
GOLDEN VEROLEUM (LIBERIA) INC. PRIORITY PLANTING AREAS , BUTAW DISTRICT AND
NUMOPU DISTRICT AND KPANYAN DISTRICT, SINOE COUNTY, REPUBLIC OF LIBERIA

Summary Report - HCV Planning and Management

PREPARED FOR GVL BY

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1.0 Executive Summary

Golden VerOleum (Liberia) Inc, (GVL) is a legal entity registered and incorporated under the laws of Liberia as of August 9, 2010 and an approved ordinary member of the RSPO as of August 29, 2011 (Ordinary member Approved 29/08/2011, 1-0102-11-000-00).

GVL entered into a concession agreement with the Government of Liberia for the development of oil palm plantation in Sinoe, Gran Kru, Maryland, River Cess and River Gee counties in Southeastern Liberia. The Act to ratify the Concession Agreement between the Republic of Liberia and Golden Veroleum (Liberia) Inc. was approved September 1, 2010 and published by authority of the Ministry of Foreign Affairs Monrovia, Liberia and printed September 2, 2010.

The Concession agreement was preceded by community briefings and consultations in May 2010 and further on October 23, 2010 GVL received formal, broad based community invitation from Butaw District, Sinoe County, to begin development in the District. In accordance with Liberian legislation, GVL on November 25, 2010, received an authorization (DED/EPA-06/192/10/RL) from the Environmental Protection Agency of Liberia (EPAL) to prepare a training nursery on land demarcated by the community, GVL and the Ministry of Lands Mines and Energy survey team.

Subsequent to the nursery preparation permit, in keeping with Annex I Section 6 of the Environment Protection and Management Law of the Republic of Liberia, an Environmental Scoping Study was completed in December 2010 followed by an Environmental and Social Impact Assessment study in February 2011. The Studies were conducted by an independent EPA licensed environmental consulting firm, Green Consultancy Inc. The resulting ESIA report was reviewed internally by the EPAL, followed by the holding of a broad-based stakeholders reviewed session in Greenville, Sinoe County. The Liberian ESIA process is essentially similar to the RSPO assessment process with broad based participations..

In May 2011 the Environmental Protection Agency of Liberia (EPAL) issued a three year Environmental Permit-EPA/EC/EIS/001-0511 to GVL to commence operation in a 33,000ha permitted area.

On September 15, 2011, GVL received notification from the Roundtable of Sustainable Palm Oil of the approval of its membership application. Subsequently, GVL took up participation in Liberian RSPO NI development activities and working groups as well as in development of oil palm sustainability skills in Liberia in conjunction of the EPAL. In August 2012, RSPO confirmed Solomon P. Wright and E. Abraham T. Tumbey Jr of Green Consultancy Inc as Approved HCV Assessors.

GVL has stated that its operation follows Liberian legislation and was established prior to its RSPO membership and therefore the applicable RSPO procedures are the Ongoing New Plantings Procedures. Under both pre-existing and ongoing development by GVL, the company is committed to the RSPO and therefore the company has initiated this validation assessment to specifically enable the certification of its existing operations under the RSPO. As noted these operations have followed Liberian regulations (which follow RSPO principles, including regarding FPIC and HCV processes), and these Liberian assessments have been carried out by certified RSPO Assessors.

In support of the above a review of the ESIA prepared by Green Consultancy Inc was conducted commencing September 18, 2012 to October 6, 2012 by RSPO approved HCV Assessors: Solomon P. Wright and E.Abraham T. Tumbey Jr of Green Consultancy Inc. The assessment was part of a process by GVL to bring GVL into alignment with the RSPO NPP process with the objective of certifying its operations. The planting company GVL is a legal entity registered and incorporated under the laws of Liberia and an approved ordinary member of the RSPO as of August 29, 2011 (*Ordinary member Approved 29/08/2011, 1-0102-11-000-00*)

The assessment team confirmed that the required legal documents such as Concession Agreement between the Government of Liberia and GVL, required Environmental and Social Impact Assessment (ESIA), Environmental Permit, Ministry of Agriculture Permits and HCV reports are available.

Based on the HCV assessment done in the initial ESIA and reconfirmed in the recent study of the area, it can be confirmed that there are no primary forest within the area. The remaining forest vegetation is characterized by secondary forests and agriculture degraded farmlands. The original forests of the area have been cleared for agriculture in the past, leaving secondary vegetation.

Much of the natural habitat of the area has already been transformed by shifting cultivation, using the traditional slash and burn method that is locally practiced. This traditional slash and burn shifting agriculture system has significantly impacted the integrity of the forest vegetation by clearing primary vegetation notable of hosting a rich biodiversity of fauna and flora species. Consequently, only the most hardy and small mammalian species are prominent in the area. Three types of HCVs are identified within the area, HCV4, HCV5, and HCV6. Local people's farmland and other critical forest livelihood sites has been identified and mapped. Sacred sites and cemetery has also been identified, demarcated and marked. There are no peat soils located in the area

2.0 Reference Documents

2.1 ESIA/SEIA and HCV Assessment reports

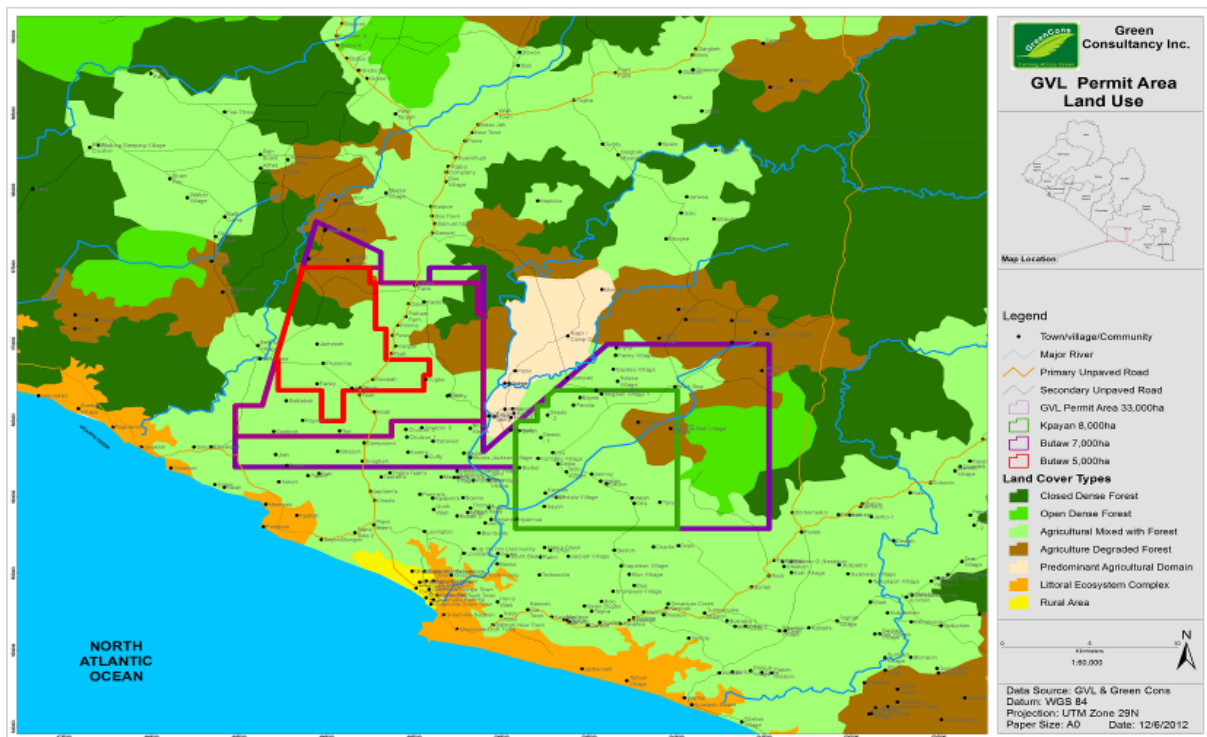
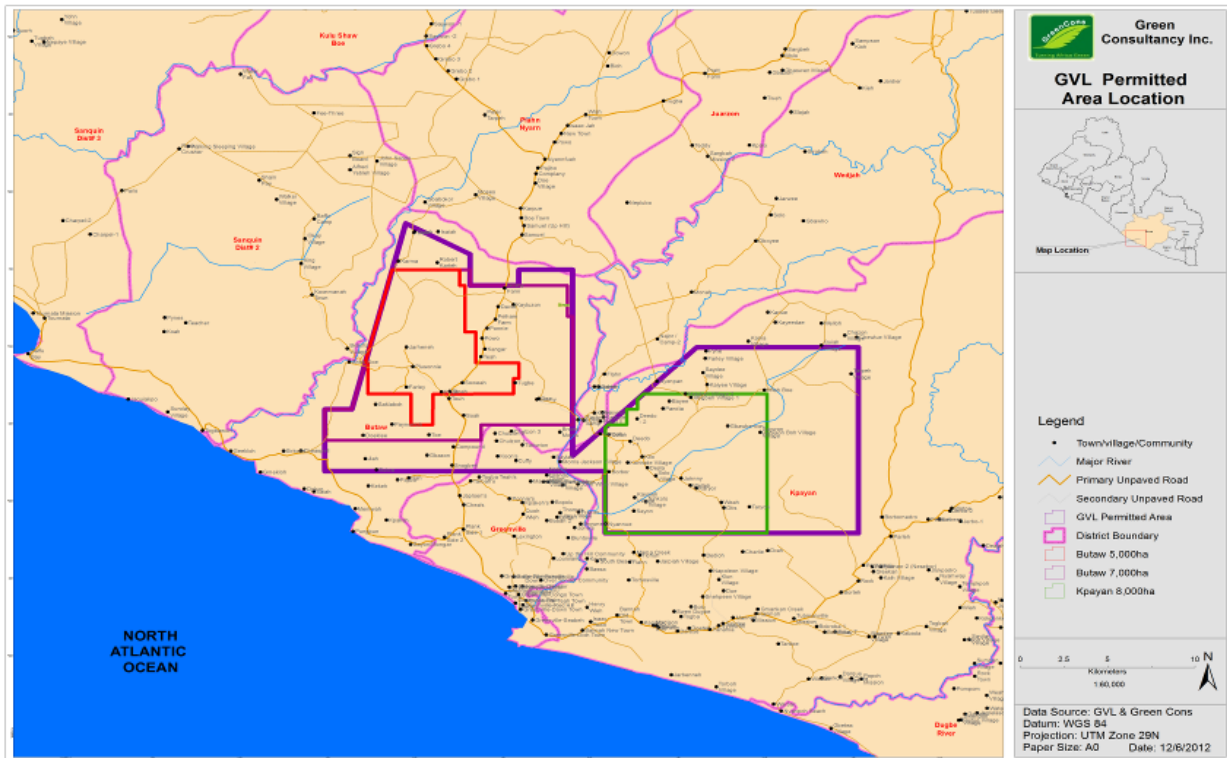
The original February 2011 ESIA (SEIA) and updated November 2012 HCV assessment reports. Summaries are separately available.

2.2 Legal documents and regulatory permits related to the areas assessed

Document	Issue By or Through	Date And Code Number
Ratified Concession Agreement between the Government of Liberia and Golden Veroleum (Liberia) Inc.	Republic of Liberia by Authority Ministry of Foreign Affairs Monrovia, Liberia	Approved September 1, 2010 and published and printed September 2, 2010
Business Registration Certificate	Ministry of Commerce and Industry	October 13, 2012/2013
Tax Identification Number	Ministry of Commerce and Industry	TIN - 426669005(Oct 15, 2010)
Environmental Permit	Environmental Protection Agency of Liberia (EPAL)	EPA/EC/EIS/001-0511
Official nursery authorization letter	Environmental Protection Agency of Liberia (EPAL)	DED/EPA-06/192/10/RL
Import permit for plants or other goods governed by the Phytosanitary Regulation	Ministry of Agriculture(MOA)	NOES/RL/22/2011 March 23, 2011
Survey Site Plan	Edwin B. Boakai through the Ministry of Lands, Mines & Energy	November 1, 2010
Phyto-certificate	Ministere De L'Agriculture De L'Elevage Et De La Peche Benin	000774 12/04/2011
Land Use Certificates	Minister of Agriculture, Minister of Lands, Mines & Energy, Minister of Justice, Probate Division of the Third Judicial Circuit Court Sinoe County	A-1-09 p 356-360 And A-1-09 p 367-370

2.3 Location maps – landscape level and property level

Land Use Map Showing GVL Permitted Area



2.4 Area of plantings and time-plan

Initial project activities with respect to administrative set up and technical preparation have already commenced in line with Liberian legislation. The implementation of project operational activities commenced on December, 2010 subsequent to the issuance of an Environmental permit, participatory mapping and community invitation letter.

Table: Current Activity Schedule

PRIORITY DEVELOPMENT AREA	ACTIVITY	YEARLY HECTARES		
		2010, 2011 and 2012	2013	2014
BUTAW I 5,000	Land Clearing	1,658	2,000	1,342
	Nursery	71	-	-
	Planting	870	2,929	1,059
BUTAW II 7,000 HA	Land Clearing		3,500	3,500
	Nursery			
	Planting		3,500	3,500
NUMOPU KPANYAN DISTRICT 8,000 HA	Land Clearing		6,516	1,404
	Nursery	80	-	-
	Planting		6,436	1,404

Clearing has already taken place for the period of 2010, 2011 and 2012 (see above) within two out of three of the areas earmarked for near term planting. Land clearing and planting will continue during subsequent years following the submission of the reports in line with the RSPO

In order to minimize impacts to wildlife, under brushing and felling are to be conducted gradually on a block-by-block method, and heading from roadsides and clear ground towards forested areas. This is to ensure that the mobile animals have the time and space to escape and seek refuge at the nearby forest.

GVL will not develop any land within these target zones without first identifying the HCVs in the areas and without engaging in the Free, Prior and Informed Consent of communities who traditionally have lived on and used the surrounding resources (for subsistence farming, hunting, medicinal uses etc). The FPIC process is an ongoing negotiation process and influences the development program locations and timing. The attached maps show key identified HCV locations (such as sacred and burial sites). Specific development areas will be defined in collaboration with the communities. It is the company's expectation that communities will define for set aside, forest areas for traditional use and that farm land areas will be mutually agreed proximate to the villages and towns. These will be jointly agreed as the project progresses.

3.0 ESIA (SEIA) and HCV Management & Planning Personnel

3.1 Organizational information and contact persons

Table: Contacts

Company Name		Golden Veroleum (Liberia) Inc	
Address: 17th Street, Villa Samantha (Beach Side), Sinkor			
City: Monrovia	Post Code: NA	Country: Liberia	
Phone: N/A	Fax: NA		
Contact: David Rothschild, Director	Email: david.rothschild@veroleum.com		
Alt Contact: Matt Karinen, Director	Email: matt.karinen@veroleum.com		
Alt Contact: Vigy Ponnudurai, Sr. VP Operations	Email: vigy.ponnudurai@veroleum.com		
Web site: www.veroleum.com	Business: Palm Oil		
RSPO Membership № : Ordinary member Approved 29/08/2011, 1-0102-11-000-00			

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3.2 Personnel Involved in planning and implementation

Responsibility of the HCV threats mitigation and HCV enhancement is with the line operating organization. It is considered imperative that actual HCV management is an integral part of the operating organization, and a way of operating, rather than an outside function.

Functions outside the operations participate by proposing applicable standards and solutions to issues, as well as monitoring and auditing their implementation.

Our Sr Vice President of Operations will oversee the Environmental Manager and Community Affairs Managers responsible for managing the Environmental and Community teams who will be responsible for the survey, planning and community liaison and for placing the appropriate signage and delimiters to demarcate conservation areas and monitor the areas on a regular basis.

Table: Organization Roles

Ref	Personnel	General Responsibilities
1	Top management/Director/Vice President of Operations/Development and Regional Controllers/Senior Managers	Allocate financial resources as and when required Plan and manage the overall operation at each level Consult with communities on important matters at senior level and make appropriate adjustments, resolutions and decisions from company part
2	Research and Internal Audit Dept Heads	Supervise and enforce environmental, social and operational requirements, including management, monitoring and audits
3	Environmental Dept Head	Oversee the overall management and operation of the environmental requirements, including HCVs. Coordinate staff and resources in the delivery of remediation measures. Advise Management and contractors on the environmental and HCV issues. Liaise with the relevant Government agencies and stakeholders.
4	Community Affairs Dept Head	Ensure Free Prior and Informed Consent, proper and effective information dissemination between the company and the communities, complaints and grievances are received, noted and addressed

Ref	Personnel	General Responsibilities
5	Environmental and Community Field Officers and Assistants	<p>Carry out the identification, analysis and agreement with communities on and demarcation of environmental and social HCVs</p> <p>Brief company and contractors supervisors, staff and employees of all the company's and legislative requirements</p> <p>Monitor the implementation of all the mitigating measures in all the development area.</p> <p>Carry out monthly environmental audit for all the plantation area.</p> <p>Inform the Manager of the potential issues or noncompliance.</p>
6	GIS Head and Officers	<p>Coordinate with the Environmental Dept and the Community Affairs Dept to map out all HCVs and environmentally sensitive zone to develop participatory, public and company internal mapping</p>
7	Land Preparation Head and block responsible officer	<p>Liaise with the Environmental, Social and GIS team to ensure development area is surveyed, mapped and untouchable areas demarcated prior to work.</p> <p>Inform Environmental, Social and GIS team, as relevant, of any suspected omissions or errors, and of suspected accidental breaches of the demarcated areas or breaches of agreed practices</p>
8	Health and Safety Head and Officers	<p>Monitor the working areas and the well-being of the workers</p>
9	Human Resource Head and Officers	<p>Hiring, evaluating and training employees from the agreed communities</p> <p>Ensuring HCV training to newly hired employees as well as regular update training of existing employees</p>

3.3 Stakeholders to be involved

Important formal stakeholders include the following

Table: Stakeholder Table

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; Monthly meetings
Village and towns representatives	Information on all company matters affecting communities or taking place nearby; Employment and training matters; School and Health Care matters; Social contracts matters; Receipt and addressing any concerns or grievances; Monthly meetings
Local and locally present International Non Governmental Organizations	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;

4.0 Summary of Management and Mitigation Plans (ESIA/SEIA)

GVL implements following plans and regulations (for detailed rules and plans, refer to the itemized elements in the details table)

4.1 Mitigation plans to minimize negative for socio-economic impacts

- Soil Erosion, in particular impact on water quality (A-series of plans and regulations, refer to detail plans table);
- Flooding management and other hydrological management (C-series)
- Degradation of aquatic life by spills (D-series)
- Socio-economic procedures and programs (J-series)
- Employment programs (K-series)
- Water resource degradation and siltation management (N-series)
- Management of dust and noise pollution (O-series)
- Road safety (P-series)
- Abandoned camps (if any) management (R-series)
- Security management with communities (S-series)
- Improvement and location of heritage Cemeteries and Gravesites including those lost or forgotten (Refer to cemeteries and gravesites under “Specific HCV Maps Based Guide” sub-point)

4.2 Management plans to enhance socio-economic contributions.

- Farming land improvement (J3), Farming methods improvement (J4), Livestock development (J5), Farming markets (J9), Community programs (J10), Occupational health management (K1)
- Employee welfare programs (L) in particular as 60-90 % of community households have one or more members in company employment
- Road safety (P-series)
- Security management with communities (S-series)

4.3 Mitigation plans for negative environmental effects

- Soil Erosion (A-series)
- Refer also to Minimum Riparian Buffers map (under “Specific HCV Maps Based Guide” sub-point)
- Soil contamination (B-series)
- Hydrological Management (C-series)
- Degradation of aquatic life by spills (D-series)
- Human impact on wildlife (E-series)
- Floral ecology (F-series)

- Biomass management (G-series)
- Fertilizer application and Pests and diseases management (H-series)
- Forest Fires management (I-series)
- Waste management (M-series)
- Abandoned areas management (if any) (Q-series)

4.4 Management plans to promote positive environmental effects

- Bushmeat hunting management (E2)
- Connected riparian and high density forest zones (A1) and re-establishment of corridors that may already have been cut
- Additional preservation of core areas of Higher Density Forests (in addition to primary forests). Core areas of High Density secondary forests will be planned to be preserved, and also utilized for community traditional forest resources needs (gathering and materials, similar to riparian areas). The company is reviewing lower density forest categories categories that may be further excluded from development or chosen for development in line with High Carbon Stock (HCS) preservation. Such determination will be made based on further assessments including with partners and stakeholders. (Refer to core forest areas section under “Specific HCV Maps Based Guide” sub-point)

5.0 Summary of Management and Mitigation Plans (HCV)

5.1 Plan for HCV monitoring and regular review of data.

GVL will fully implement the recommendations provided in the Environmental and Social Impact Assessment reports and HCV assessments (of 2010, 2011 and 2012) made by Green Consultants, Inc., and those resulting from the internal work of the company's research, Environmental and Community Affairs departments 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 GVL development regions, GVL will also seek to ensure and monitor the positive social and human impact being sought.

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.

Internal reports will be provided monthly (Environmental and social activities reports, Grievances report, HR report), and comprehensive reports 6-monthly.

Our Sr Vice President of Operations will oversee the Environmental Manager and Community Affairs Managers responsible for managing the Environmental and Community teams who will be responsible for the survey, planning and community liaison and for placing the appropriate signage and delimiters to demarcate conservation areas and monitor the areas on a regular basis. Managers, team leaders, workers and contractors will be advised on our regulations regarding prohibition on respecting riparian buffer zones. Guard stations will also be established at all entries to monitor the entry and exit of individuals to ensure there is no trafficking of timber or animals. The joint teams team is also working with local partners to develop a community awareness programs covering the critical concerns.

5.2 Management and mitigation plans for threats to HCV areas and to maintain or enhance conservation values identified

Guidelines per each HCV

HCV 1 - Significant concentrations of biodiversity values

Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values.

Not present in the area.

HCV 2 - Significant landscape forests with viable species

Forest areas containing globally, regionally, or nationally significant large landscape level forests, contained within, or containing the management unit, where viable population of most if not all naturally occurring species exist in natural patterns or distribution and abundance.

Not present in the area.

HCV 3 - Rare, threatened or endangered ecosystems

Forest areas that are in or contain rare, threatened or endangered ecosystems.

Not present in area.

HCV 4 - Forest areas that provide basic services of nature in critical situations

(Including HCV 4.1 Forests critical to water catchments and HCV 4.2 Erosion Control)

Forests play an important role in preventing flooding, controlling stream flow regulation and water quality. Where a forest area constitutes a large proportion of a catchment, it may be able to play a critical role in maintaining these functions. The greater the risk of flooding or drought or the greater the importance of water usage, the more likely it is that the forest is critical to maintaining these services and more likely that the forest is a High Conservation Value Forest (HCVF).

Management objective

To ensure perpetual flow of clean water through the forest and for the host communities by setting aside and maintaining appropriate buffer zones for all major rivers and streams in the concession areas and to ensure that the oil palm plantation operation does not threaten communities' access to water resources; and to ensure that the forest continue to maintain its function of controlling erosion and catchment areas.

Threat types

Threats to the above objective will include but are not limited to the following:

- Mistaken or inadequate planning to retain important HCV areas
- Operational encroachment into HCV areas
- Wrong work timing such as in heavy rain
- Erosion and silt/mud flows
- Clearing and removal of vegetation off HCV zones by local communities
- Lack of monitoring

Management regulations

Key regulations – specific standards and rules are shown in the rules table

- 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
- All the specified HCVs are to be mapped out.
- Regular meeting with local communities to include discussion of the HCV establishment and their participation in the management of the HCV encouraged based on information sharing and awareness.
- Riparian reserves to identified, established, mapped, documented and respected (specific standards are established in the details section).
- Protection and maintenance of buffer zones, erosion control practices for all areas with slopes especially near any surface water.
- Visible signs are to be posted around the HCV 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 sanity of designated “no go” areas.
- Heavy equipment crossing through major river tributaries to be avoided by placing coverts to all points of crossing.
- Monitoring of the HCVs to be periodically done with the involvement of representatives of host communities, other stakeholders and the environmental team of the company.
- Surface water testing of the major rivers within the concession to be done and records of all testing kept to detect any change in water quality.

- Monitoring to include measuring fluctuation activity of water level during rainy season and dry season as baseline in rivers which has the important function as the catchment areas
- Refer to the Specific HCV Maps Based Guide for additional plans to maintain and enhance conservation values

HCV 5 - Meeting basic needs of local communities

Forest areas and are fundamental to meeting basic needs of local communities members for food farming and for those members retaining traditional lifestyles, also for hunting and gathering of livelihood needs, e.g. rattan and thatch).

Management objective

The objective of management under this HCV is to ensure mutual co-existence between the company and the host communities by ensuring that the basic dependence needs of the communities are supported and guaranteed.

Threat types

Threats to the above objective will include but are not limited to the following:

- Wrong or mistaken land planning, information and consent process resulting in not recognizing of host communities farmland or other community or private lands, or lands used for other livelihood/household needs
- Encroachment on planned restricted land by clearing operators

Management regulations

Key regulations – specific standards and rules are shown in the rules table

- Community members who wish to retain traditional life and sustenance styles to have the means to maintain a sustainable livelihood and agricultural practices with adequate farmlands and forest reserves
- Map out all host communities farmland and land used for other critical needs
- Schedule meetings along with the local communities for the purpose of explaining the mapping process and the essence of the HCV identification;
- Survey and demarcate along with host communities and other stakeholders all designated and mapped farmland ensuring their full participation in the process, thereby avoiding confusion and misunderstanding in the future;
- Recognize communities desired balance between land to use for development vs land to retain in traditional use, and the shift in aspirations (eg thatch being the necessary roofing material under poverty, while communities desire to roof with metal sheeting as soon as they have any income to do so).

- Record all meetings, attendance, minutes and approval documentation commencing and ending the process;
- Annually monitor the usage of the farmland
- Refer to the Specific HCV Maps Based Guide for additional plans to maintain and enhance conservation values

HCV 6 Forest Areas of Critical Value to Traditional Culture

Forests can be critical to societies and communities for their cultural identity. This value is designed to protect the traditional culture of local communities where the forest is critical to their identity, thereby helping to maintain the cultural integrity of the community. Additionally, abandoned or temporary living places in the forest (such as hidden huts from the war years) may contain gravesites that are not now maintained or cared, but nevertheless important heritage.

Management objective

To give full consideration of the way of life of the host communities by ensuring that their beliefs and practices are encouraged and respected without any interference, disturbance, or disruption as a result of plantation development.

Threats

Threats to the above objective will include but are not limited to the following:

- Lack of inventory of area prior to clearing activities;
- Unmaintained sites such as graves forgotten or semi-forgotten, and difficulty to detect in advance of development
- Communities and traditional leaders not being unanimous over sacred areas and their use
- Land clearing activities encroaching by accident on sites to be preserved

Management regulations

Key regulations – specific standards and rules are shown in the rules table

- The culture and rights of the local communities as well as their assets are respected and maintained
- Participatory mapping of the considered area with communities having interests and access
- The immediate host communities need to be fully aware of the proposed development area in order to identify any sacred area or unmarked graves that might be in the area to be cleared;

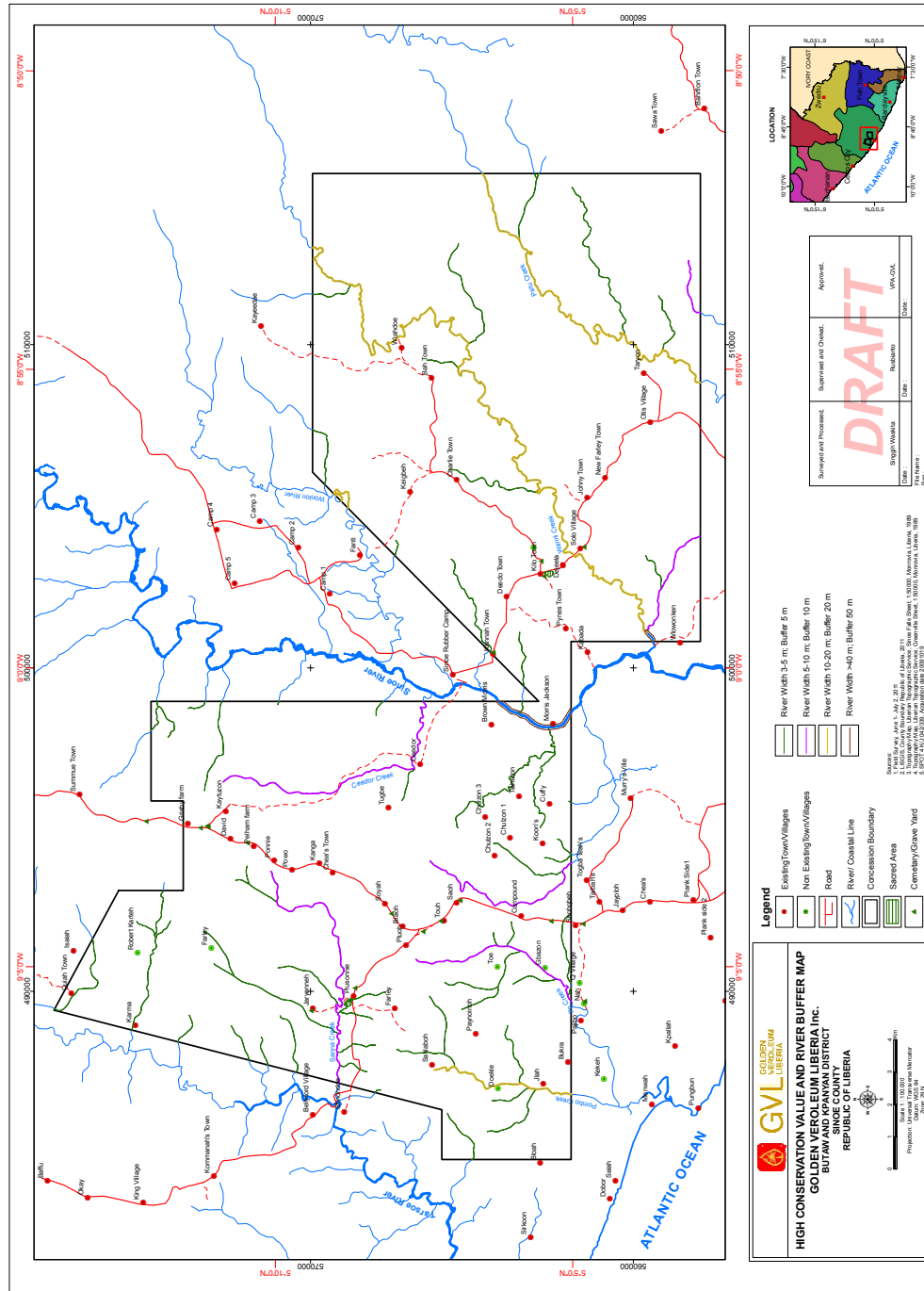
- The company needs to ensure that clear explanations concerning HCV is made to the host communities in order to guarantee their full participation and involvement in the demarcation process;
- Identification of any area related to this HCV to be demarcated and signs posted naming the owning community;
- 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 proposals to relocate traditional significant areas should be approached very cautiously and preferably avoided. Any negotiations entered into between the host communities and the company over the removal and subsequent relocation of any area relating to this HCV to be documented and recorded with photos and attendance of all present including other stakeholders;
- Advisory to the operational surveyors and operators to recognize and avoid potential sites not identified by community members in advance
- Monitoring of all sites demarcated to be periodically carried out by the company and the host communities' representative in order to ensure appreciation of the site.
- Refer to the Specific HCV Maps Based Guide for additional plans to maintain and enhance conservation values

6.0 Specific maps and details of plans and regulations

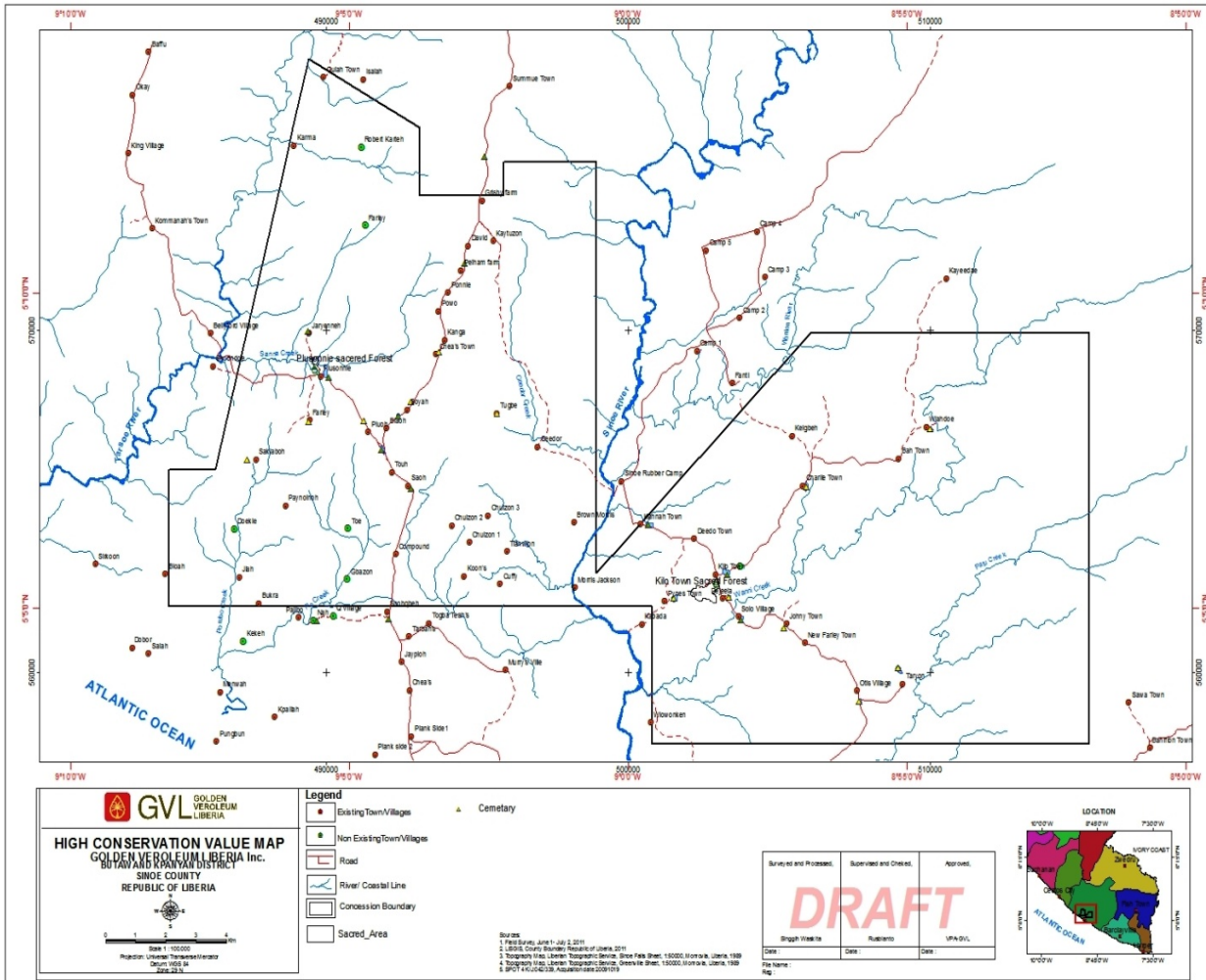
6.1 Specific HCV Maps Based Guide

Minimum Riparian Buffers

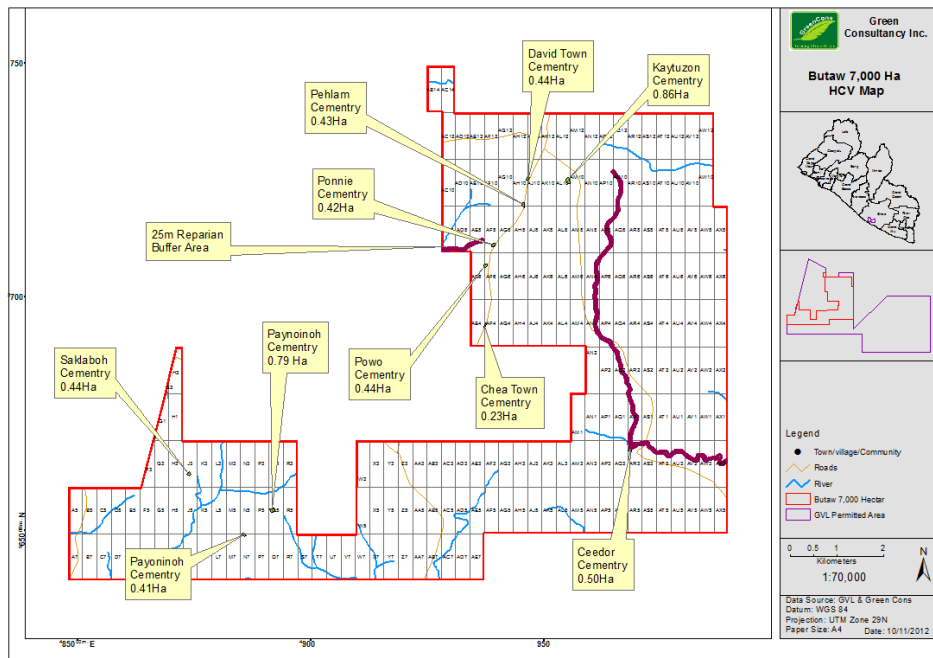
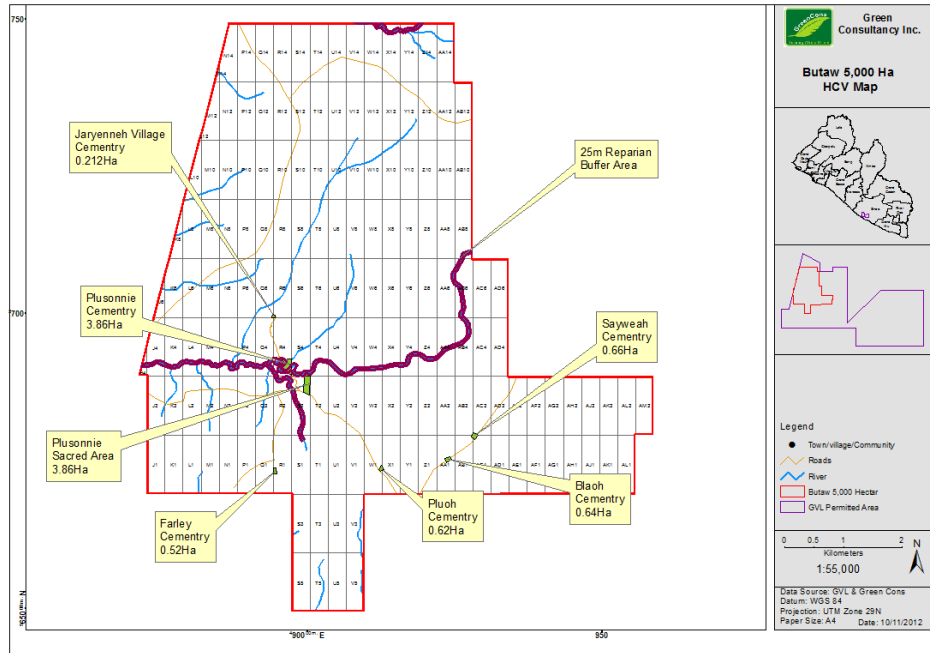
Riparian and associated wet swamp patches and grove areas areas are also planned to meet communities traditional forest resources needs (gathering and materials). Note, maps may be updated and revised based on weather patterns/high flows experience.

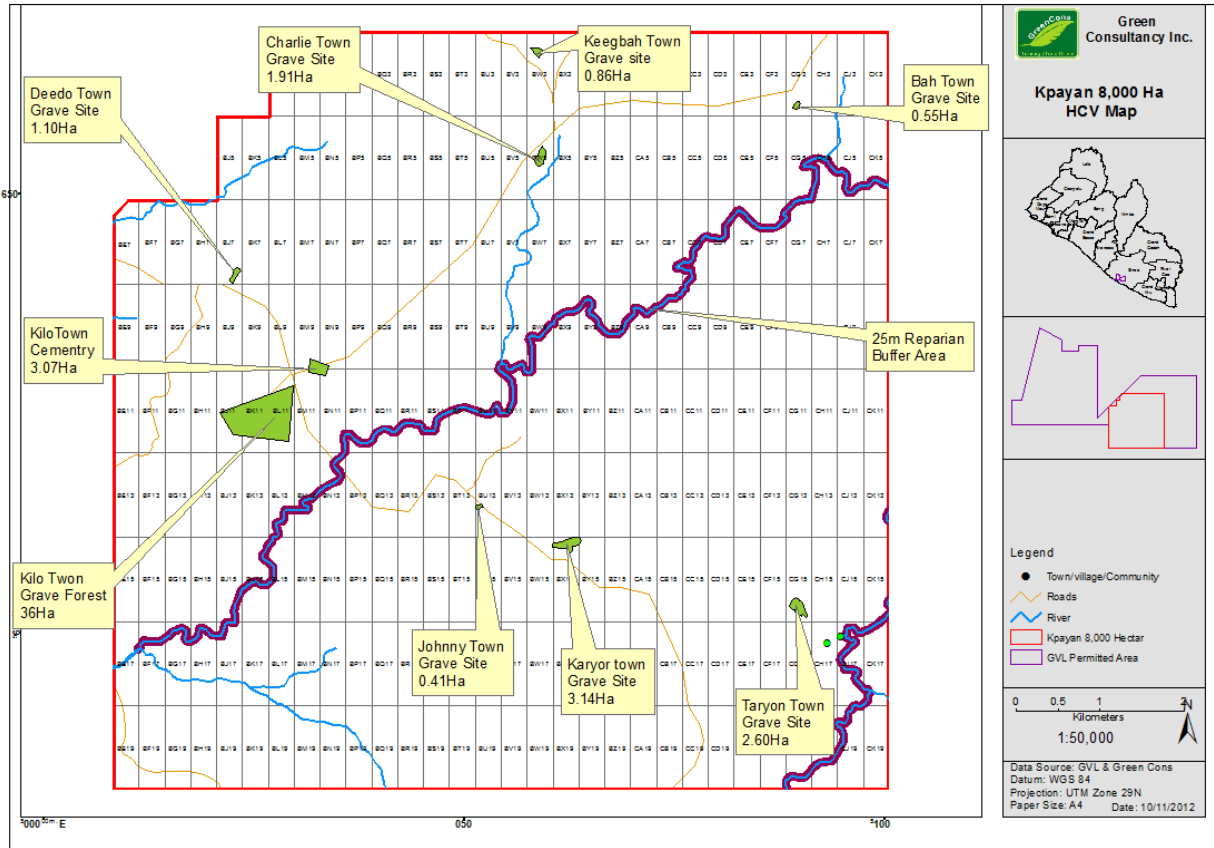


Sacred Areas – Cemeteries and Shrine areas (Note Custodians may not allow certain Shrines/Sacred Areas to be identified or precisely located on public maps; areas will be guided by authorized Environmental/Community team members only)



Cemeteries and Gravesites in relation to major area features. Lost or unmaintained gravesites may not be identified by community members until during development as access and visibility improves. Maps and records are to be updated as new information is obtained.





6.2 Specific Plans and Regulations Table

Impacts	Mitigation Measures	Monitoring and Follow-up Program														
<p>A Soil Erosion Leading to:</p> <ul style="list-style-type: none"> • Soil damage & nutrient loss • Soil instability • Deterioration of water quality • Disturbance to aquatic life • Increase in sediment loads 	<p>A1 Riparian Preservation of riparian reserve for planting</p> <table border="1" data-bbox="548 590 992 905"> <thead> <tr> <th>Stream Width</th> <th>Min. Width</th> </tr> </thead> <tbody> <tr> <td><40m</td> <td>50m</td> </tr> <tr> <td>20m – 40m</td> <td>40m</td> </tr> <tr> <td>10m-20m</td> <td>20m</td> </tr> <tr> <td>5m-10m</td> <td>10m</td> </tr> <tr> <td>< 5m</td> <td>5m</td> </tr> <tr> <td>> 3m</td> <td>-</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 1:33,000 map scale. Marking on the ground or on the tree at 1.5-m height on the demarcation of riparian reserves.</p> <p>Photo (with date), GPS locations and map to be included in the Compliance Monitoring Report.</p> <p>Monitoring of water quality upstream and downstream of the Project site. The parameters include <i>TSS, turbidity, oil and grease</i>. 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>A2 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>A3 Equipment Equipment must be of reasonable size and can be equipped with blade as is standard practice in the industry globally. Equipment will be used and operated to minimize soil disturbance and compaction. The blade should be mostly moved above the ground surface without touching the ground to prevent soil disturbance and forming of rill erosion.</p>	<p>Equipment plan and budget Photo (with date) of machinery used for land clearing and preparation.</p>															
<p>A4 Erosion control structures</p>	<p>Marking of proposed roads on the map and ground checking for the</p>															

Impacts	Mitigation Measures	Monitoring and Follow-up Program
	<p>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.</p>	<p>width of roads, drainage system and gradient. Photo (with date) and GPS location of the filter strips especially in the high-risk area.</p>
	<p>A5 Cover crops for table drains Table drains should be seeded with grass to prevent erosion of drainage banks and to prevent formation of erosion channels.</p>	<p>Site inspection – during rehabilitation works. Any failures should be noted.</p>
	<p>A6 Road grade Road grade should not exceed 15% (8degrees).</p>	<p>Photo (with date), GPS location and mark on map for such structures.</p>
	<p>A7 River crossings Roads should not cross main streams unless appropriate crossing structures (e.g. culverts or bridges) are built.</p>	<p>Map showing the road with approximate area for each of them and photo (with date) for structures built across the river.</p>
	<p>A8 Road soil management Avoid pushing excess spoil into gullies and the edges of road embankments during road maintenance. Spoil should be compacted '<i>in-situ</i>', or transported to disposal sites away from the road, thus minimizing erosion of roads and sedimentation of waterways.</p>	<p>Site inspection – during rehabilitation works. Any failures should be noted.</p>
	<p>A9 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. Where filter strip is not possible, silt trap is encouraged at all drainage</p>	<p>Photo (with date) and GPS location of the filter strips and silt traps, especially in the high-risk area.</p>

Impacts	Mitigation Measures	Monitoring and Follow-up Program
	<p>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>	
	<p>A10 Culverts All culverts should have cut-off wall to prevent erosion under the pipe. 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>	<p>Photo with date and GPS locations of all drainage system including any failures.</p>
	<p>A11 Biomass removal Removal of biomass should be carried out during suitable time period, proper methods and procedures and selection of machineries to reduce unnecessary surface erosion.</p>	<p>Photo (with date) and GPS location of the stacking of biomass and the location of burning at the field.</p>
	<p>A12 Slopes Terracing Slope between 12o and 20o should be terraced for better result in the field, improved access and water retention.</p>	<p>Marking of slope between 12o and 20o on the map and in the field. Photo (with date) of terracing in the field.</p>
	<p>A13 Steep Areas Set Aside The steep areas should be conserved for flora conservation and ecological protection.</p>	<p>Development Plan in 1:33, 0000 scale maps. Photo with date and GPS locations showing the marking or painting on the trees.</p>
<p>B Soil Contamination from hydrocarbons</p>	<p>B1 Spills prevention Transport hydrocarbons by means of</p>	<p>Photo (with date) and GPS locations showing that oil storage</p>

Impacts	Mitigation Measures	Monitoring and Follow-up Program
	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	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.
C Hydrological Impact	<p>C1 Water Management</p> <ul style="list-style-type: none"> • Extensive land clearing should preferably be carried out during the suitable weather. • Commence planting cover crops soon (e.g. 1 month) after site clearing. • Refrain from clearing of areas where slopes are more than 25° and soils are shallow. • The areas should be limited by heavy machines during land clearing and preparation. • Limiting tractor traffic during wet periods to avoid excessive compaction. • Establish long term rainfall and flow gauging stations to monitor the impact on the river base 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
	<p>C2 Flooding prevention</p> <p>Exercise proper management practices; develop Project area in phases, encouraging natural ground cover immediately after clearing and maintaining adequate streamside buffer strips.</p>	Map showing details of phased development. Photo (with date) showing natural ground cover establishment and maintenance of riparian reserves and buffer belts.
	<p>C3 Sediment management</p> <ul style="list-style-type: none"> • Develop plantation in phases and ideally scheduled over drier period 	Photo (with date) of measures taken to protect water quality from sediment yield. Provide map

Impacts	Mitigation Measures	Monitoring and Follow-up Program
	<p>or months.</p> <ul style="list-style-type: none"> • Lay roads carefully, preferably following the contour and must be far enough from stream. • Clearing should be done parallel to contour lines, 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. • 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. • Reduce the duration (max. 3 months) of land exposure to natural elements. • No person shall carry out any tree felling, building or structures erecting and other works within the riparian area. • Conduct water resource assessment with the aim of identifying all water resources in 	<p>and GPS coordinates to show</p>

Impacts	Mitigation Measures	Monitoring and Follow-up Program
	the area of operation and identify sampling locations for monitoring	
D Degradation of aquatic life by spills	D1 Fuel and chemicals storage Locate all fuel storage areas at least 50m away from surface water.	GPS location, photo (with date) showing fuel storage areas
	D2 Used chemicals containers Properly clean and store used chemical containers for supply to locals or recycling entities for reuse or recycling	Regular check of used chemical containers. Photo with date of used chemical containers cleaning, storing and record of disposals
E Human impact on wildlife populations Leading to: <ul style="list-style-type: none"> • Fragmentation of habitat and wildlife ranges • Loss of biodiversity 	E1 Preservation zones Steep slopes more than 25° must be protected Retain patches of primary forests stand found in degraded forests areas, in order to serve as wildlife corridors Conserve riparian management zones	GPS location, photo (with date) showing the marking on the trees at 1.5-m height at the base limits and map (1:33,0000) showing the surveyed area.
	E2 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.
	E3 Development direction Directional clearing or felling of trees towards forested area.	Development Plan with direction of clearing shown. Regular ground surveillance especially in the planting areas.
F Floral ecology	F1 Sensitive high risk areas Protection of sensitive/high risks areas including steep slopes, riparians, wetlands etc	Regular check of riparians, slopes and wetlands with monitoring data on medicinal plants and floral species in these areas
G Biomass management	G1 Vegetative waste Stacking of vegetative waste along the contour	GPS location and photo (with date) showing the stacking of biomass in the cleared area.
	G2 Alternative biomass methods Apply alternative method of biomass	The Project Proponent to look into these possibilities with consultation with the relevant

Impacts	Mitigation Measures	Monitoring and Follow-up Program
	disposal such as <i>in-situ</i> mulching or chipping when suitable.	authority.
H Fertilizer Application and Pests and Diseases Management <ul style="list-style-type: none"> • Incorrect application of Fertilizers • Judicious use of pesticides 	H1 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
	H2 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 and mammalian pests whenever possible.	Detailed records of application and environmental team.
I Forest Fires	I1 Fire response team and procedure Establish a Emergency Response Procedure and an Emergency Response Team	Operational audit
J Socio-Economics Concerns on <ul style="list-style-type: none"> • 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 	J1 FPIC Rigorous implementation of the Free, Prior, Informed Consent principles and practices J2 Displacement of population Displacement in any form or manner is avoided as company policy. Local people allowed to remain in their communities with all 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.	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

Impacts	Mitigation Measures	Monitoring and Follow-up Program
	<p>J3 Farming land Because of the agrarian nature of the communities, land for farming will be allocated in consideration of current and future population growths to enable farmers have land for farming and other livelihood activities. The process of identification and allocation of farming land to be done in concert with the local people.</p> <p>J4 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 maximizes the use of land other than that any land allocated for farming will not be sustainable over a long time frame.</p> <p>J5 Livestock development Encourage livestock raising through education, methods advise, model farm establishment, purchasing locally produced livestock and products, and establishing markets</p> <p>J6 Community affairs 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>J7 Sacred sites</p>	<p>Conditions of towns within the concession in respect of basic social services: education, health, roads, sanitation etc</p> <p>Record of agriculture training and support to project host communities including number of beneficiaries.</p> <p>Record of local community infrastructure support: number of hand pumps, kilometers of road constructed or rehabilitated, support to health care, education etc</p> <p>Records of all complaints and actions taken to address them</p>

Impacts	Mitigation Measures	Monitoring and Follow-up Program
	<p>Sacred sites will not be diusturbed. In conjunction with community representatives identify, demarcate and mark all sacred sites, cemeteries and cultural sites to be avoided by the project.</p> <p>J8 Compensation 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 by affected persons.</p> <p>J9 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>J10 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. Open up employee welfare selectively to affected community groups.</p>	
<p>K Provision of Employment Opportunities for locals, upgrading of economy and infrastructure</p>	<p>K1 Employment priority Work priority should be given to the suitable qualified local villagers.</p>	<p>Keep a record of workers and their particulars. Record of number of locals benefitting from employment</p>
	<p>K2 Foreigner work permits If non-Liberians were employed, proper procedures must be followed.</p>	<p>HR records.</p>

Impacts	Mitigation Measures	Monitoring and Follow-up Program
	<p>K3 Health check Where practical, workers to go through health check within first year of employment and emphasis on communicable or infectious diseases especially Malaria, TB or others every 6 months</p>	<p>Provide the audit team with non-confidential summary of the worker's health records.</p>
	<p>K4 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>
	<p>K5 Cash economy development Support of small landholders to participate in the cash economy</p>	<p>Record of cash and material support including purchases of products from small holders</p>
<p>K Risks to human health</p>	<p>K1 PPE The use of personal protective equipment for all personal engage in risk 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 risk activities are entitle to safety wears; keep records of all employees safety wears; ensure that employee are properly equip during work and penalize violators, making sure these records are properly recorded and kept to ensure company commitment to safety issues.</p>
<p>L Employee welfare</p>	<p>L1 Permanent employment Provision of mainly permanent, not seasonal and not casual employment opportunities</p> <p>L2 Training and career path Provision on the job and formal training for skills enhancement and career progression, from local base to top management</p> <p>L3 Children Schooling and education</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>Provision of free of charge regulated schooling from crèche until Sr High school to employee children.</p> <p>L4 Health care Provision of free basic and intermediate health care from clinics to regional hospital support</p> <p>L4 Housing Provision of insurance schemes, Provision of free, modern built housing suitable for families</p> <p>L5 Electric power, water and sanitation Provision of insurance schemes, retirement free electric power, clean water and sanitation facilities</p> <p>L6 Long term benefits Provision of insurance schemes, retirement benefits as well as social services and amenities for workers and their beneficiaries</p> <p>L7 Womens development Provision of equal opportunities to work, pay, training and advancement to women, and provision of harassment-free workplace</p> <p>L8 Encouraging employee union Provision of encouragement for proper union organization and resolution of disputes through workplace negotiation</p>	

Impacts	Mitigation Measures	Monitoring and Follow-up Program
M Pollution by improper waste disposal in the project area	M1 Waste Refuse to be disposed off in pits approx. 30m from waterways and above water table. Cover refuse with soil once a week.	Photo (with date), GPS location of the dumping ground and general layout of the camp, name of contractor and plantation areas.
	M2 Storage tanks Any Storage tanks constructed on stable ground with bunding and at least 50 m away from waterways.	GPS location and photo (with date) showing the location of the storage facilities.
N Water resource degradation and siltation	N1 Communities water provision Cooperate with communities and local authorities on solving water supply issue on the directly affected communities.	Photos (with date) to show good practices on ground.
	N2 Water quality monitoring Regular monitoring of water quality.	Compliance report
O Dust and noise pollution	O1 Vehicles Proper maintenance of vehicles.	Records of maintenance carried out for vehicles
	O2 Vehicles traffic within the Project area <ul style="list-style-type: none"> • 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. O3 Outside the Project area: <ul style="list-style-type: none"> • Inform truck drivers to reduce their speed when approaching 	Photo (with date) and map showing roads, speed humps and tree-covered buffer zone around plantation area, installation of signboards, speed humps

Impacts	Mitigation Measures	Monitoring and Follow-up Program
	<p>human settlements to reduce dust generation.</p> <ul style="list-style-type: none"> • Install road sign and establish speed humps near the settlement areas (at the entry points) and impose speed limit of 20km/hr on plantation roads to reduce churning up of dust. 	
P Road Safety	<p>P1 Road signs Proper traffic signboard at appropriate spots especially near T-junctions or settlement area.</p>	Photo (with date) and GPS location of the signboard.
	<p>P2 Road damage Damaged section of road should be repaired as quickly as is practical and in accordance with company road maintenance procedures.</p>	Photo (with date) and GPS location of any damaged road.
Q Abandoned project areas	<p>Q1 Rehabilitating land Re-establish all open area with fast growing indigenous species or fruit trees</p>	Photo (with date) and GPS locations showing the reestablishment works on site.
R Visual impact on abandoned camps	<p>R1 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.</p>	Photo (with dates), GPS location of roads and map for the plantations.
	<p>R2 Equipment Remove all machinery and equipment to recover cost.</p>	Area inspection
S Security of the Project area and communities	<p>S1 Security gates Retain the security gates into the plantation areas and joining communities</p>	Photo (with date) and GPS locations

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 Standards and Principles.

Signed on Revision dated January 21, 2013

A handwritten signature in black ink, appearing to read 'M. Karinen', with a stylized flourish at the end.

Matt Karinen, Director