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## SUMMARY ASSESSMENT ON HCV SITES WITHIN SIME DARBY PLANTATION (LIBERIA) INC (20,000ha)



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## Executive Summary

This is an assessment of the sites within the Sime Darby Plantations estates in Liberia to determine the presence of sites with high conservation attributes.

The main objective of this study is to identify these HCV sites in line with the certification requirements of Roundtable Sustainable Palm Oil (RSPO) certification scheme. Having identified these sites a training module will be developed to ensure that the management staff of each estate will be able to guide all the workers in maintaining, monitoring and enhancing their conservation values. The assessment is guided by Proforest *High Conservation Value Forest (HCVF) Toolkit* in the documentation and field surveys conducted in each estate. The initial field work was completed in February 2011 by a team of ecologists and biologists, followed with documentation review. A subsequent field visit was conducted in May 2011.

The location of the proposed project site is shown in the map below:



From the assessment it was noted that the proposed site had been cleared of the natural vegetation for the previous rubber planting as well as the many shifting cultivation conducted by the local communities. Secondary vegetation had covered the area owing to the absence of maintenance during the country period of unrest. There were demonstrated efforts to protect of the waterways with well defined riparian buffer belts (HCV 4.2). These waterways were of importance to the local communities as source of water as well as transport system. The many towns within and around the project area had been identified and consultations held with the inhabitants during the assessment. The planted sites around these communities would be excluded from the plantation activities and protected under HCV 5. Sites of religious significance had also been identified and demarcated for protection under HCV6.

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## **Description of Project Area and Location**

The project area comprised of Parcel III of land totaling 20,000 ha in Bopolu District, Gbarpolu County. The land area earmarked for the plantation predominantly consists of degraded lowland forests owing to extensive shifting agricultural activities. Patches of residual forests are scattered across the project area, especially along the main river banks and remote areas.

The project area covers several villages and towns the location of the project area.

## **Project Ownership**

The project is owned by Sime Darby Plantation (Liberia) Inc, a subsidiary of Sime Darby Plantation, which is a Malaysian owned agro-industrial company with downstream business comprising of 21 entities in 15 countries worldwide ranging from America, Europe, Asia and Africa. Sime Darby Plantation (Liberia) Inc Liberia is a corporation duly organized under the laws of the Republic of Liberia, represented by its duly authorized representative Mr. Boima Sonii the Liaison person for this project

Sime Darby Plantation (Liberia) Inc current administrative office is located on the Mobil Compound, Virginia, Montserrado County. It is a new company with the potential of developing and establishing the oil palm project the counties described above.

## **Project Historical Aspect**

The proposed project area covers 20,000 ha of land located in Bopolu District, Gbarpolu County, encompassing several towns and villages. These are Totoquelle Town, Dwana Town, Lowoma Town, Boiyalla Town, Sadieh Town, Joseph Cumen Town, Norris Village, Gibson Village and Moibelle Village.

The land area earmarked for the plantation development is dominated by old agricultural land that was exposed to shifting cultivation within degraded lowland forests. Patches of intermediate and residual forests are located on steep slopes and along the banks of major Mafu and Wegbeni Rivers. These areas retained different commercial timber species and secondary vegetation.

## **Assessment Findings**

The proposed project covers 20,000 ha of land located in Bopolu District, Gbarpolu County, created in 2003 from a territory previously known as Lower Lofa County. It is the newest of Liberia's fifteen political sub-divisions. It encompasses several towns

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including Totoquelle, Dwana, Lowoma, Boiyalla, Sadieh, Joseph Cumen, Norris Village and villages of Gibson and Moibelle.

Gbarpolu County is located within an evergreen tropical rain forest region with an annual rainfall of 80-85 inches. Due to shifting cultivation, most of the natural forest areas had been converted into farmlands. The vegetation in the project area was predominantly secondary forest with less than 20% of the original area of forest cover remaining along hill slopes, river banks and remote areas away from communities. The residual patches with forest trees were found mainly along the Mafu and Wegbeni Rivers.

An assessment of the general landscape features identified a total of three ecosystems:

1. Patches of swampy ground.
2. Degraded agricultural forests areas. These comprise of old farm lands and isolated patches of residual forests stands.
3. Patches of residual forest trees mainly on steep slopes and along river banks

The assessment had identified a number of vulnerable timber species that include *Lophira alata* (Ekki), *Heritiera utilis* (Niangon), *Terminalia superb* and *T. ivorensis* along with few protected animals under Liberian law.

During the survey, there were evidences of current hunting activities within the area. Old spent gun shells were observed in several parts of the forest. Several traps were also observed and reported by the local communities, mainly around farmlands. Terrestrial fauna in the region was less abundant and diverse than expected. Several small species of mammals were reported to inhabit the area. The predominant species in the area were the Ground Squirrel, African Brush-tailed Porcupine (*Atherurus africanus*), Rusty-bellied Brush-furred Rat (*Lophuromys sikapusi*), Guinea Gerbil (*Tatera guinea*), Green Bush Squirrel (*Paraxerus poensis*), Tree Pangolin (*Manis tricuspis*), and Ants Bear (*Cynictis penicillata*). There were several species of snakes including Rhinoceros viper (*Bitis nasicornis*) or commonly called Cassava snake, Rock python (*Python sebae*), Green Mamba (*Dendroaspis viridis*) and the Black cobra (*Naja melanoleuca*). Other reptiles observed in the area included lizards, chameleons and geckos.

The avifaunal population in the area included lowland forest birds such as Hartlaub's duck, , Senegal Coucal, White-backed night heron, White faced whistling duck, Palm-Nut Vulture, African Fish Eagle, falcons, Harrier hawk, black sparrow hawk (*Ahanta francolin*), Black crane, mottled spinetail and Piping hornbill.

Protected animal species under Liberian laws were recorded in the project area as killed bush meat. These were Water Chevrotain (*Hyemoschus aquaticus*), Royal Antelope and, Forest Buffalo, Giant Forest hog, crocodiles and Olive Colobus monkey.

The Participatory Rural Appraisal (PRA) methodology was used in working with community members in the study area to better understand their concerns and livelihood. The PRA research methodology employed in this study entailed the use of survey questionnaire. Structured questionnaires were used primarily on the survey of respondents producing views and opinions on the study areas, household size, income level, primary livelihood options, expenditure, education, health, area problems and agriculture practices. The questionnaires were used in 9 communities in Gbarpolu County.

Table A: Representatives of local communities consulted

Category	Respondents			
	Male	Female	Total	% Total
Totoquelle	12	7	19	35.84
Luoma	2	1	3	5.66
Lowoma	3	5	8	15.09
Duana	2	1	3	5.66
Small Bong Mines	2	2	4	7.54
Small Saw Mill	2	2	4	7.54
Sao	2	1	3	5.66
Norris	3	1	4	7.54
Moibele	3	2	5	9.43
<b>% to Total</b>	<b>31</b>	<b>22</b>	53	100.0

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As in the previous two areas, the survey results showed that the primary source of livelihood was subsistence farming (rice, cassava). With 85% of respondents indicated that they depended on agriculture for income. The remaining 15% rely on fishing and petty trade. The villagers in the Gbarpolu area were from the Kpelle, Belle, and Gola tribes and were Christians. Traditional beliefs were still very high amongst the population. Half of the respondents reported residing in the area for more than 20 years, while 40% of them had lived in the area for less than 10 years. Seventy percent of them were natives to the area and 75% of them characterizing their homestead as permanent, with the remaining 25% as temporary.

As stated above almost all the people were working in the field within the Project Area. Only 20% of the respondents reported having been employed in a formal job before. The rest had to rely on self-employment in petty trade. The respondents spent more than 70% of their income on food with the remaining going towards education, health care, household material and clothes. The major concern raised was the lack of health care facilities, schools, safe drinking water and housing facility. Almost all the villagers relied on the existing health care facilities for their health needs while a small proportion still depended on traditional medicines. Road networks in the project area were extremely poor, especially in the Duana Village. As a result, transportation of food crops to the market centers was very difficult and expensive. The poor road condition was largely responsible for the low agriculture production in the area and the acute level of poverty as well as underdevelopment. Firewood was used for cooking, while palm oil lamps, flash light and candle were the main source of lighting at night. The major difficulty facing farmers in the area was loss from pest attacks on planted crops.

The main sources of drinking water in the project were from streams and wells. Many of the towns depended heavily on stream water because of the unavailability or limited number of hand pumps. Educational facility was limited to Totoquelle, Moibele Small Bong Mine and in Bopolu District. Thirty percent of the respondents reported that they never had a formal education. In general, however, school facilities were not up to acceptable standards with inadequate staff. The physical state of most of the school buildings was very poor. Facilities like furniture and equipment were inadequate. Even in the urban centers, the administrative headquarters, libraries, staff accommodation, transport, offices were generally in poor condition.

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## HCV Sites

### **HCV 1 Forest areas containing globally, regionally or nationally significant concentrations of biodiversity values**

#### HCV 1.1 Protected Areas

Within the project area assessed, there was no protected area found. The four protected areas found outside of the proposed project of the company are located in the north and west of the site. These are the Kpelle National Forest, South Lorma National Forest and the Gola National Forest. The proposed Lake Piso Multiple Sustainable Use Reserve is located further south west of the project site.

#### HCV 1.2 Threatened and Endangered Species

Most of the vegetation found within the concession area are degraded secondary vegetation consisting of savanna grasses and scattered sections of young bushes found in areas which had been farmed years ago. Apart from the isolated tracts of forest located along the Mafu and Wegbeni Rivers and scattered residual patches of original forest the proposed project area for oil palm establishment had no critical endangered species observed or recorded by hunters interviewed.

As noted during the survey there were more protected species of animals killed by hunters within the project area owing to the presence of the South Lorma and Kpelle National forests, which are about 3 km from the project area. The riparian buffer belts formed the important corridors for the movement of the animals between the project site and these national forests.

#### HCV 1.3 Endemism

This HCV attribute was not identified within the project area as no endemic species of flora and fauna were recorded.

#### HCV 1.4 Critical Temporal Use

The team concluded after numerous interviews and on site monitoring that the proposed oil palm area did not have habitats that support migratory birds of global significance. The team however found that the common Cattle Egret (locally referred to in some area as cow spirit) was the only bird of migratory nature seen in scattered open area of the project site. The site did not contain special food trees for the animals or breeding grounds except in the residual riparian forest.



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**HCV 2 Forest Area contains or is part of a globally, regionally or nationally significant large landscape-level forests where significant populations of most if not all naturally occurring wildlife species exist in natural patterns of distribution and abundance**

There are three sub-categories assessed to identify the presence of such forest:

- HCV 2.1 The FMU is a large, landscape-level forest of global or regional or national importance
- HCV 2.2 The FMU is an integral part of a large landscape-level forest
- HCV 2.3 The FMU maintains viable populations of most naturally occurring wildlife species existing in natural patterns of distribution and abundance.

Several of the study area showed small hill with residual forest covering the area. The untouched hill slopes is also a habitat for several wildlife species such as small mammal and birds. This area is HCV 2.2 area and need to be conserved by the management.

None of these characteristics mentioned above were identified within or around the concession area during the HCVF assessment. The large tract of forests is only found South Lorma and Kpelle National forests, which are at least 3 km from the project area. The area was observed to be covered with intact forest or residual forest. This forest was intact with the original vegetation protected.

**HCV 3 Forest area contains or is part of a threatened or endangered ecosystems**

HCV 3.1 In investigating these areas to assess the contribution of the project area to conserving ecosystems, the following official sources were consulted:

- Liberia Biodiversity Strategy Action Plan
- Biodiversity and Protected Areas-Liberia
- United Nations Environment Programme-World Conservation Monitoring Center (UNEP-WCMC).
- World Database on Protected Areas(WDPA)Version 6
- The Ramsar Bureau.2002. List of Wetlands of International Importance
- Conservation International- Liberia
- Conservation and Wildlife Department, Forestry Development Authority
- Agriculture Ministry-Liberia

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No specific ecosystem that had been defined by the sources consulted was recorded in the project site. South Lorma and Kpelle National forests areas which are outside of the project area.

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

##### HCV4.1 Watershed Protection

Forests critical to water catchments are the main attribute of this category of HCV as they play an important role in preventing flooding, controlling stream flow regulation and water quality.

The residual forest along the Mafu and Wegbeni Rivers, could be considered under this element of controlling stream flow regulation and water quality and unique source of water for daily use.

##### HCV4.2 Erosion Control

Forests are critical in erosion control. The forest cover maintains terrain stability, by reducing erosion, landslides which will result in downstream sedimentation.

The forest along the Mafu and Wegbeni Rivers could be considered under this element of controlling soil erosion and maintaining water quality for domestic purposes.

##### HCV4.3 Forests providing barriers to destructive fire.

The river buffer zone found along the main river and contained several wildlife and their habitats. It was maintained untouched and potentially to be natural corridor for the wildlife.

Owing to the high rainfall in the region the occurrence of fire was deemed to be low.

#### **HCV 5 Forest area is fundamental to meeting basic needs of local communities**

All of the settlements surveyed were still dependent on the forests surrounding their area or forest far from them. The forest provided basic necessity such as food, medicine, protein, firewood and construction material.

Fourteen communities within and surrounding the project area were informed and public meetings were held to explain fully the nature of the project as shown below:

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## Public consultations with local communities

<b>Name</b>	<b>Town/Village</b>
1. Siaka Biyan	Totoquelle
2. Luoma Bassie	Luoma
3. Moses Kollie	Boimah Cumen
4. Junior Kannay	Junior Kanny
5. Joe Cumen	Joe Cumen
6. John G. Kollie	Lowoma
7. Thomas Falah	Duana
8. Jack Kollie	Small Bong Miles
9. John G. Flomo	Small Saw Mill
10. Oldman Kanneh	Sao
11. Judge Kamara	Boiyalla
12. Mathew Kolie	Norris
13. James Mulbah	Gibson
14. Vafee Kaneeh	Moibele

Concerns raised by the communities were also documented. Local authorities and national leaders were also informed or contacted regarding the project. All consultations held were documented with attendance taken.

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## HCV 6 Forest area is critical to local communities' traditional cultural identity

Of 14 communities surveyed 2 had sacred community sites within their villages.

Table B: Sacred Community Sites

Settlement	Sacred site
Totoquelle	Cotton tree used for traditional sacrifices and rituals including Poro and Sande Bush.
Lowoma	Forest patch used for traditional sacrifices and rituals

The areas identified were restricted areas in which strangers/non-members were forbidden to enter the sites.

All of the towns and villages investigated had burial sites scattered around the town or in designated location within the town. These sites would have to be protected.

The HCV sites investigated within the project area are shown as *Figure A*:

Figure A. Locations of the HCV sites within the project area

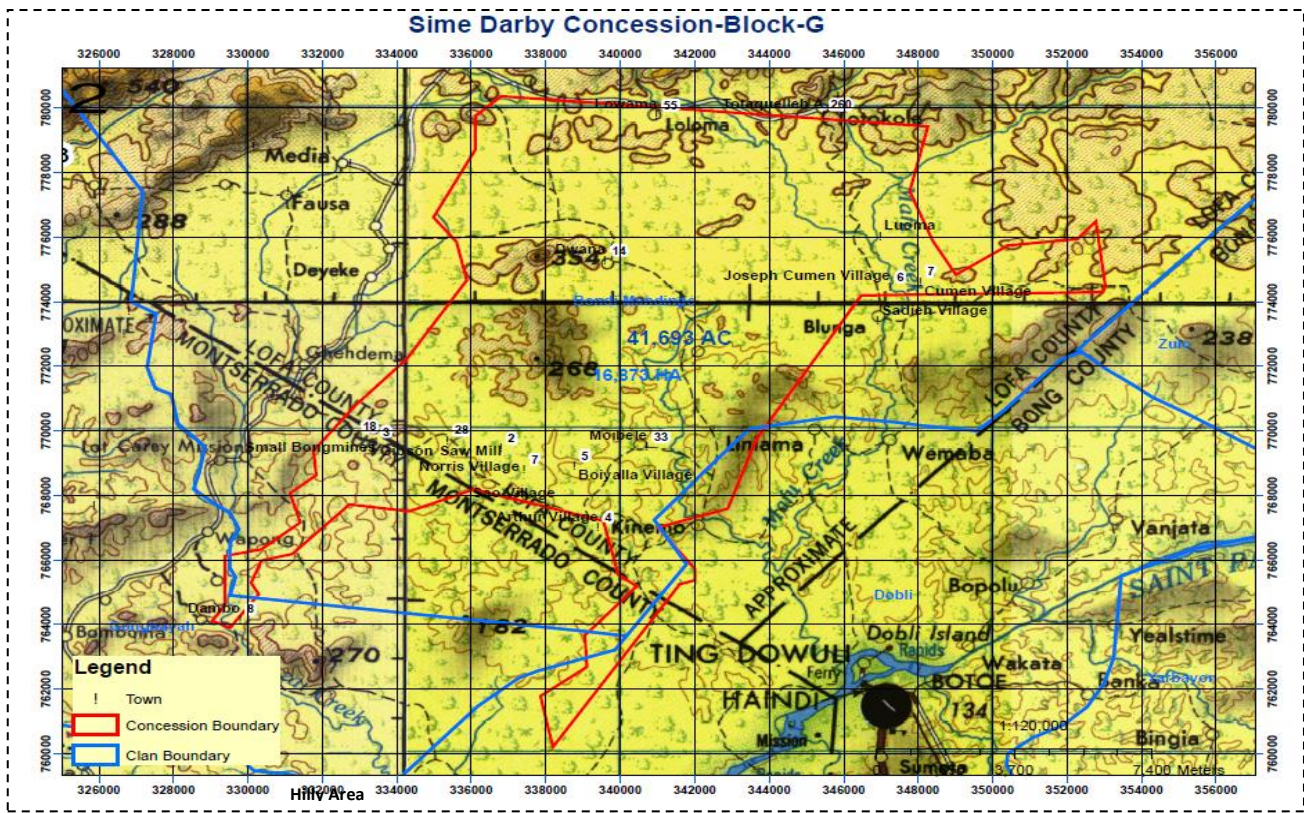
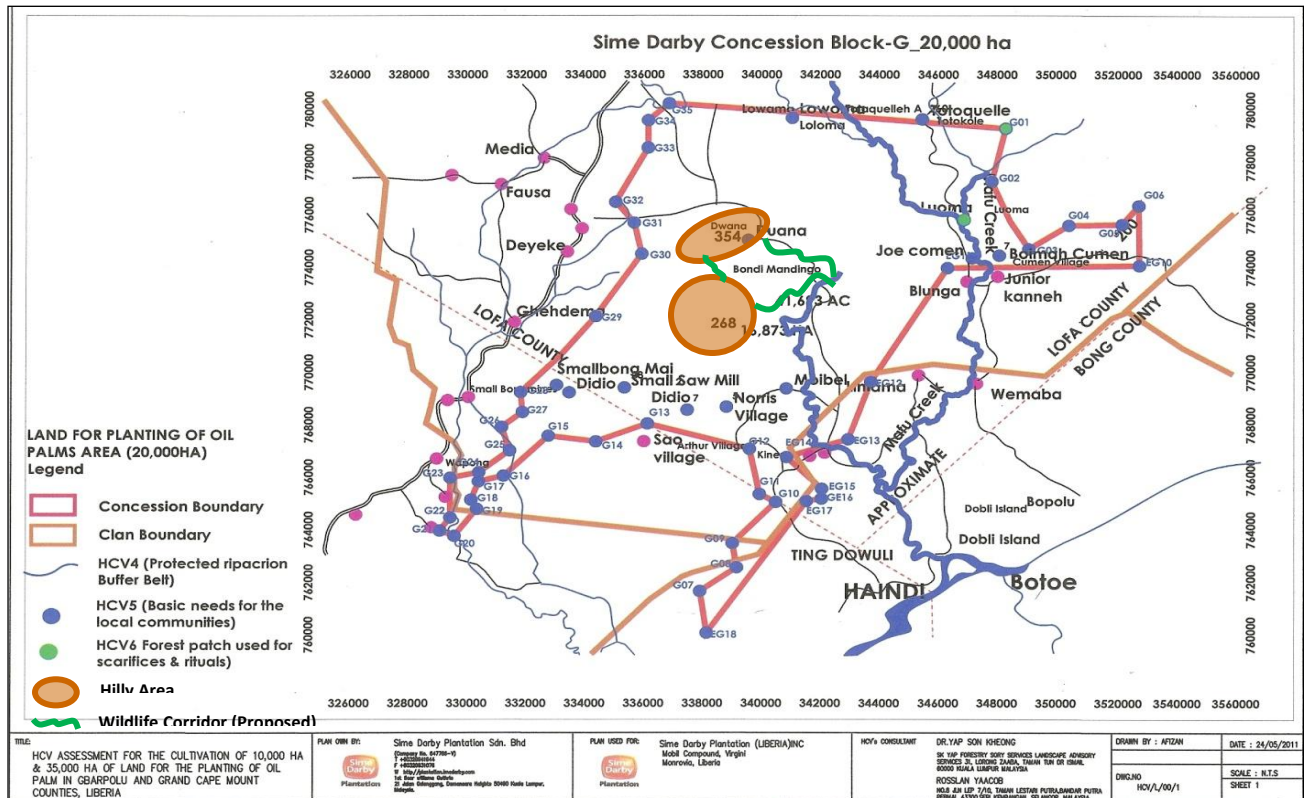


Figure B: Locations of Towns and Settlements with HCV 5 and HCV 6 Attributes



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A summary of the HCV sites is presented in the following Table.

Project area	HCV 1				HCV 2	HCV3	HCV 4			HCV 5	HCV 6
	1.1	1.2	1.3	1.4			4.1	4.2	4.3		
20,000 ha (Parcel III)								X		X	X

The management practices for maintaining and enhancing the values of HCV sites were also prescribed for each estate. To ensure that this could be understood by the management and field workers a training module was developed. Monitoring regimes had been proposed to ensure that the HCV values would be maintained. Continuous consultations with stakeholders would be established through liaison committee.

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