved by the Land Commission	2013

### 3.0 Location maps – both at landscape level and property level



Figure 1: LIBINCO Grand Bassa Location Map



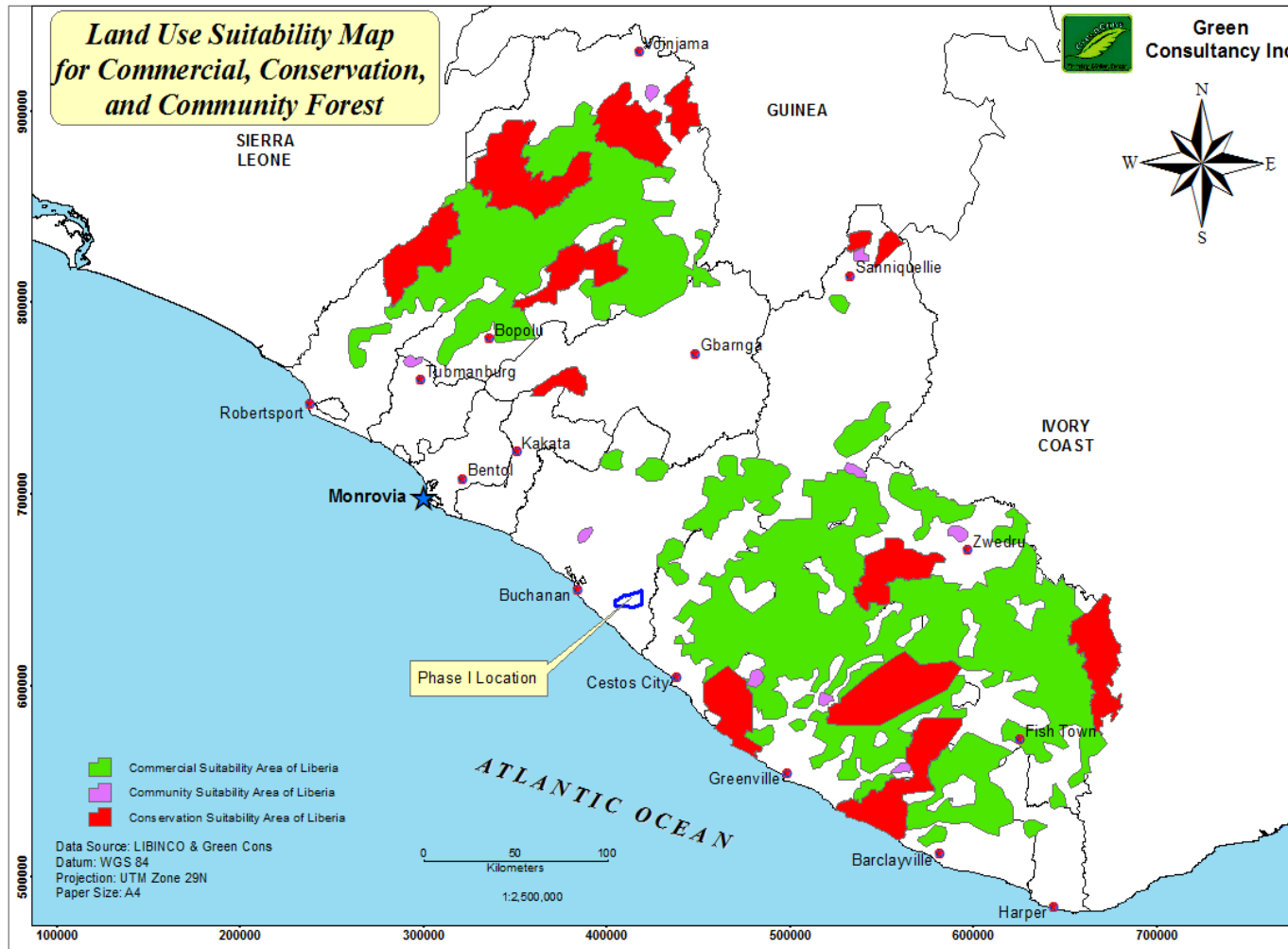


Figure 2: LIBINCO potential planting area in Grand Bassa County

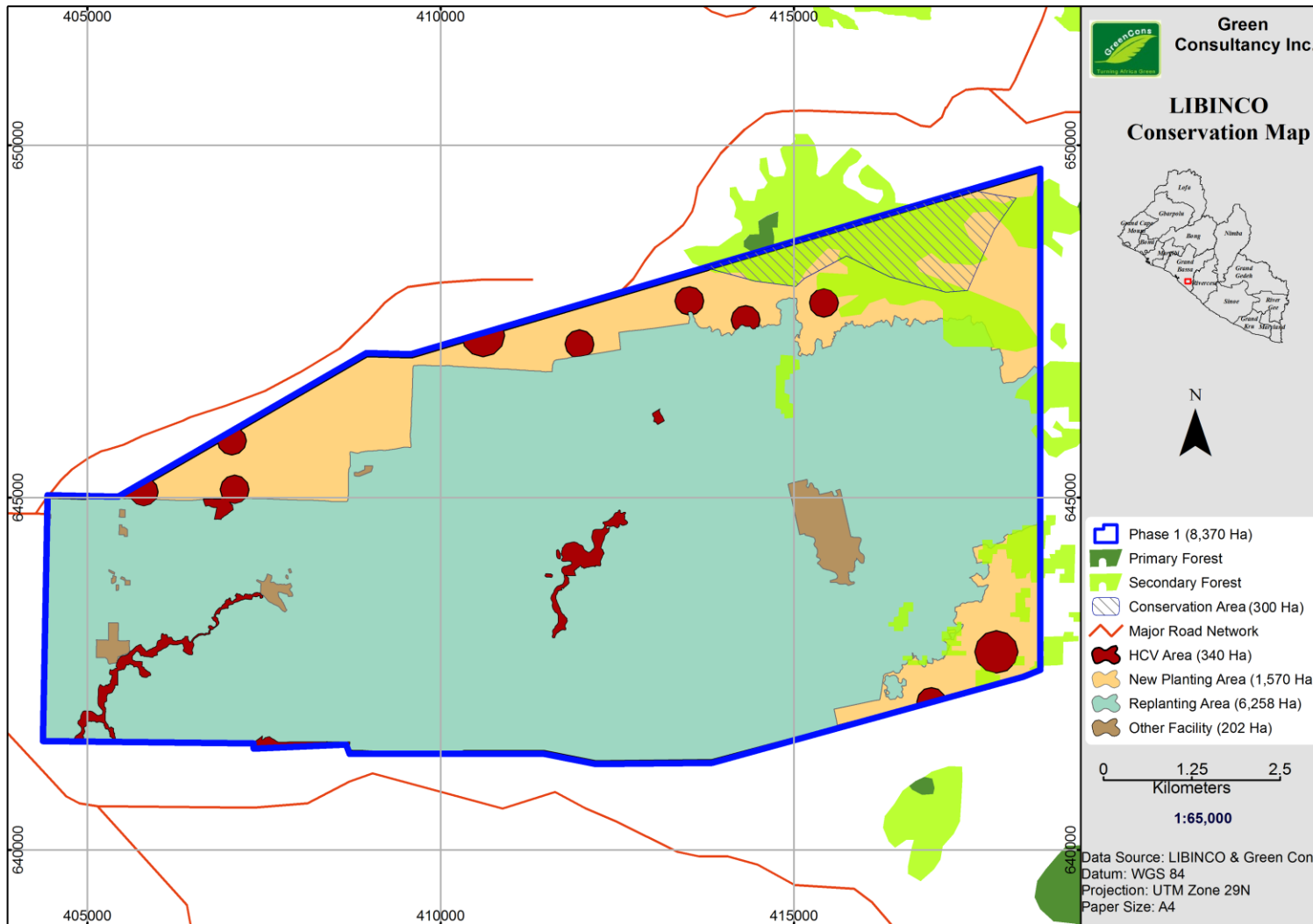


Figure 3: LIBINCO Conservation Map

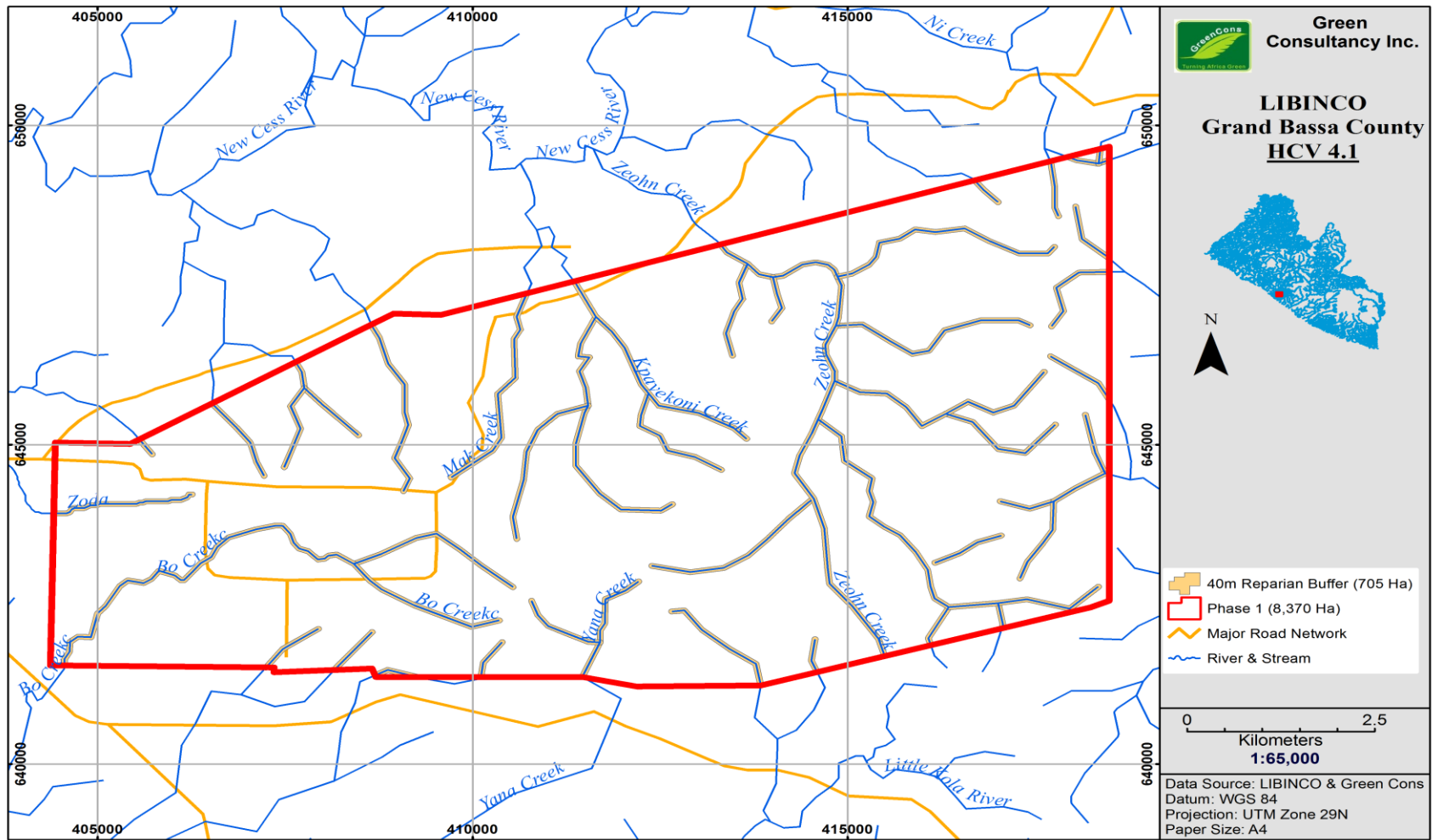


Figure 4: LIBINCO Hydrology map

In light of the HCV already identified, any other significant forested area, which might be identified during survey through the new planting area will also be mapped out and demarcated for development. LIBINCO management has already conducted HCV mapping within the Phase 1 PROJECT AREA and result of the assessment is referenced within the conservation map.

#### 4.0 Area of New Plantings and Time-plan for New Plantings

Project Schedule

Proposed Development Plan

LIBINCO has earmarked on three years commencing system from 2014 to 2016 to begin planting. Palm seedlings will be brought from LIBINCO nursery sites in District # 4. The entire area where the nursery site is located has since been permitted by the EPA.

**Table 2: Project Activity Schedule**

<b>Area statement phase 1 (8,370 ha)</b>		
Left out of planting	HCV/riparian zone/towns	340 ha
	Road	170 ha
	Nursery	69 ha
	Others/infrastructure	32 ha
2011/ 2012/ 2013 fields		3,126 ha
2014/2015 replanting		3,063ha
Undeveloped area (Inclusive of conservation area)		1,570 ha
<b>Area statement phase 2 (4,637 ha)</b>		
Undeveloped area		4,637 ha
Out growers scheme		NOT applicable in the concession area

At present, no clearing for field planting, ie, the planting of nursery palms into the open fields, has commenced. In line with the RSPO guidelines and procedures, clearing is expected to commence systematically upon certification and approval of the reports. This systematic clearing is one of management strategies to reduce the impact on destroying and trapping any wildlife that may be present, and better preparation of land area.

There was a robust FPIC process conducted with the towns and villages within and surrounding the project area in which consent was given and signed by all affected communities, leading to an MOU for the resurvey and land development processes in the

concession area. At the end of the participatory resurvey process, the land area was reduced to 13,006.88 hectares.

## **5.0 ESHIA and HCV Management & Planning Personnel**

### **5.1 Organizational information and contact persons:**

Organization information and contact person:

Company Name	LIBINC Oil Palm (LIBINCO)
Office Address	LIBINCO Palm Bay Estate, Dist. #4 Grand Bassa County, Liberia
Nature of Business	Oil Palm
Project Location	Latitudes 5°48'3" N and 5°53' N and longitudes 9°43'30" W and 9°51'30" W
RSPO Membership №	1-0040-07-000-00
RSPO Membership Status	Ordinary
Contact Person	Mr. Sashi Nambiar Head of Operations +231880386594 <a href="mailto:sn@epoil.co.uk">sn@epoil.co.uk</a>
	Mr. Jasvinder Singh RSPO Compliance Manager +231770174125 <a href="mailto:jvs@epoil.co.uk">jvs@epoil.co.uk</a>

### **5.2 Personnel Involved In Planning and Implementation**

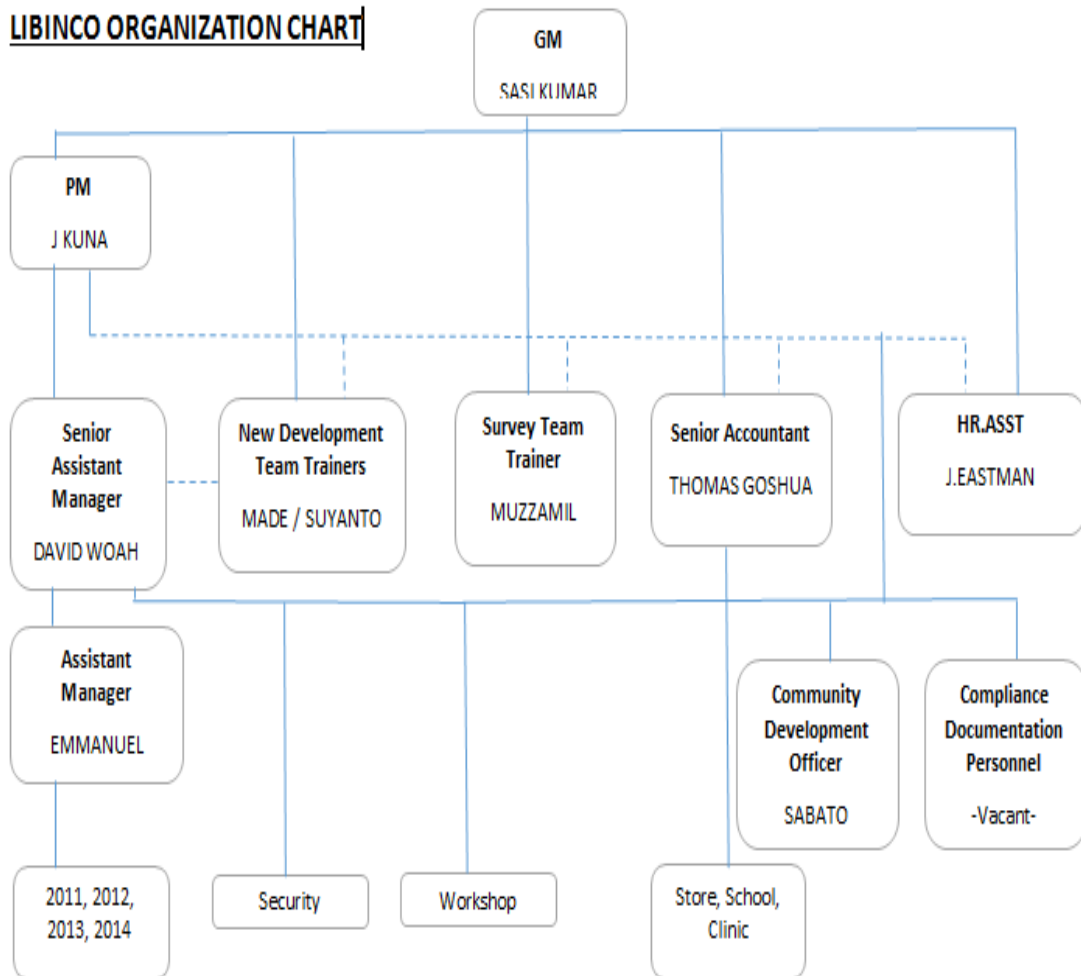
The serious commitment placed on the planning and implementation on the recommendations of the various reports is essential to the company's management. The duties of the management are as follows:

- Enlisting the Involvement of other senior executives of the company in ensuring that the HCV identified within the project are enclaved.
- The training of personnel in the area of community engagement and HCV management even prior to the commencement of the study.

Ensuring that actual HCV management is an integral part of the operating organization, and a way of operating, rather than an outside function. Will ensure that proper survey of HCV sites is executed, planning on the management and monitoring are done; the appropriate signage and delimiters to demarcate and avoid areas set aside for conservation.

Apart from these functions, management has committed itself to ensuring that all procedures, guidelines and strategies are in place especially as it relates to proper land clearing activities in order to avoid disturbance to riparian and conservation reserves. Contractors are made to adhere strictly to all environmental laws governing the company, especially as it relates to the management plan within the ESHIA. In order to ensure that the above is achieved, the management of LIBINCO has enlisted the below personnel in the planning, implementation, management and monitoring of the environment within the project area.

**LIBINCO ORGANIZATION CHART**



**Chart 1: Personnel and Department Role in Planning and Management**

### 5.3 Stakeholders Involvement

#### Government Agency

Government agencies and ministries have statutory responsibility to informing the Liberian people on their state of affairs. The information provided is in reference to their areas of work. In the presence of regulatory permits issued to the company by the Government, LIBINCO is under obligation to allow the inspection of its facilities by government agencies. The inspection is meant to ensure that LIBINCO is in compliance with all regulatory guidelines of the Laws of Liberia. The regulatory agencies and ministries include:

Table 3: Stakeholders Involvement

Stakeholder	Engagement
The Environmental Protection Agency of Liberia (EPAL)	Compliance reporting; Permit inspections; Joint research and enhancement projects
Lands, Mines and Energy Ministry (LME)	Mapping (as required)
The Liberia Water and Sewer Corporation (LWSC)	Water management on habitation and operations (as required)
Forestry Development Authority (FDA)	Management of forested areas
Ministry of Agriculture (MOA)	Compliance reporting; Inspections; Food security improvement; Training programming; Joint research and enhancement projects
Land Commission	As required in case of land issue
Local authorities of the County (County Superintendent, Paramount, clan and town chiefs)	Information on all company activities affecting county and communities; local regulatory matters; Social contracts matters; Receipt and addressing any concerns or grievances;
Other stakeholders relevant in the process of monitoring LIBINCO operation are also listed below	
Stakeholder	Engagement
Village and towns representatives	Project host communities-Information on all company matters affecting communities or taking place nearby; Employment and training matters; School and Health Care matters; corporate social responsibility matters; Receipt and addressing any concerns or grievances;
Community Relations Committee representing the District	<ul style="list-style-type: none"> <li>Grievance procedure in place to address community issues and opinions</li> </ul> Objective/Function <ul style="list-style-type: none"> <li>To represent the voices and convey the issues and concerns of each village and village/town chief in the project area;</li> <li>To provide a platform that will enhance a smooth and harmonious working relationship between LIBINCO and the project host communities</li> </ul>



Stakeholder	Engagement
	<ul style="list-style-type: none"> <li>• To provide a platform for the villages to engage with LIBINCO regularly, through their representatives; with regards to future economic displacement matters and issues relevant to the project;</li> <li>• To formalize a system for submitting grievances to LIBINCO, as well as for resolution of such grievances; To support initiatives in the identification of employment and business opportunities;</li> <li>• To regularly provide feedback and information to the affected communities on the project</li> </ul>
Local and locally present International Non-Governmental Organizations	Including NGOs that may establish activities in the areas, SAMFU, SCNL, CI, and FFI. Consultations and information periodically; Receipt and addressing any concerns or grievances;
Local advocacy groupings	Consultations and information periodically; Receipt and addressing any concerns or grievances;

#### 5.4 Specific Mitigation and Management Plans (ESIA)

The two tables below addressed the management and mitigation plans for the effective monitoring and management of different negative and positive environmental conditions and the specific plan and regulation associated with the mitigation measures.

The management and operation of the plantation should address the mitigation for the environmental conditions associated with the plantation. The summary outlines those environmental and social conditions which will arise as a result of the oil palm operation. The summary also looks at the operation phase of the plantation.

**Table 4: Potential Impacts**

Potential Impact	Receptor(s)	Proposed Mitigation Measure(s)
Environmental Impact		
water quality deterioration and change in local hydrology	Aquatic flora and fauna	<p><b>Buffer Zone</b> Ensure appropriate buffers are set aside along rivers and streams to ensure its integrity and other aquatic life forms. The buffer reserves will serve as natural filters for surface runoff from the plantation areas. The reserves will also play a major role in protecting the banks of the waterways from channel erosion. In addition the reserves will create aesthetic scenes along the watercourse.</p> <p><b>Fertilizer Application at the Plantation</b> Judicious use of inorganic fertilizers will be ensured as much as possible. The fertilizers usages will be in line with best practices on use of fertilizers in oil palm plantation. The use of herbicides will be as per spraying programme to avoid over usage of chemicals. Blanket spraying of herbicides to be avoided and cover crop establishment is recommended.</p> <p>The use of pesticides on the plantation will be minimized The most efficient environmentally friendly techniques including Integrated Pest Management (IPM) will be used. A constant phyto-sanitary observation will be maintained to help prevent the outbreak and spread of any potential disease/pest into the whole plantation.</p>
Air quality deterioration	Workers/ Local communities	<p>Burning of biomass will not be allowed. Stacked biomass generated will be made available to the local people as fire wood for domestic use. However while plantation will try to ensure that collection will not harm or endanger them, they do so at their own risk.</p> <p>Remaining trees and cleared under brushes will be stacked and formed into windrows. Windrowing with stacking in alternate rows or if low biomass stacking to be done in every 4 rows.</p>

Potential Impact	Receptor(s)	Proposed Mitigation Measure(s)
Noise nuisance	Workers/ Local communities	-All construction and earthworks will be done during daytime to avoid disturbing the serene nights of the local communities. -Ear muffs will be provided for workers where necessary
Solid waste management issues	Workers	-The proposal to phase the development will generate biomass which could be manageable at a given time. -Salvaging of useable biomass can significantly reduce the volumes of waste that has to be disposed of. -Felled trees and cleared under-brushes will be stacked and formed into windrows and allowed to decompose. -Other solid waste like food wrappers, containers and food waste to be disposed of at the designated dump site.
Loss of biodiversity	Terrestrial flora and fauna	Phasing of Oil Palm Development Clearance of vegetation will be phased to reduce the impacts of vegetation removal on terrestrial flora and fauna.  Conservation area Conservation area established within the oil palm plantation depicted in the HCV assessment. Buffer zones will also be provided along the waterways and streams within the concession.

Potential Impact	Receptor(s)	Proposed Mitigation Measure(s)
Soil stability and erosion	Soil/ water courses	Sensitive sites with high erosion risk will be identified. Such areas shall not be cultivated and will include steep hills and very steep slopes having gradient of 25 <sup>0</sup> or more. Vegetation of such areas shall be maintained to help control erosion as well as ensuring soil stability.
Impact on soil fertility and acidification	Soil/water courses	Judicious use of inorganic fertilizer will be ensured throughout the life of the project to help conserve the environment. The fertilizers will be broadcasted around each young oil palm. This is to ensure that the fertilizer is available to the young transplanted oil palms. For mature palms, the fertilizers are to be applied as per best practices for the ages of palms and fertilizer type used to reduce soil degradation and maximize nutrient uptake.
Biomass generation and CO2 balance	Air	The phasing of the project will reduce the impact to the barest minimum.
Pest Infestation	Terrestrial flora	The most effective environmentally friendly techniques including Integrated Pest Management (IPM) will be used. A constant phyto-sanitary observation will be maintained to help prevent the outbreak and spread of any potential disease/pest into the entire plantation
Solid waste management issues	Workers/ Local communities	Domestic/Office Waste Adequate litter bins will be placed at vantage-points to minimize littering of the site by workers. The contents of these bins would be emptied at appropriate central points and then sent to a designated waste dump site. Biomass: Salvaging of useable biomass can significantly reduce the volumes of waste that has to be disposed of.
Food security	Local communities	The local people living on the concession will not be resettled. LIBINCO will leave a buffer zone around each village where the communities can farm.

POTENTIAL IMPACT	RECEPTORS	PROPOSED MITIGATION MEASURES
<b>SOCIAL IMPACT</b>		
Land acquisition and compensation issues	Land owners/ farmers	<p>Ensure that appropriate documents are in place with record of community consent (FPIC) to offer land.</p> <p>Appropriate compensation procedures will be followed to ensure that payments made to Project-Affected-Persons (PAPs) are within legal requirements. This is in line with the Ministry of Agriculture price listing for compensation of crop.</p> <p>Monetary compensations will be paid to people whose farms or crops will be destroyed due to the development. LIBINCO will assess the farms and crops to be affected and evaluate these properties accordingly with the assistance and guidance of local MOA assigned personnel. Appropriate budgetary allocations have been considered to take care of this issue.</p> <p>Compensation payment will be made directly to affected farmers and individuals to avoid future problems from other people purporting to be family members. To facilitate this therefore, a committee made up of company and town representatives have been formed to ensure that fair compensation are paid to the right individuals. The committee comprises of farmers and representatives selected from each town, selected by the town members themselves.</p> <p><b>Community Sensitization Program</b>  In order to ensure the FPIC process is followed the company has established engagements with the communities on various projects related activities and undertake community sensitization programs which are ongoing. Working groups have also been established comprising of community selected representatives who will liaise with the company on an ongoing basis for peaceful coexistence, community relations for project implementation, resolution of grievances and dissemination of project information</p>

Potential Impacts	Receptor(s)	Proposed Mitigation Measures
Occupational health and safety issues	Workers	<p>Provision of Personal Protective Equipment (PPE) Personal protective equipment/apparels such as Wellington boots/safety boots, respirators/nose masks, gloves, overalls and raincoats will be supplied to field workers in suitable and adequate proportions. Respective supervisors at various work station will be charged with the responsibility to enforce the use of these gears.</p> <p>Personnel in charge of pesticide application will wear all the PPE specified on the product labeling for “pesticide applicators and other handlers.” All PPE will be inspected each day of use for leaks, holes, tears, or worn places. Worn out PPE will either be repaired or discarded.</p> <p>Use of Experienced Personnel in handling Machinery</p> <p>Only experienced personnel will be engaged to operate any machine or equipment. The project will ensure that drivers and earth-moving equipment handlers possess driving license. Initial training in machinery handling and safe working procedures will be given to all new drivers, operators and other field workers to help minimize the occurrence of accidents on site.</p> <p>Safety Training for Agro-chemical Handling</p> <p>The Company will conduct safety training for pesticide handlers and all agricultural workers. The training program will include handling of agro-chemicals, use of PPE and what to do in the case of pesticide exposure.</p>
Sanitation problems	Workers	A place of convenience will be provided at workers quarters, offices and factory to discourage free-range defecation. In addition, field workers will be encouraged to use places of convenience available at nearby communities. Waste bins will be provided at appropriate and convenient places to minimize littering of the site. Wash rooms and changing rooms will also be provided for workers
Aesthetics and visual intrusion	Workers/ Local communities	Phasing of the clearing of the site will help reduce this impact

Potential Impact	Receptor(s)	Proposed Mitigation Measure(s)
<i>Plantation Operation</i>		
Presence of workforce-Loss of wildlife from hunting and conflicts with human	Terrestrial flora and fauna/workers	<ul style="list-style-type: none"> <li>• Employee education and notification will be implemented to reduce vehicle-wildlife collisions and conflicts</li> <li>• Workers of LIBINCO would be prohibited from hunting, trapping, killing, harming or capturing of any wildlife which are not pests</li> <li>• Warning signs indicating hunting/capturing of wildlife is prohibited would be placed at strategic HCV areas</li> <li>• Any occurrences of wildlife trapping and trading observed will be reported to the EPA and FDA</li> </ul>
Biodiversity management	Terrestrial flora and fauna/Workers	Management of riparian zones and other HCVs, wildlife conservation awareness for employees and surrounding communities, enforcement of no hunting policy for employees.
Occupational health and safety	Workers	<p>Adoption of Health and Safety Policies</p> <p>LIBINCO will educate workers on its health and safety policy. The adoption of a health and safety policy at plantation site will serve as a precautionary measure to prevent/minimize the possibility of accidents and reduce health risks. Ensure workers are properly oriented to the safety and health rules Well-equipped first aid kits would be provided at all work sites</p> <ul style="list-style-type: none"> <li>• Employ medical personnel to be stationed at the Base Camp. Adequate signage should be erected, especially in hazardous areas</li> <li>• Machines are to be operated by competent, licensed and authorized personnel only and in a manner that does not endanger other employees or the Company's property</li> <li>• The Emergency Response Plan would be made aware to all relevant personnel and the necessary training and resources required should be provided;</li> <li>• Protective gears and clothing must be provided to employees and should be worn at all times during operation.</li> <li>• Provide potable water for employees</li> <li>• Conduct periodic fogging to prevent mosquito breeding</li> </ul>

Table 5: Mitigation and Management Plans (ESIA)

Impacts	Mitigation Measures	Monitoring and Follow-up Program														
<p>Soil Erosion Leading to: Soil damage &amp; nutrient loss Soil instability Deterioration of water quality Disturbance to aquatic life Increase in sediment loads</p>	<p>Riparian Preservation of riparian reserve for planting</p> <table border="1" data-bbox="539 440 1048 842"> <thead> <tr> <th data-bbox="539 440 797 475">Stream Width</th> <th data-bbox="804 440 1048 475">Min. Width</th> </tr> </thead> <tbody> <tr> <td data-bbox="539 475 797 510">&lt;40m</td> <td data-bbox="804 475 1048 510">50m</td> </tr> <tr> <td data-bbox="539 510 797 545">20m – 40m</td> <td data-bbox="804 510 1048 545">40m</td> </tr> <tr> <td data-bbox="539 545 797 580">10m-20m</td> <td data-bbox="804 545 1048 580">20m</td> </tr> <tr> <td data-bbox="539 580 797 616">5m-10m</td> <td data-bbox="804 580 1048 616">10m</td> </tr> <tr> <td data-bbox="539 616 797 651">&lt; 5m</td> <td data-bbox="804 616 1048 651">5m</td> </tr> <tr> <td data-bbox="539 651 797 686">&gt; 3m</td> <td data-bbox="804 651 1048 686">-</td> </tr> </tbody> </table>	Stream Width	Min. Width	<40m	50m	20m – 40m	40m	10m-20m	20m	5m-10m	10m	< 5m	5m	> 3m	-	<p>Exclusion to be mapped on a 1:65,000 map scale. Marking on the ground or on the tree at 1.5-m height on the demarcation of riparian reserves. Photo (with date), GPS locations and map to be included in the Compliance Monitoring Report. Monitoring of water quality upstream and downstream of the Project site. The parameters include TSS, turbidity, oil and grease. Other information such as GPS location, stream width, surrounding land use must be provided too.</p>
	Stream Width	Min. Width														
	<40m	50m														
20m – 40m	40m															
10m-20m	20m															
5m-10m	10m															
< 5m	5m															
> 3m	-															
<p>Erosion channels Dominant drainage paths on cleared areas shall be rehabilitated for areas no longer used with fast growing creeper plants to prevent formation of soil erosion channels.</p>	<p>Photo (with date) and GPS location of the drainage system.</p>															
<p>Equipment Equipment must be of reasonable size and can be equipped with blade or bucket where necessary as is standard practice in the industry globally. Equipment will be used and operated to minimize soil disturbance and compaction. The blade or bucket</p>	<p>Equipment plan and budget Photo (with date) of machinery used for land clearing and preparation.</p>															



Impacts	Mitigation Measures	Monitoring and Follow-up Program
	should be mostly moved above the ground surface without touching the ground to prevent soil disturbance and forming of rill erosion.	
	Erosion control structures Table drains, culverts and other drainage structures to channel run-off water to road-side filter strips or silt pits prior to entry into streams should be installed concurrently with road construction.	Marking of proposed roads on the map and ground checking for the width of roads, drainage system and gradient. Photo (with date) and GPS location of the filter strips especially in the high-risk area.
	Cover crops for table drains Table drains should be maintained with grass or other vegetation cover to prevent erosion of drainage banks and to prevent formation of erosion channels.	Site inspection – during rehabilitation works. Any failures should be noted.
	A6 Road grade Road grade should not exceed 15% (8degrees).	Photo (with date), GPS location and mark on map for such structures.
	River crossings Roads should not cross main streams unless appropriate crossing structures (e.g. culverts or bridges) are built.	Map showing the road with approximate area for each of them and photo (with date) for structures built across the river.
	Road soil management Avoid pushing excess spoil into gullies and the edges of road embankments during road maintenance. Spoil should be compacted ‘in-situ’, or transported to disposal sites away from the road,	Site inspection – during rehabilitation works. Any failures should be noted.

Impacts	Mitigation Measures	Monitoring and Follow-up Program
	thus minimizing erosion of roads and sedimentation of waterways.	
	<p>Filter strips Provide filter strips or silt pits (traps) along the roadsides to help to reduce siltation of river systems and to prevent an increase in the intensity and frequency of peak flows into the river system downstream of the land clearing activities.</p> <p>Where filter strip is not possible, silt trap is encouraged at all drainage outlets, prior to discharge into streams to reduce suspended sediment loading. Silt traps should be maintained regularly. Disposal from silt trap should not be done adjacent to rivers, streams, creeks or any drainage.</p>	Photo (with date) and GPS location of the filter strips and silt traps, especially in the high-risk area.
	<p>Culverts The head and outlet walls of culverts should be stabilized with log or stone pitched walls. Culvert gradients should ideally be 1-3%. Contractors should ensure that proper drainage is installed in order to reduce soil erosion and runoff.</p>	Photo with date and GPS locations of all drainage system including any failures.
	No burning. Biomass must be left to rot in-situ.	
	Slopes Terracing	Marking of slope between 12° and 20°

Impacts	Mitigation Measures	Monitoring and Follow-up Program
	Slope greater than 12 degrees should be terraced for soil moisture conservation or for planting and better result in the field, improved access and water retention.	on the map and in the field. Photo (with date) of terracing in the field.
	Steep Areas >25° Set Aside The steep areas should be conserved for flora conservation and ecological protection.	Development Plan in 1:65, 0000 scale map. Photo with date and GPS locations showing the marking or painting on the trees.
Soil Contamination from hydrocarbons	Spills prevention Transport hydrocarbons by means of secured truck. Store fuel products on impervious surface. Ensure that all fuel and waste oil storage containers have secondary containment. Develop spill contingency plan to respond to large oil spills	Photo (with date) and GPS locations showing that oil storage area is properly bounded and sited on stable ground. The storage facilities should be at least 50 m from the nearest waterways. Annual review of spills contingency plan.
Hydrological Impact	Water Management Extensive land clearing should preferably be carried out during the suitable weather. Commence planting cover crops or allow the natural legumes establishment by avoiding blanket herbicide spraying. Refrain from clearing of areas where slopes are more than 25° and soils are shallow.  Establish long-term rainfall and flow	Marking on map the boundary of each Project phases. GPS location and photo (with date) showing the land clearing activities carried out in phases. Records of rainfall

Impacts	Mitigation Measures	Monitoring and Follow-up Program
	<p>gauging stations to monitor the impact on the river base flow.</p>	
	<p>Flooding prevention Exercise proper management practices; develop Project area in phases, encouraging natural ground cover immediately after clearing and maintaining adequate streamside buffer strips.</p>	<p>Map showing details of phased development. Photo (with date) showing natural ground cover establishment and maintenance of riparian reserves and buffer belts.</p>
	<p>Sediment management Develop plantation in phases and ideally scheduled over drier period or months. Lay roads carefully, preferably following the contour and must be far enough from stream. Clearing should be done parallel to contour lines, preferably starting from high to low ground. Install cross drains for minimizing overland flow. Timing of road construction or road upgrading to conform to periods of less rainfall and allowing sufficient time for earthworks to stabilize. Using the appropriate machineries in the land clearing to minimize disturbance to the soil. All clearing, grading and stabilization operations would be done before starting the next phase.</p>	<p>Photo (with date) of measures taken to protect water quality from sediment yield. Provide map and GPS coordinates to show</p>

Impacts	Mitigation Measures	Monitoring and Follow-up Program
	<p>Where possible, the stages of development should be from the high to low grounds, so as to take advantage of the present vegetation to act as silt and runoff barriers.</p> <p>Reduce the duration (max. 3 months) of land exposure to natural elements.</p> <p>Company shall not carry out any tree felling, building or structures erecting and other works within the riparian area.</p> <p>Conduct water resource assessment with the aim of identifying all water resources in the area of operation and identify sampling locations for monitoring</p>	
<p>Degradation of aquatic life by spills</p>	<p>Fuel and chemicals storage Locate all fuel storage areas at least 50m away from surface water.</p> <p>Used chemicals containers Properly clean and store used chemical containers only for recycling entities for reuse or recycling if service is available. Reusing chemical containers for premix chemicals is recommended.</p>	<p>GPS location, photo (with date) showing fuel storage areas</p> <p>Regular check of used chemical containers. Photo with date of used chemical containers cleaning, storing and record of disposals</p>
<p>Human impact on wildlife populations Leading to: Fragmentation of habitat and wildlife ranges</p>	<p>Preservation zones Steep slopes more than 25° must be protected Retain the conservation area highlighted in the HCV assessment.</p>	<p>GPS location, photo (with date) showing the marking on the trees at 1.5-m height at the base limits and map (1:65,000) showing the surveyed area.</p>

Impacts	Mitigation Measures	Monitoring and Follow-up Program
Loss of biodiversity	Conserve riparian management zones	
	Bush meat hunting Discourage hunting or trapping of wildlife within and surrounding the Project area.	Regular check for any sign of hunting activities at all the base camps.
Floral ecology	Sensitive high risk areas Protection of sensitive/high risks areas including steep slopes, riparian, wetlands etc.	Regular check of riparian, slopes and wetlands with monitoring data on medicinal plants and floral species in these areas
Biomass management	Stacking of biomass remnants Apply method of biomass disposal such as in-situ mulching or stacking when suitable	GPS location and photo (with date) showing the stacking of biomass in the cleared area.
		Stacking of biomass remnants in the palm inter-rows
Fertilizer Application and Control Chemicals Management Incorrect application of Fertilizers Judicious use of pesticides	Fertilizer application Avoid application of fertilizers, pesticides and weedicides during the rainy weather and windy conditions. Fertilizers should also be applied in split doses.	Detailed records of application
	Chemical application The frequency, dosage and timing of chemical application should be monitored closely. Practice biological control and other environmental friendly methods to control weeds whenever possible.	Detailed records of application and environmental team.
Forest Fires	Fire response team and procedure Establish an Emergency Response Procedure and an Emergency Response Team	Operational audit

Impacts	Mitigation Measures	Monitoring and Follow-up Program
<p>Socio-Economics Concerns on Displacement of people and communities Loss of land, crops and sacred sites, Food insecurity, loss/contamination of domestic water sources, health problems Change in lifestyle and living conditions</p>	<p>FPIC Rigorous implementation of the Free, Prior, Informed Consent principles and practices Displacement of population Displacement in any form or manner is avoided as company policy. Local people allowed to remain in their communities with required aspects of their surrounding community required for them to maintain or improve their livelihood, including a minimum 250m radius buffer zone surrounding each town, apart from the farmlands. Resettlement can be practiced if actively desired and requested by the community members. Farming land Because of the agrarian nature of the communities, land for farming will be allocated within the buffer zone surrounding each town Farming methods Because of the historical traditional method of farming practice in the area; farmers to be assisted and capacitated to adapt sedentary farming practices that maximize the use of land other than that any land allocated for farming will not be</p>	<p>Survey in detail the towns living side by side with the concession and the adequacy of land allocated for farming and other livelihood activities. Record of all payments made to resettled persons with evidence thereof Records of all meetings, consultations and negotiation regarding resettlement. Monitor frequent meetings between company and community representatives. Structure, membership list and minutes of all meetings between company and community representatives Conditions of towns within the concession in respect of basic social services: education, health, roads, sanitation etc. Record of local community infrastructure support: number of hand pumps, kilometers of road constructed or rehabilitated, support to health care, education etc. Records of all complaints and actions taken to address them</p>

Impacts	Mitigation Measures	Monitoring and Follow-up Program
	<p>sustainable over a long time frame.</p> <p><b>Livestock development</b> Encourage livestock raising through purchasing locally produced livestock and products, and establishing markets</p> <p><b>Community affairs</b> Establish a robust community relations program with a focus on building a vibrant company-community relationship on the basis of trust and mutual benefit. This should include a mechanism for free and continuous flow of information and awareness to the community about past, current and future activities of the project.</p> <p><b>Sacred sites</b> Sacred sites will not be disturbed. In conjunction with community representatives identify, demarcate and mark all sacred sites, cemeteries and cultural sites to be avoided by the project.</p> <p><b>Compensation</b> Identify and enumerate all private assets including tree crops, land and other private assets and pay just compensation based on GOL approved compensation rates following negotiation and acceptance</p>	



Impacts	Mitigation Measures	Monitoring and Follow-up Program
	<p>by affected persons.</p> <p>Farm markets Encourage local farming initiative by purchasing vegetables and other crops from the farmers at competitive rates so that those who are not employed by the company can be encouraged to continue their farming</p> <p>Community programs Support local development through concrete corporate, social responsibility programs in the area of roads, healthcare, education, sanitation and agriculture. Particular emphasis on adult literacy.</p>	
Provision of Employment Opportunities for locals, upgrading of economy and infrastructure	<p>Employment priority Work priority should be given to the suitable qualified local villagers. LIBINCO to work with local education authorities to identify persons who can be sponsored by the Company to pursue further training in the field of Agriculture.</p>	Keep a record of workers and their particulars. Record of number of locals benefitting from employment
	<p>Foreigner work permits If non-Liberians were employed, proper procedures must be followed.</p>	HR records.
	<p>Health check Where practical, workers to go through health check within first year</p>	Provide the audit team with non-confidential summary of the worker's health records.

Impacts	Mitigation Measures	Monitoring and Follow-up Program
	<p>of employment and emphasis on communicable or infectious diseases especially Malaria, TB or others every 6 months</p> <p>Concession agreement facilities Provision of facilities and utilities in accordance with terms of Concession agreement (potable or clean water, housing and sanitary facilities)</p>	<p>Photo (with date) and GPS location of the camp,</p>
Risks to human health	<p>PPE The uses of personal protective equipment for all personnel engaged in risky activities, for instance those in mechanical workshop, heavy equipment drivers, chain saw operator, etc. The PPE shall include among other things safety goggles, gloves, safety booths, ear and nose muff,</p>	<p>Ensure all employees in risky activities are entitled to safety wears; keep records of all employees safety wears; ensure that employee are properly equipped during work and penalize violators, making sure these records are properly recorded and kept to ensure company commitment to safety issues.</p>
Employee welfare	<p>Permanent employment Provision of permanent employment where applicable, Training and career path Provision on the job and formal training for skills enhancement and career progression, from local base to top management Children Schooling and education Provision of free of charge regulated schooling from crèche until Sr. High school to employee children.</p>	<p>Record and detailed statistics of programs of programs insurance program and social services/amenities provided per annum</p>

Impacts	Mitigation Measures	Monitoring and Follow-up Program
	<p>Health care Provision of free basic and intermediate health care From clinics to regional hospital support</p> <p>Housing Provision of health insurance schemes, Provision of free, modern built housing suitable for families</p> <p>Electric power, water and sanitation Provision of health insurance schemes, , free electric power, clean water and sanitation facilities</p> <p>Long term benefits Provision of insurance schemes, retirement benefits as well as social services and amenities for workers and their beneficiaries</p> <p>Women's development Provision of equal opportunities to work, pay, training and advancement to women, and provision of harassment-free workplace</p> <p>Encouraging employee union Provision of encouragement for proper union organization and resolution of disputes through workplace negotiation</p>	
Pollution by improper waste disposal in the project area	<p>Waste Refuse to be disposed of in pits approx. 30m from waterways and above water table.</p>	Photo (with date), GPS location of the dumping ground and general layout of the camp, name of contractor and plantation areas.

Impacts	Mitigation Measures	Monitoring and Follow-up Program
	<p>Storage tanks Any Storage tanks constructed on stable ground must have secondary containment and at least 50 m away from waterways.</p>	<p>GPS location and photo (with date) showing the location of the storage facilities.</p>
<p>Water resource degradation and siltation</p>	<p>Communities water provision Cooperate with communities and local authorities on solving water supply issue on the directly affected communities.</p>	<p>Photos (with date) to show good practices on ground.</p>
	<p>Water quality monitoring Regular monitoring of water quality.</p>	<p>Compliance report</p>
<p>Dust and noise pollution</p>	<p>Vehicles Proper maintenance of vehicles.</p>	<p>Records of maintenance carried out for vehicles</p>
	<p>Vehicles traffic within the Project area Ensure efficiency of engine. Vehicles should be well maintained to reduce exhaust smoke emissions. Gravelling of roads around the plantation office, village and living quarters would reduce the dust problem. Introduce tree-covered buffer zone around plantation village to reduce dust in the dwelling area. Outside the Project area: Inform truck drivers to reduce their speed when approaching human settlements to reduce dust generation. Install road sign and establish speed</p>	<p>Photo (with date) and map showing roads, speed humps and tree-covered buffer zone around plantation area, installation of signboards, speed humps</p>

Impacts	Mitigation Measures	Monitoring and Follow-up Program
	humps near the settlement areas (at the entry points) and impose speed limit on plantation roads to reduce churning up of dust.	
Road Safety	Road signs Proper traffic signboard at appropriate spots especially near T-junctions or settlement area.	Photo (with date) and GPS location of the signboard.
	Road damage Damaged section of road should be repaired as quickly as is practical and in accordance with company road maintenance procedures.	Photo (with date) and GPS location of any damaged road.
Visual impact on abandoned camps	Camps if any Removal of all building structure to discourage any illegal squatter activities, removal of all solid and liquid waste, rehabilitation of all main roads.	Photo (with dates), GPS location of roads and map for the plantations.
	Equipment Remove all machinery and equipment to recover cost.	Area inspection
Security of the Project area and communities	Security gates Retain the security gates into the plantation areas and joining communities	Photo (with date) and GPS locations

## **6.0 General Summary of Management and Mitigation Plans of HCV**

All recommendations incorporated within the ESHIA report conducted in 2013 by Coastal & Environmental Services and GreenCons should be fully implemented by LIBINCO. Additionally, the recommendation of the HCV report is to be implemented also by LIBINCO to ensure that there is minimum negative social and environmental impact in the surrounding landscape. Furthermore, given the poverty and vulnerability, and desire for development, of the communities in the proposed LIBINCO development regions, LIBINCO will also seek to ensure and monitor the positive social and human impact being sought. In order to fully realize and record the level of the environmental and social impact of the project on the company, four different monitoring activities will be conducted within the operating area of the company and its surrounding thereof..

1. Operational monitoring: This will follow those parameters described in the specific ESHIA Plans and Regulations Table
2. Monthly internal monitoring reports: Internal reports will be provided monthly (Environmental and social activities reports, Grievances report, HR report). Review in monthly management meeting.
3. Quarterly monitoring reports: Summary of the monthly reports and a management conclusions section will be produced, including for stakeholder dissemination. Review in quarterly stakeholder meetings (timing may be subsequently adjusted).
4. Annual monitoring report: Per Liberian regulations, there will be an annual review of the Company's adherence to the environmental permit issued by the Environmental Protection Agency of Liberia and the Environmental permit will be subject to review. Review by EPAL and in annual seminar.

The serious commitment placed on the planning and implementation of the recommendations is essential to the company's management. In demonstrating its unwavering support to this area the company has as an overseer to the operation, General Manager. The duties of the General Manager have already been outlined under section 3.2: Personnel Involved in Planning and Implementation.

## **6.1 Management and Mitigation Plans for HCV Areas and to Maintain or Enhance Conservation Values Identified.**

As a result of the preparation of an HCV National Interpretation for Liberia in January 2013, heavy reliance on the HCVs identification and interpretation is cast on this toolkit. Thus, the definitions of the below HCVs is based on the toolkit.

### **HCV 1.2: Concentrations of rare, threatened or endangered species**

**This HCV is considered POTENTIALLY PRESENT.**

#### ***Management objective***

The management of LIBINCO should ensure that habitat in which rare, threatened or endangered species are found are part of its conservation priorities. Buffers to wetlands of mangrove or other marshy areas must be considered during clearing and LIBINCO management should sensitize surrounding communities of the importance of conserving areas such as these

### **HCV 1.3: Concentrations of endemic species**

**It is logical to indicate that HCV 1.3 is POTENTIALLY PRESENT within the LIBINCO Project Area.**

#### ***Management objective***

Endemism nationally and regionally is being challenged by ever increasing slash and burn agriculture which destroy vegetation and habitat depended on by species. For instances water bodies are being polluted, dried up or diverted as a result of poor management of wastes, illegal mining activities, and logging activities.

Management to HCV 1.3 would be greatly achieved once the ecology and habitat of the species are known. In the case of the assessment, endemic species are certain to mostly be found within riparian areas of swamps and marshy areas, which according to the National Interpretation are areas of conservation significance the management of LIBINCO should ensure steps are taken and mechanism is in place to reduce threats to species endemism by buffering the habitat of these species.

The management of LIBINCO should ensure efforts are undertaken to avoid any and all marshy area and avoid all areas on steep hills during clearing activities. Farming on “left alone area’ (area left due to its HCV characteristics) by local communities especially within its new planting block should be discouraged and reasons of leaving such area be communicated to nearby communities.

#### **HCV 1.4: Critical temporal concentrations of species**

**It can be concluded from the study that HCV 1.4 is POTENTIALLY PRESENT within the project area.**

#### ***Management objective***

As a result of the precautionary principles LIBINCO should avoid all and any swampy areas including all marsh land. The company must also avoid clearing beside swamps as such activity can pose serious threat to the sanctity of the areas. Although challenged in conserving these locations comes from farming activity, wood gathering, and also illegal mining activity, LIBINCO should ensure the complete avoidance of these areas during their land clearing activities. Full management technique to ensure continuous and temporal significance of the areas by migratory fauna species is discussed in the management and monitoring section of the HCV report.

#### ***Management and Mitigation Plan for HCVs 1.2, 1.3, and 1.4,***

1. Identify, demarcate and map all HCV areas with clear documentation
2. Raise and increase awareness of the essence of setting aside HCVs to avoid communities misunderstanding and misinterpretation of such activities and thus considering it as a means of preventing development and employment in their area.
3. Enforce strictly a no hunting policy except for non-endangered mammal pests into the plantation and the buying, selling and eating of bush meat on the premises of the concession. Also discourage the selling of live fauna species on the concession by workers and ensure harsh punishment for violators.
4. Protect and maintain all buffer zones; ensure periodic erosion control practices for all areas with slopes especially areas near any surface water with the involvement of the local community. Conduct regular meeting with local communities on the management of designated HCVs and acknowledge their participation in the management of the HCVs.
5. Ensure visible signs are posted around the HCV. Provide HCV maps to land preparation teams prior to clearing of any block and ensure that the teams understand and know how to read and interpret the map.
6. Monitor periodically all land clearing activities and ensure that all area of avoidance recommended in the HCV report are adhered to.
7. Encourage the protection of HCV areas by rewarding communities, team and persons responsible for ensuring such areas are maintained and protected through certification, community project, such as hand pump, bridges, football field, etc. and ensure that persons directly working with LIBINCO who are found in violation of abusing the sanctity of designated HCV areas are penalized.
8. Evaluation and monitoring of the existing HCV needs to be periodically done with the involvement of representatives of host communities, other stakeholders and the company. Monitoring should include the maintenance and presence of HCV sign posts at designated areas.



#### **HCV 4.1: Areas critical to water catchments**

**HCV 4.1 is PRESENT in the project area**

##### *Management objective*

Identification of all areas of illegal mining and measures taken by LIBINCO that vegetation along these streams or the swamp is not destroyed. Buffer to rivers and streams or other marshy areas must be considered during clearing and LIBINCO management must ensure that communities understand their actions of conservation of these areas and to also ensure perpetual flow of clean water through the forest and for the host communities on gradual level plains and those downstream and to mitigate the constant flooding of road and farms by the conservation of the different type of vegetation found within this forest, i.e. wetlands, swamps, mangroves, etc. setting aside and maintaining appropriate buffer zones for all major rivers and streams in the new planting area and to ensure that the oil palm plantation operation does not threaten water resources and the access to them.

#### **HCV 4.2: Areas critical for erosion control**

**This HCV 4.2 is POTENTIALLY PRESENT within the LIBINCO project area**

##### *Management objective*

The tendency to have more area for land development during clearing is obvious within the concession areas. LIBINCO should avoid any and all areas on steep. Communities in around hilly areas adjacent the land clearing should be made aware of the danger posed in clearing over steep hill. Buffer around every steep hill should be a must for the company to avoid accidental runoff or mudslide from the hill to communities below.

##### *Management Plan for HCVs 4.1 & 4.2*

The below large streams and river buffer is recommended for the first step in managing the area set aside prior to engaging the management mechanisms

**Table 6: Recommended preservation of riparian reserve for plantation**

Stream/River Width	Min. Width
>40m	50m
20m – 40m	40m
10m – 20m	20m
5m – 10m	10m
3m – 5m	5m
<3m	-

The following regulations have been set aside by the company to enhance the protection of surface and ground water within project areas.

1. Water catchment areas should be protected to ensure that communities have unhindered access to quality water for their livelihood purposes and riparian forests are reserved to ensure that they maintain their function in controlling erosion
2. All the specified HCVs are to be mapped out.
3. Regular meeting with local communities to include discussion of the HCV
4. Establishment and communities' participation in the management of the HCV encouraged based on information sharing and awareness.
5. Riparian reserves to be identified, established, mapped, documented and respected
6. Protection and maintenance of buffer zones, erosion control practices for all areas with slopes especially near any surface water.
7. Visible signs are to be posted around the HCVs and maps provided to land preparation team prior to clearing of any block. The team is to adhere to the map provided and avoid any impact to NO GO area. Land clearing activities need to be monitored and accounted for periodically. Penalties to be established for violators abusing the sanctity of designated "no go" areas.
8. Monitoring of the HCVs to be periodically done with the involvement of representatives of host communities, other stakeholders and the company.
9. Avoid heavy equipment crossing through major river tributaries by placing culverts to all points of crossing, in the event where it seems almost impossible within the immediate time period, minimum crossing should then only be allowed, documenting time of crossing, reason of crossing and the length of time elapse during such activities. These records will show the transparent activities of the company even in the event of monitoring and evaluation. . This action has to be communicated with the local communities, especially with those towns using the water for other domestic usages.
10. Ensure surface water testing of the major rivers and records of all testing kept to show any change in water quality due to the presence of any impurities or other palm waste during the different phase of the plantation operation.

## **HCV 5: Area fundamental to meeting the basic needs of local communities**

**It is certain from the study conducted that HCV 5 is PRESENT.**

### ***Management objective***

The dependence on these areas by the communities should be considered during land clearing by LIBINCO. It is certain that some level of dependency on the forest might be reduced but without caution by LIBINCO, the level of damage which will be caused to the lives and livelihood of the communities will be desperate. LIBINCO should ensure extreme caution is taken during her operation especially when it comes to communities living near or adjacent to forested vegetation.

### ***Management Plan for HCV 5***

- To facilitate the establishment of a company community HCV team along with the host communities and to provide them clear explanations concerning HCV identification and mapping process in order to guarantee their full participation and involvement.
- Survey, demarcate and map along with host communities and other stakeholders all designated farmland and none forest timber product sites
- Provide maps to land preparation team prior to clearing of any block. The team is to adhere to the map provided and avoid any impact to “NO GO” area.
- Record all meetings, attendance, minutes and approval documentation commencing and ending the process;
- Quickly find alternative to creeks use by the community for major domestic needs like drinking and cooking when it becomes imperative and unavoidable to use the surface water for plantation operations.
- Ensure proper mechanism for the management of water provided to the community by setting along with the community a water sanitation committee.
- Ensure periodic monitoring of water level and quality
- While some of the creeks used by communities may be considerable distance away from them, always have a noticeable HCV board identifying the actual usages of the water body;
- To engage the community periodically in understanding their concerns about these HCV

## **HCV 6: Areas critical to cultural identity (values)**

**Due to the involvement of the communities in identifying places of cultural heritage values it can be confirmed that HCV 6 is PRESENT.**

### ***Management objective***

LIBINCO should ensure buffers are left between the land area to be cleared and these sites. Management prescriptions in maintaining these sites are addressed in the management and monitoring section of the HCV report.

### ***Management Plan for HCV 6***

In order to fully satisfy the objective of management in the adherence of this HCV, the following needs to be initiated

- All clearing blocks need to be mapped out and surveyed;
- The immediate host communities need to be aware of the clearing activities in order to identify any sacred area or unmarked graves that might be in the area to be cleared;
- Notice boards / signboards representing and indicating each category of HCV must be demarcated along with the host community and posted around the given area. They shall be made visible and explained to the local communities to facilitate clear understanding.
- The company needs to ensure that clear explanations concerning HCV is made to the host communities in order to guarantee their full participation and involvement in the demarcation process;
- Photo and other records relating to the lack of any identified area or the presence of identified areas needs to be taken and recorded;
- Any negotiations entered into between the host communities and the company over the removal and subsequent relocation of any area relating to this HCV needs to be documented and recorded with photos and attendance of all present including other stakeholders;
- Monitoring of all sites demarcated needs to be periodically carried out by the company and the host communities' representative in order to ensure appreciation of the site.

## 7.0 Internal responsibility

We hereby sign off on the above Summary Report of Planning and Management. The above may be amended and clarified for improvement during the development of the plantation but it will remain in accordance with RSPO NPP and RSPO Principles and Criteria.

On behalf of the Approved Assessors



Solomon P. Wright  
Team Leader: RSPO HCV Approved Assessors  
May 6, 2014

Management of LIBINCO PALM BAY ESTATES, DISTRICT #4, GRAND BASSA COUNTY



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Sasi Kumar  
GM, LIBINCO