

**Roundtable on Sustainable Palm Oil  
New Planting Procedure  
Summary Report of HCV and SEIA  
Assessment**

**Sg. Kubud Estate**

**Keresa Plantations Sdn Bhd,  
Lavang District, 97000 Bintulu,  
Sarawak, Malaysia**

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## 1. Executive Summary

### 1.1. Summary of Assessment Finding

- Keresia Plantations Sdn Bhd is a company engaged in oil palm plantations and milling located in the Lavang Land district, Sebauh sub-district, Bintulu, Sarawak, Malaysia. Keresia has committed to meet the RSPO principles and criteria to support the sustainable management of oil palm plantations. RSPO approved the company's membership (No.100770900000) on June 03, 2009. This marked an important landmark and set a new vision for Keresia Plantations to be a responsible producer of crude palm oil.
- Keresia has also invested by renting a piece of land of ±3,558.00 ha (NCR Land) from local community next to the plantation. Planting commenced at the end of 2012 and expected to mature at the end of 2015.
- At present, the entire NCR project area is claimed as Native Customary Right (NCR) land by the local villagers from Rumah Iba and Rumah Lawai. Currently, there are two Memorandum of Agreement documents for a 30 year lease period, signed between the two long houses mentioned above with Keresia Plantations Sdn Bhd dated December 21, 2011 and August 06, 2012.
- Keresia Plantations Sdn Bhd has the following list of legal documents related to the area assessed:
  - a) Environmental Impact Assessment: The Proposed Sg. Kubud Estate, Lavang land district, Sebauh sub-district, Bintulu, Sarawak. June, 2012
  - b) Memorandum of agreement document with the 2 long houses dated December 2011 and August 2012.
- The project site is located in Bintulu District of Bintulu Division in the Sebauh sub-district. The plantation area of Sungai Kubud Estate is situated approximately 85km from Bintulu town. Access to the plantation is via sealed road from Bintulu on the Bintulu-Miri Road heading north east. At the Simpang Bakun junction, the road then heads in the south easterly direction until turning to the plantation followed by estate road which is maintained by the plantation. The current access is via Keresia Plantations Sdn Bhd, viz Sujan Estate and Jiba Estate.
- The project site is bordered in the north with Sarawak Oil Palms Berhad plantation, and in the south west with Jendela Padu Sdn Bhd an oil palm plantation, in the south east with *Acacia mangium* plantation. Long houses which are located in the north of the project site are Rumah Iba and Rumah Lawai, while Rumah Majang and Rumah Desmond are generally located in the south of the project area.
- The land area of the project site of Sungai Kubud Estate is approximately located between longitudes 113° 24.00' E – 113° 30.00' and longitudes 3° 05.600' N – 3° 08.800'N of the equator.

### 1.2 Assessment Result

Sg. Kubud Estate opted to conduct Retrospective HCV Assessment by Envirollogic Consulting auditors. The auditors has conducted their field study in the project area and visited the local people from both Rh Iba and Rh Lawai. They also organised stakeholders meeting and discussion with Assistant General Manager, Senior Estate Manager, Acting Estate Manager and other staff during the audit

The SEIA conducted by government (Natural Resources and Environment Board) approved consultants as well as the Retrospective HCV and SIA assessments conducted by RSPO approved assessors and Team Leader. Sg. Kubud Estate has adhered to RSPO New Planting Procedure and documented the assessments and plans are comprehensive and professionally carried out according to RSPO requirements and comply with the applicable RSPO Principles, Criteria and Indicators for new planting.

- 1.3 The Retrospective HCV Assessment** by Envirollogic Consulting auditors has identified and confirms that no primary forest was found within the development area. Area required maintaining or enhancing under HCV and peat was identified and included in this summary report. The whole piece of land is belongs to the local communities and leased to Keresa Plantation through legal agreement.

## 2. Scope of the SEIA and HCV Assessment:

### 2.1 Organisational Information/Contact Person

<b>Company Name</b>	:	Keresa Plantations Sdn Bhd
<b>Address</b>	:	P.O.Box 2067, 97000 Bintulu, Sarawak, Malaysia.  <b>Head Quarters</b> Level 5, Tun Jugah Tower, Jalan Tunku Abdul Rahman, 93100 Kuching, Sarawak, Malaysia.
<b>Contact Person</b>	:	Abdul Aziz bin Zainal Abidin
<b>Status Business Land</b>	:	Oil Palm Plantation
<b>New Planting Area</b>	:	3,558 Ha

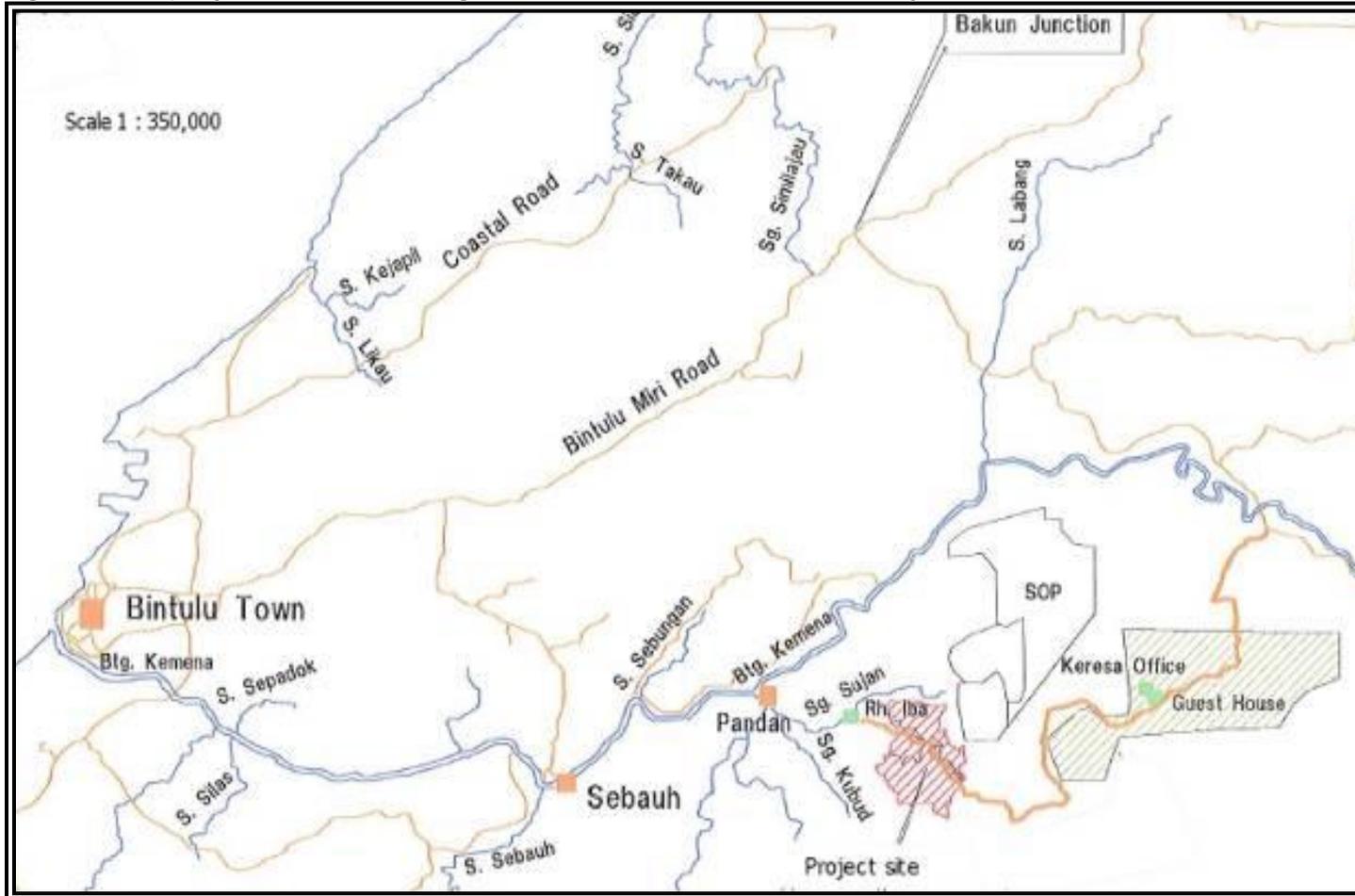
### 2.2 List of Legal Documents, regulatory permits and property deeds related to the areas assessed.

Keresa Plantations Sdn Bhd has the following list of legal documents related to the area assessed:

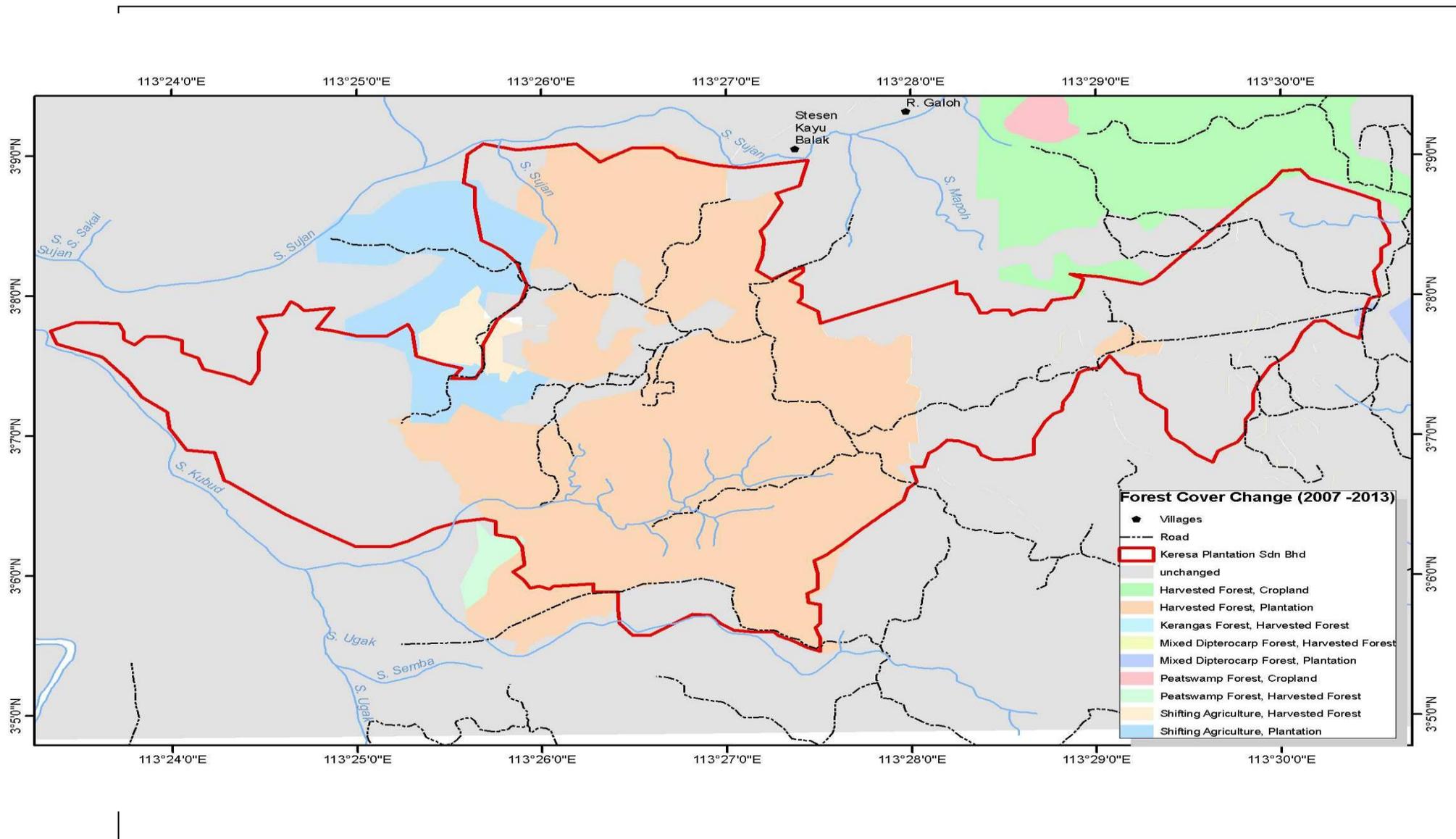
- a) Term of Reference submission to Natural Resources and Environmental Board Sarawak reference CK/EV 103-559/0001/12 dated 6 January 2012.
- b) Letter from Natural Resources and Environment Board Sarawak reference NREB/6-1/2G/48: Discussion on the Term of Reference dated June 2012.
  
- c) Final Environmental Impact Assessment: The Proposed Sg. Kubud Estate, Lavang land district, Sebauh sub-district, Bintulu, Sarawak. 13 June, 2012.
  
- d) Memorandum of agreement document with the 2 long houses dated December 2011 and August 2012 for leasing the NCR land.
  
- e) FPIC Process Documents:
  - i) Consultation with long house communities on the leasing proposal conducted on September and October 2011. Report dated 4 October 2011 by Wild Asia.
  
  - ii) Follow up Consultation with long house communities dated 16 – 17 February 2012 by independent consultant from Tenaganita.
  
  - iii) Follow up Consultation with long house communities dated 29 August 2012 by Wild Asia.
  
  - iv) Satisfactory survey and consultation with long house on the proposed lease agreement dated 30 August 2013 by Wild Asia.

2.3. Location maps:

Figure 1: Company's location in Lavang Land District, Bintulu, Sarawak, Malaysia.



**Figure 2: Landscape map of Sg. Estate Kubud**



**Figure 3: Landscape map of Sg. Estate Kubud**

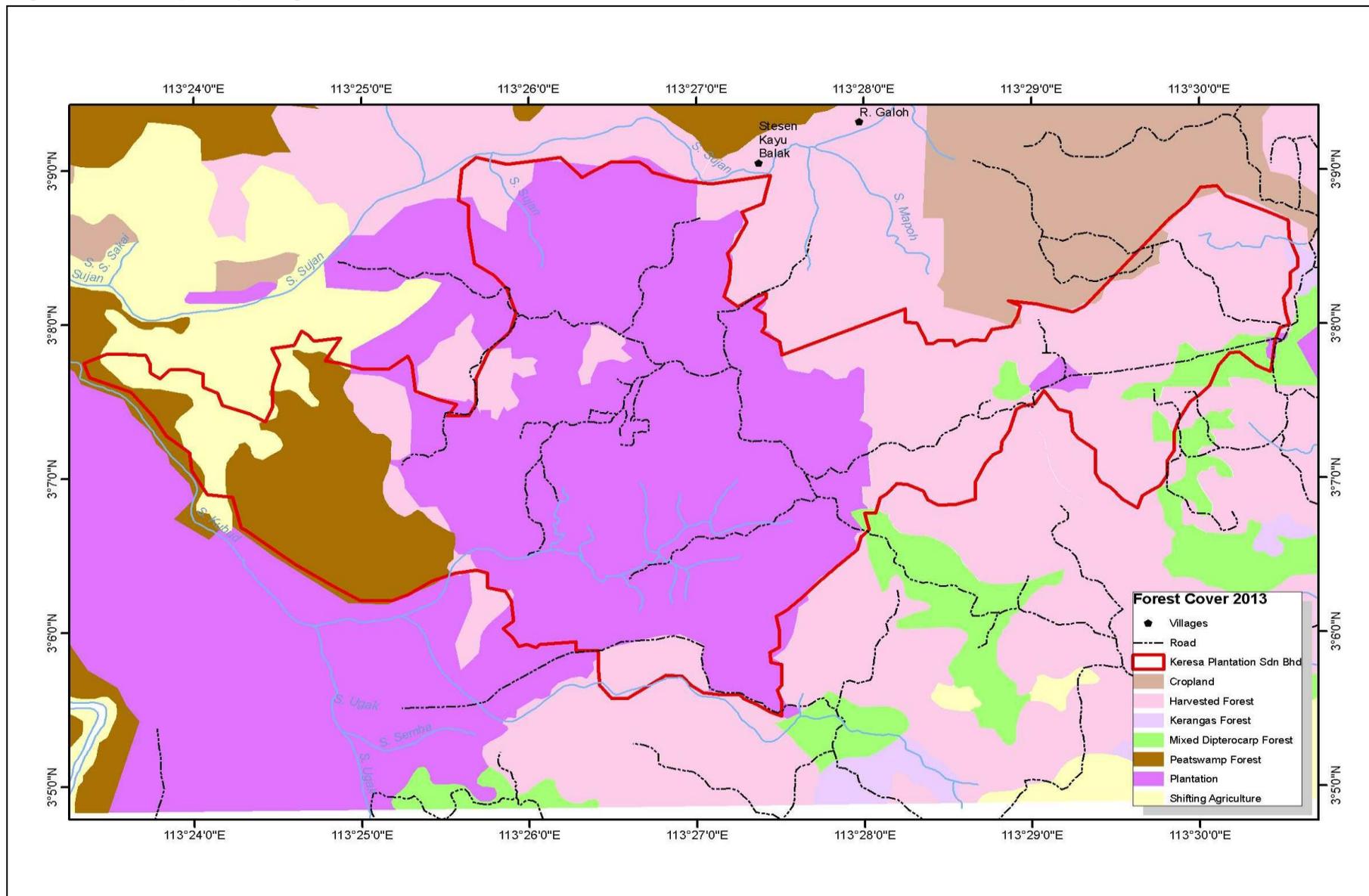
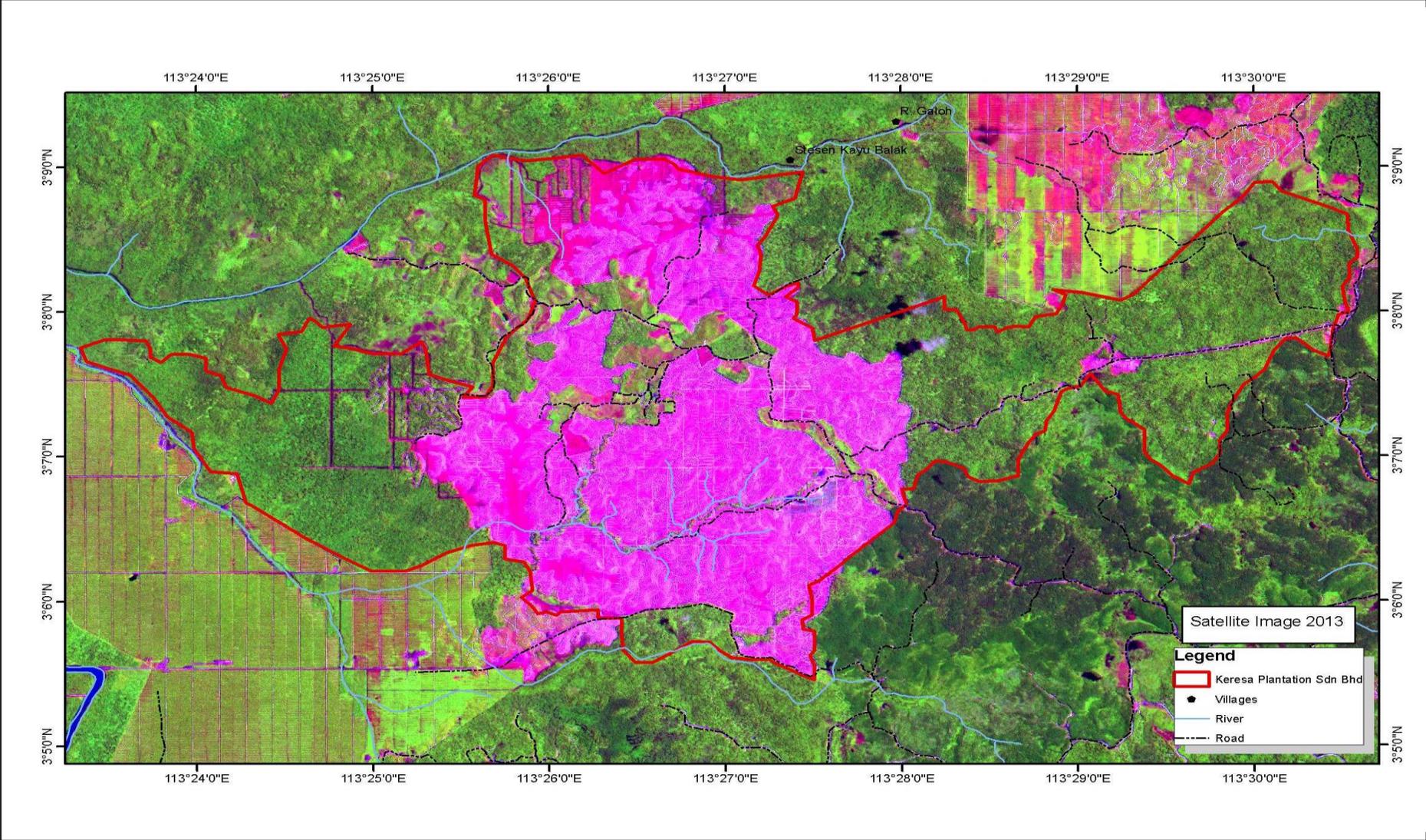


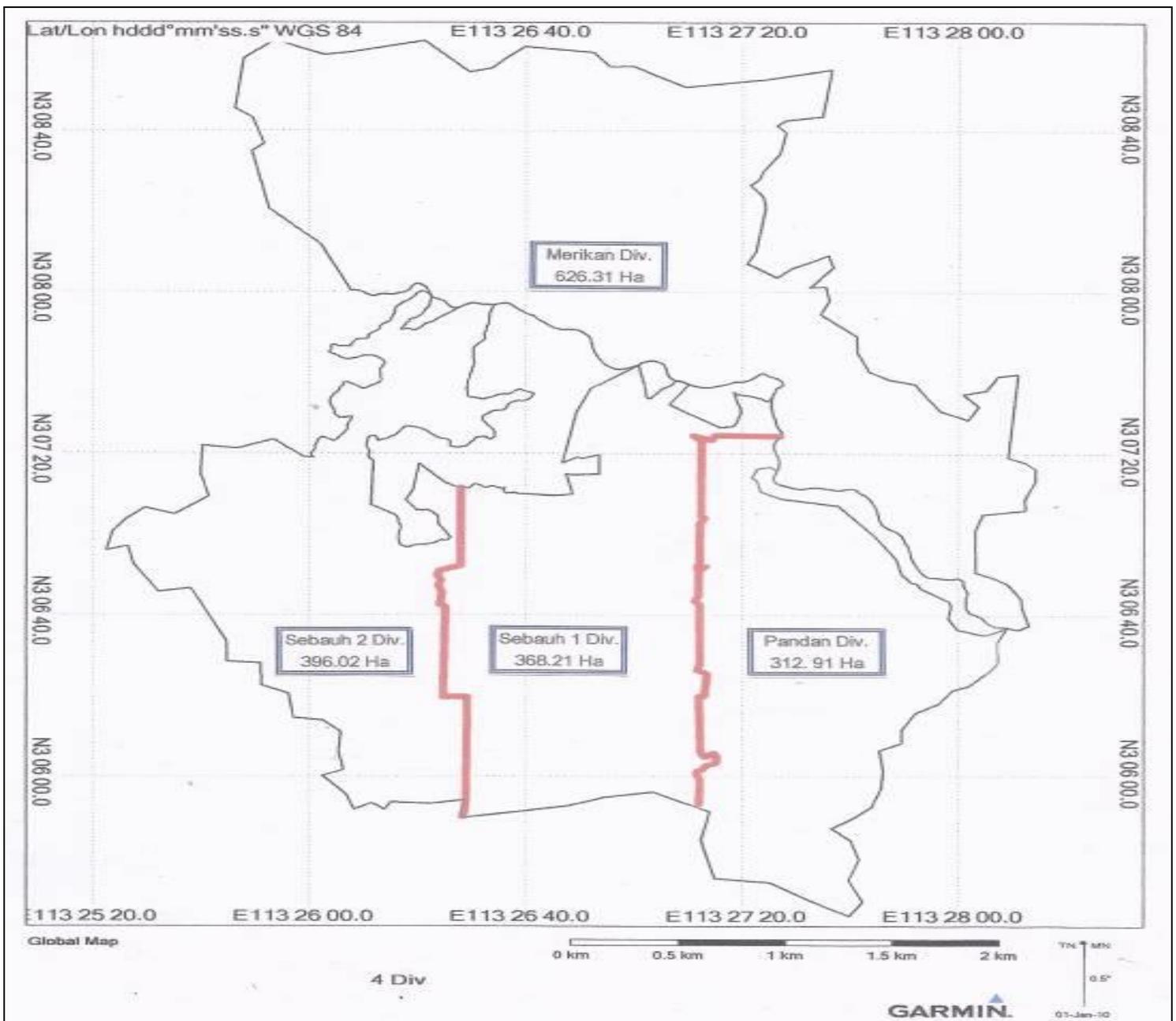
Figure 4: Satellite Imaginary of Sg. Kubud Estate



## 2.4 Area of new planting and time-plan for new planting

Keresa Plantations management decided to assist the local native community to upgrade their living condition by entering into a lease agreement with the local native communities of Rh. Iba and Rh. Lawai. Company has started project phase by phase from both long houses. Areas of development are not in primary forest. Previously this land was cleared by the native community for their shifting agriculture activities by planting fruit trees. During the Retrospective HCV Assessment, the new development area was already planted.

**Figure 5: Map of development area of Sg. Kubud Estate.**



### 3. Assessment Process and Procedure

#### 3.1 Assessor and Their Credential

3.1.1. High Conservation Value Assessment  
EnviroLogic Consulting (001674865-K)  
18 Jalan 20/2, Paramount Garden, 46300 Petaling Jaya  
Selangor Darul Ehsan, Malaysia  
Tel/Fax : + 603-7960 5601  
E-mail: [sanath@kenviro.com](mailto:sanath@kenviro.com), [admin@kenviro.com](mailto:admin@kenviro.com)  
Website: [www.kenviro.com](http://www.kenviro.com)

#### Assessor Team

EnviroLogic Consulting assembled a team with expertise in forestry, botany and wildlife ecology and social science to conduct the Retrospective HCV assessment. The team's specialization covers tropical rain forest management and wildlife ecology and the socio-cultural economics of village communities. The background experience and core competencies of the HCV assessors responsible for carrying out the Retrospective HCV assessment are summarized in the following bio-data and Table 4 indicates the Retrospective HCVs that they are specialized in.

**Table 1: Assessment team expertise and HCV assessment focus**

<i>Name</i>	<i>Field of Expertise</i>	<i>HCV aspect</i>
<b>Dr. Sanath Kumaran</b>	Biodiversity, wildlife ecology	HCV 1, 2, 3, 4 (RSPO Approved Team Leader)
<b>Ken Yeong</b>	Bioremediation and restoration	Assistant Team Leader
<b>Ernest Chai</b>	Forestry, Field botany, Ecology	HCV 1, 2, 3
<b>Rantai Ak Jawa</b>	Forestry, field botany	HCV 1, 3, 4
<b>Selvanathan G</b>	Sociological/cultural assessment	HCV 5, 6 (RSPO Approved Assessor)

#### Team Leader

##### **Sanath Kumaran, PhD.**

Dr. Sanath Kumaran has 17 years professional working experience in natural resources conservation and management in Malaysia, Indonesia, Cambodia and Papua New Guinea. He is a conservation planning expert with **EnviroLogic Consulting**, an international specialist consultancy based in Petaling Jaya, Malaysia and has field experience in High Conservation Value assessment, development of management

plans and monitoring indicators. **He is an approved RSPO HCV Assessor.** He has vast working experience in scientific fieldwork and policy level on natural resources management and community based natural resource management. Dr. Kumaran has worked in the field and as an agronomist with oil palm companies. He has also served WWF-Malaysia in various projects related to forest conservation, forest certification and forest trade network. He has experience in wetlands ecology while working with Wetlands International and has worked with various government agencies to promote conservation and sustainable use of forest, oil palm and freshwater resources in a rational manner with multi-stakeholder participatory approach. His expertise also includes capacity building of local community on policy advocacy to lobby for co-management of natural resources and has extensive advisory experience concerning policy issues across forest, oil palm and freshwater thematic areas of work. He has a B. Agric. Sc. (Soil Science), MPhil (Environment and Natural Resources Management) and PhD (Cloud forest hydrometeorology) and has published more than 20 publications and technical papers on forest conservation, wildlife assessment and monitoring, hydrology and forest certification. He has a keen passion in leadership training, adult & youth experiential learning, specifically developing effective leadership capabilities. He brings considerable forest and wetlands conservation and management experience to the team. Dr. Sanath Kumaran can be contacted at No. 18, Jalan 20/2, Paramount Garden, 46300 Petaling Jaya, Selangor, Malaysia and [sanath@kenviro.com](mailto:sanath@kenviro.com).

#### **Ken Young-Team Member**

Ken has over 10 years of experience in management, particularly in project development and management, marketing and now environment. He has worked with HCV assessments and smallholder baseline studies for commodity crops in Malaysia, Southeast Asia and Africa. He is currently an Associate Technical Manager with Wild Asia. His area of specialization involves optimizing socio-ecological outcomes in complex projects with multi-stakeholder engagements. He is familiar with fields of knowledge in tropical ecology, community natural resource management, complexity and resilience theories, environmental ethics and landscape conservation, restoration and management.

#### **Ernest Chai-Team Member**

Mr. Ernest Chai has an MPhil degree and B.Sc. Forestry. In the past 30 over years, he has served with the Forest Department Sarawak as an Executive Forester and has been involved in numerous national and international projects, including ITTO Model Forest Management Area (MFMA) on Plantation, The Netherlands-Malaysia sustainable management of Peat Swamp Forests with specific reference to Ramin, Sarawak Indigenous Tree Centre (SITC) at Tatau, Sarawak, and the establishment of 52ha long term ecological research plot at Lambir National Park. He is also a part-time Auditor with SIRIM, SGS and SCS on forest management certification and was ex-

NREB of Sarawak as a Forestry EIA Consultant. At present he is a manager and company director for a forestry consulting firm in Sarawak. He brings with him knowledge on silviculture, sustainable forestry practices and development of forest management plans.

#### **Rantai Jawa-Team Member**

En. Rantai has an overall of 30 years work experience with Forest Department Sarawak in plant specimen collection and identification and working in the Herbarium. He has also been involved in an ITTO project in the establishment and assessment of ecological plots, and the establishment of Gene Bank Plot in Lanjak Entimau Wildlife Sanctuary, Sarawak. He has been with Sarawak Forestry Corporation since 2006 involved in HCVF assessment and collection of plant specimens throughout Sarawak. In 2007, he co-authored a book titled, "A New Check List of the Trees of Sarawak" with Dr. Paul Chai. En. Rantai Jawa now lives in Kuching, Sarawak.

#### **Selvanathan Grapragasem-Team Member**

Mr. Selvanathan Grapragasem has an overall of 22 years working experience, in which for the past 7 years in social accountability and also in quality, environment, health and safety management in Malaysia and Indonesia. He is a social expert and has worked with AgroVet Certification [RSPO Certification] of Austria, ALGI International [Global Social Compliance] of New York, USA and 4D Consultant [Social Accountability] of India. He has vast working experience in fieldwork and policy level on social management and community based social resource management. Mr Selvanathan has worked with various agencies to promote social sustainable use of forest and oil palm in a rational manner with multi-stakeholder participatory approach. He has a Diploma in Agriculture and Degree in Business Management and has audited more than 20 organizations and is an approved HCV assessor of RSPO and focusses on sociological and cultural assessment of local communities. Selvanathan has also contributed in a HCV assesment in Malaysia and Cambodia. He brings considerable social and management experience to the team.

### 3.2. Social and Environmental Impact Assessment

Chemsain Konsultant Sdn Bhd  
NO. 58C, 2<sup>nd</sup> Floor,  
Medan Jaya Commercial Centre,  
97000 Bintulu,  
Sarawak, Malaysia

The above consultant was registered with the Natural Resources and Environment Board Sarawak.

Table 1b: List of EIA consultants

Personnel	Qualifications	Specialisation
Tay Ai Chen NREB/1/00835	Ph.D Plant Ecophysiol.	Team Leader Agronomy and Plantation Development
Nafisah bt TahirNREB/1/00736	M.Env.Resource Mgmt	Ecology: Flora and Fauna
Anthony R. Enchana NREB/1/00456	M.Sc. EIA	Project Coordinator Soil Erosion and Monitoring Plan
Ir. Brian S.H. Chong NREB/1/00336	M.Sc.Env. Eng B.Sc. Civil Eng	Civil Engineering, Waste Mgmt, Infrastructure and Utilities and Air Quality
Dr John S.T. Chan	Ph. D. Chemistry	Occupational Safety and Health & Water Quality
Tan Shwu Mei NREB/1/00341	M.Env. Mgmt B.A(Hons.) (Antropology & Sociology)	Socio-Economic and Land Use

Environmental Impact Assessment report details the environmental issues associated with the development of the project area.

Keresa Plantations Sdn Bhd is the project developer of this area and Chemsain Konsultant is the appointed EIA consultant.

#### Statement of Need

Sarawak is slated to be the next catalyst for growth as its oil palm plantattions reaches a mature stage. Oil palm has been on 1.1 million hectares of state and NCR Land. From 2001 to 2009, the oil palm industry in Sarawak contributed RM916 million to the tax revenue of the state.

State government has earmarked two million hectares or 15 percent of state land for oil palm plantation. At an average of 25-30 tonnes of Fresh Fruit Bunches per hectare and at RM700 per tonne, it is projected two million hectares can generate about RM35 billion annually to the state.

The rapid expansion of oil palm industry has brought new opportunities to investors. The project shall tap into this economic trend which is likely to persist. If carried out in a well-planned and sustainable manner, the project will be able to realize many socio-economic benefits, including the provision of job opportunities and spin-off business opportunities as well as infrastructural development to the project vicinity.

### **Project Concept**

The project will be implemented by Keresia Plantations Sdn Bhd and the concept of development is such that development will only take place on NCR Land parcels of the respective landowners who have agreed to lease their land for development.

The landowners are those of Rh Iba and Keresia Plantations has achieved an agreement to cultivate oil palms on NCR Land for a period of 30 years during which Keresia will have full ownership over the oil palms and harvest. After 30 years, the land will be returned to the landowners with oil palms and infrastructures thereon.

In view of the development concept, the total area to be developed is subject to the participation of NCR Land owners which went through prior consultation.

### **Project Activities**

Project activities can be classified into those during pre-development stage, land preparation stage, oil palm nursery establishment, field planting, maintenance and harvesting of oil palms.

During the pre-development stage, the main activities are establishment of boundary and perimeter fences, development of planting blocks, mobilization of equipment, machinery and transportation of construction materials.

During land preparation stage, main activities are site clearing, disposal of solid waste particularly cleared vegetation, weeding on cleared areas and ground preparation for sowing of leguminous cover crop. By this stage, infrastructural development, i.e. establishment of roads, collection roads, base camp, drainage, bridges and culverts, utilities will have commenced.

Activities associated with oil palm nursery involve securing and transferring of seedlings to polybags, watering, manuring and maintenance of nursery.

During field planting, planting of legumes will take place before oil palms. Young oil palm seedlings will be transported by tractor to planting sites and subsequently planted.

Maintenance of oil palms involves manuring of immature and mature palms, weeding as well as pest & disease control. Palms are normally bear fruits 28 months after planting. Ripened fruits will be harvested using specific tool and harvested fruits will be transported to the oil palm mill as soon as possible.

### 3.2 HCV Assessment Method

(Data Source, Data Collection, Dates, Program and Place Visited)

The HCV criteria as defined in the HCVF Toolkit for Malaysia (2009) was used for the HCV assessment described in this document. Where applicable, references are made to the HCV descriptions, definitions, criteria, sub-HCV in the above mentioned document and also the Global HCVF Toolkit (2003) by ProForest. The six HCVs with the ten sub-conservation values are presented in Table 2.

**Table2: Interpretation of HCV, Sub-Values and descriptions in Malaysia.**

<b>High Conservation Value</b>	<b>Sub-HCV</b>	<b>Brief description</b>
<b>HCV 1 is Biodiversity Values</b>	HCV 1.1	All forest areas that have been legally gazetted as Protected Areas under Malaysian legislation (either federal or state).
	HCV 1.2	Any species categorised as either Critically Endangered (CR), Endangered (EN) or Vulnerable (VU), on the IUCN Red List, Appendix I of CITES or listed as protected under Malaysian legislation (federal or state).
	HCV 1.3	Any forest containing endemic species as identified by FRIM, MNS, SFC, Forestry Departments and published literature, particularly in high concentrations or highly restricted distribution.
	HCV 1.4	Any forest area which is important to wildlife for feeding, nesting, roosting, migration or contains saltlicks
<b>HCV 2 is Landscape Level Forests</b>		Any forest area that forms or is part of a linkage between larger forest complexes, and can thus provide connectivity between fragments or act as a wildlife corridor for the movement of animals from one complex to another.
<b>HCV 3 is Ecosystem</b>		Any forest area that contains an ecosystem/habitat type identified as a priority for protection by the National Conservation Strategy (NCS), PERHILITAN Ecosystem Assessment report, Forestry Departments, FRIM, or SFC,

		and/or is confirmed as such by current expert opinion,
<b>HCV 4 is Services of Nature</b>	HCV 4.1	Includes dam catchment areas and any forest area legally gazetted as a Protection Forest for water catchment under the National Forestry Act 1984 for Peninsular Malaysia.
	HCV 4.2	Forest areas that have been legally gazetted for soil protection or conservation under federal and state laws e.g. the National Forestry Act 1984 (Peninsular Malaysia).
	HCV 4.3	Any specific areas that can act as barriers to provide protection of forests, especially forests with high conservation values, from fire, in areas that are generally fire-prone and where the consequences are potentially severe.
<b>HCV 5 is Basic Needs of Local Communities</b>		A forest area may be considered HCV 5 if it contains or is adjacent to settlements which depend on produce from that forest for basic subsistence or health needs. Examples include hunting grounds or areas from which minor forest products such as bamboo, rattan and medicinal plants are collected, and which are regularly visited by community members for this purpose. The community may be living either in or adjacent to the forest
<b>HCV 6 Cultural Identity of Local Communities</b>		A forest is considered HCVF 6 if it has been important for a local (particularly indigenous) community's cultural, ecological, or religious activities. The community may be living either in or adjacent to the forest. Examples of such sites within a forest include burial grounds or sacred areas which cannot be replaced with alternatives and/or would cause drastic cultural change within the community.

**Information in the above table is extracted from High Conservation Value Forest (HCVF) Toolkit for Malaysia, October 2009**

### **HCV assessment steps**

The retrospective HCV assessment for Sungai Kubud Estate adopted a process which followed the following steps:

1. Discussions with the management to determine the preparedness of Sungai Kubud Estate for the retrospective HCV assessment based on the Malaysia “**National Interpretation of RSPO Principles and Criteria for Sustainable Palm Oil Production**” *Final Document (including smallholder NI Approved by the RSPO Executive Board November 2010, the baseline NI indicators and guidance as in the approved NI dated 26 April 2008)*
2. Defining the agreement between Keresia Plantations Sdn Bhd and **Envirologic Consulting** together with a mutually agreed scope of work through a proposal document and an agreed budget
3. HCV team formation, defining the project scope and roles and responsibility of the team members
4. Compilation of secondary, available primary data, past and recent satellite imagery
5. Planning for fieldwork, time frame, work-plan and agreement on field assessment methods for primary data collection
6. Field assessment and primary data collection, including identifying stakeholders and in-depth stakeholder consultation
7. Data analysis and interpretation
8. Briefing to the Estate Manager and representative of the Management of Keresia Plantations Sdn Bhd on the highlights of findings, issues identified and preliminary conclusions
9. Preparation of Report Draft 1 including maps, management and monitoring recommendations
10. Critical review of Report Draft 1 by Keresia Plantations Sdn Bhd
11. Revised report based on critical review by Keresia Plantations Sdn Bhd
12. Adoption of the FINAL assessment report together with the management and monitoring plan (where and if applicable) by Sungai Kubud Estate.

The first two steps of the above process were completed by Envirologic Consulting in close communication with the client. Steps 1 – 4 were completed during the months November - December 2013 by Envirologic Consulting as a precursor for the retrospective HCV assessment phase. All primary data on the biophysical aspects and social dimensions of

the project area landscape (Step 6) enabled the identification of stakeholders for direct consultation in the project area and agreement on approach for primary data collection. The dates of field work and time spent in the field is presented below:

### **Date and itinerary**

#### **Sunday, 24 November 2013**

0730-1000 Flight from KL to Bintulu  
1030-1230 General discussions with Abdul Aziz bin Zainal Abidin (Assistant GM), Esak Entiga (Senior Assistant Manager), Stephen Lawai (Senior Estate Manager)  
1300-1500 Travel to Keresia Plantations site  
1630-1900 Site survey of Sg Kubud areas for environmental assessment  
2030-2130 Team discussion and planning for the next day

#### **Monday, 25 November 2013**

Botanist conducted transect surveys of Limar division and Sg Mapo areas  
Forester-ecologist conducted surveys of areas in Sg Selakai and central-south Sg. Kubud  
Itinerary of lead assessor and social assessor:  
0730-0830 Meeting with GM  
0930-1100 Visit to Rumah Lawai (baru) for social assessment  
1130-1230 Visit to Rumah Lawai (lama) for social assessment  
1800-2100 Dinner with Keresia executives

#### **Tuesday, 26 November 2013**

Botanist conducted transect surveys of Sg Tebusang areas  
Forester-ecologist conducted surveys of areas in Sg Selakai and Sg. Tebusang  
Itinerary of lead assessor and social assessor:  
0800-1000 Visit to Pandan village and recce Seberang Sg Sujan  
1000-1400 Visit to Rumah Iba for social assessment  
1700-1830 Visit to Rumah Lawai (lama) for social assessment  
1930-2100 Dinner with Keresia executives

#### **Wednesday, 27 November 2013**

Botanist conducted transect surveys of Seberang Sg Sujan areas  
Forester-ecologist conducted surveys of areas in Limar/Lawai division, Sg. Mapo and Sg. Merikan  
Itinerary of lead assessor and social assessor:  
0730-1300 Site survey of Seberang Sg Sujan for environmental assessment

1430-1800 Site surveys of Sg Tebusang, Sg Selakai areas and drained peat swamps of Sg Kubud

#### **Thursday, 28 November 2013**

Botanist conducted transect survey of Batu Garam, Sg Kubud area

Itinerary of lead assessor and social assessor:

0800-1200 Preparations for public consultation and training sessions

1300-1430 Visit to Rumah Desmond for social assessment

1500-1700 Preparations for public consultation and training

1730-2030 Visit to Rumah Iba for thanksgiving dinner

#### **Friday, 29 November 2013**

Botanist conducted transect survey of Sg Selakai and Sg Marikan areas

0900-1200 Public consultation and briefing on HCV assessment

1400-1700 Preparations for training session

1700-1900 Site visit of area bordering Acacia plantation

#### **Saturday, 30 November 2013**

0900-1200 Training on HCV assessment for Keresas staff

1400-1700 Depart to Bintulu hotel

#### **Sunday, 1 December 2013**

Depart to Kuala Lumpur

### **Stakeholder consultations**

Stakeholder consultation is crucial for any HCV assessment. For the HCV assessment of Sungai Kubud Estate, a range of stakeholders were consulted during the assessment and the key highlights of the issues raised and inputs given is summarized in Appendix 12.2 of the HCV assessment report (included below).

A range of local stakeholders from company staff and officials, village/community leaders and workers of the plantation were consulted directly during fieldwork for primary data collection. The list of stakeholders who were consulted can be found in Appendix 12.3 of the HCV assessment report (included below).

Primary data collection was done from 24 November 2013 to 1 December 2013 in a participatory way using Focus Group Discussions, structured interviews, semi structured interviews, and participant observation during trips in the surrounding long house villages. In focus group discussions, efforts were made to ensure that all different sub-groups such as

Village Head, Deputy Village Head, Women Representative, youth and old folks were interviewed.

The selection of the villages was done based on overlapping or nearby (within 5 km) radius of Sungai Kubud Estate, using a map of the project area. Direct stakeholders consulted during assessment included the Village Head, and Deputy Village Head and other representatives such as religious leaders, local leaders, etc.

### **Flora and fauna surveys**

Rapid assessment of mammals, reptiles and birds aimed to identify the features of these animal communities relevant to HCV 1.2, HCV 1.3 and HCV 1.4 were carried out. Survey methods included direct (visual) or indirect (print, call, scat for mammals and call for birds) observations during the day and late afternoon/evening field work, and interviews with company staff, labourers and villagers. These methods were combined to maximise completeness of animal species listing in the short time available (HCV 1.2 and HCV 1.3). In addition, habitat quality assessment was carried out to find areas that are temporarily used by animals (birds or bats) such as a breeding or nesting ground area (HCV 1.4).

The field surveys were carried out in the oil palm estates and the existing forested areas, namely logged over Mixed Dipterocarp Forests (MDF), Kerangas Forests and Peat Swamp Forests. Some of the peat swamp forests are found in the Selakai region in the west and some in Merikan region in the north of the project site. The Kerangas forests are located in Limar region and the lowland MDF mostly in the central regions and occur in sporadic location. All these forests have been logged over different periods of time since 1975, based on information provided by the locals and village elders. In addition, field surveys were carried out in some of the areas being claimed ownership as shifting cultivation areas by the local communities from the longhouses.

A total of 8 transects were carried out for the flora survey to capture the diversity, distribution and abundance of the plant community. The details of the eight transects used for the flora survey are shown in Appendix 12.4 (included below).

In addition, field surveys were carried out in remaining secondary forests and riparian areas adjacent to the land area of Sungai Kubud Estate to maximise completeness of animals species listed under HCV 1.2 and 1.3 as well as the list of areas temporarily used by animals (HCV 1.4).

## **4. Summary of Assessment Findings**

### **4.1 Summary from SEIA Assessment Findings**

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

#### Positive Impact:

- Positive attitude and perception from the community and looking forward for the plantation income.
- Increase in job opportunities for the surrounding local communities because of the new development operation.
- Increase in community income due to the employment and infrastructure service provided due to the new development operations.
- Opportunity for the community to involve and manage their own plantation when the lease tenure expires.
- Opportunity for community to involve in small scale business ventures and transport.

#### Negative Impact

- Land developed for the oil palm cultivation for the community will restrict planting of other crop.
- Social conflict may arise among the community who holds the land and without land.
- Increasing land transportation and traffic will increase potential risk to the safety of the community.
- Air and water pollution may occurs and increase the potential risk of the communities' health.

#### **Environmental Management Plan**

An EMP is recommended to ensure that the Environmental Impacts predicted are properly monitored and managed. This plan should be reviewed regularly to include changes or other impacts that may be identified in the course of the project.

A comprehensive EMP report shall be outlined subsequent to the approval of EIA by NREB. Generally, EMP identifies the following:-

- a. Policy and objectives of EMP
- b. Administrative set-up responsible for environmental management including structure and manpower requirements and responsibilities of various key personnel.
- c. Legislative requirements that need to be complied.
- d. Project Plan
- e. Environmental Monitoring program.
- f. Actions required and reporting sequence.

#### **4.2 Summary from HCV Assessment Findings**

HCV assessment of Sg. Kubud Estate, a new development area of Keresa Plantations Sdn Bhd was conducted by Envirologic Consulting. The assessment was carried out from 24 November 2013 to 1 December 2013 by a team leader Dr. Sanath Kumaran with of five ecological and social experts focussing on all six HCVs. Envirologic Consulting is an approved High Conservation Value (HCV) assessor of the Roundtable on Sustainable Palm Oil (RSPO). The assessment included satellite imaginary analysis, extensive field surveys, and public consultations with the communities living in the project area. The HCV assessment report included recommendations for the management and improvement of HCV found within the project area.

The assessment revealed that HCV 1.2 is present in the form of several flora and fauna species and the presence of Bornean Yellow Muntjac qualifies it as HCV1.3 as an IUCN Endemic species. The HCV 1.4 is potentially present as the wetlands (rivers and streams) are potentially used by migratory birds. HCV3 is present in the form of two priority habitats for Sarawak, viz. Peat swamp forests and Heath forests (Kerangas). For erosion control, the presences of fragmented riparian vegetation which are not legally gazetted were noted along the major rivers draining the project area and flowing through the plantation area. These forests are significant in the long term to enhance wildlife corridors and minimize stream bank erosions and sediment load of the rivers (potential HCV4.2). Areas that are prone to fires during prolonged drought are the drained peat swamps and *Acacia mangium* plantations of Grand Perfect Sdn Bhd, bordering the project area in the south west (potential HCV4.3).

HCV 2, HCV 5 and HCV 6 were not identified although a graveyard was noted by an individual from Rh. Iba longhouse as a Penan graveyard, which does not have any significant historical and cultural value for the locals.

**Table 3: Identification and Analysis of HCVs Presence in the area of Sg. Kubud Estate.**

HCV	Sub-HCV	Present	Potentially Present	Absent
HCV 1 Biodiversity Values	1.1 All forest areas that have been legally gazetted as Protected Areas under Malaysian legislation (either federal or state).			Not identified
	1.2 Any species categorised as either Critically Endangered (CR), Endangered (EN) or Vulnerable (VU), on the IUCN Red List, Appendix I of CITES or listed as protected under Malaysian legislation (federal or state).	Presence of the following species were noted:  Sun bear  Sambar deer  Asian Brown Tortoise  Light Red Meranti		
	1.3 Any forest containing endemic species as identified	Presence of the Bornean Yellow		

HCV	Sub-HCV	Present	Potentially Present	Absent
	by FRIM, MNS, SFC, Forestry Departments and published literature, particularly in high concentrations or highly restricted distribution.	Muntjac noted		
	1.4 Any forest area which is important to wildlife for feeding, nesting, roosting, migration or contains saltlicks		Presence of migratory birds	
HCV 2 Landscape Level Forests				Not identified as the plantation is located surrounded by industrial tree plantation, oil palm plantations, logged over forest areas
HCV 3 Ecosystem	Any forest area that contains an ecosystem/habitat type identified as a priority for protection	Peat swamp forests and Heath forests (Kerangas)		
HCV 4 Services of Nature	4.1 Dam catchment areas and any forest area legally gazetted as a Protection Forest for water catchment under the National Forestry Act 1984			Not identified
	4.2 Forest areas that have been legally gazetted for soil		All buffer zones along rivers.	

HCV	Sub-HCV	Present	Potentially Present	Absent
	protection or conservation under federal and state laws		Vegetation riparian buffer reserves along rivers are intact with varying width and quality along the oil palm blocks.	
	4.3 Any specific areas that can act as barriers to provide protection of forests, especially forests with high conservation values, from fire		Areas that are prone to fires, e.g. peat swamps and oil palm blocks bordering to <i>Acacia mangium</i> plantations	
HCV 5 Basic needs of local communities.	Rh. Iba Rh. Lawai Rh. Majang Rh. Desmond			The longhouse communities are not forest dependent for basic subsistence or health needs
HCV 6 Cultural identity of local communities	Rh. Iba Rh. Lawai Rh. Majang Rh. Desmond			The longhouse communities are not use the forest for their cultural, or religious activities

## Management Recommendations

1. Considering the close proximity of several villages to the licence area, there is a need to continue with the awareness programs on the importance of conservation of species, particularly protected species among all the villagers identified as stakeholders. A message of No Hunting is to be propagated.
2. Awareness programs targeted to staff and workers to be continued on the significance of no hunting, poaching – who to alert, dos and don'ts in the licence area.
3. Greater attention is needed to have adequate buffer areas along rivers/drains inside the plantation, which at present is devoid of riparian vegetation along some blocks of the licence area.
4. Detail soil survey and soil map to be produced for the plantation land area.
5. Riparian reserves along rivers that are close to the plantation boundaries needs to be better managed. Management for these riparian reserves (2.5m-25m from the river/drain bank) is to be carried out through a precautionary approach. No herbicide or pesticide spraying. Only manual circle weeding and slashing of weeds is allowed. Signage erected to indicate protection of water courses. Natural growth along the palm rows is to be encouraged. Planting of native tree species in the inter-rows of palms is encouraged.
6. Water Management Plan to be developed for the plantation to ensure that the water tables are maintained throughout the year.
7. Leave tall standing trees in vacant area due for new planting in 2014. Focus is to maintain beneficial trees such as fruiting trees, Ficus, flowering trees that encourage diversity of species.
8. Fires. During prolonged dry seasons, unauthorized parties within the plantation may also be a threat to the start of fires. A fire management plan together with tight security control of access and sharing of resources (e.g. roads) must be developed.

## 5. Summary of the HCV Management Recommendation

The following management recommendations arising from the various HCVs identified are crucial for the maintenance and enhancement of the various HCVs identified and found present in the Sungai Kubud Estate landscape.

No	Description of the Management Recommendation	HCV
1	<ul style="list-style-type: none"> <li>• Considering the close proximity of several long houses/villages to the licence area, there is a need to continue with the awareness programs on the importance of conservation of species, particularly protected species among all the villagers identified as stakeholders. A message</li> </ul>	HCV1.2, HCV 1.3, HCV 1.4

	<p>of <b>No Hunting</b> is to be propagated. Hunting and possession of protected species is to be strictly banned. Preventative punitive measures should be implemented for all employees of Keresia Plantations Sdn Bhd.</p> <ul style="list-style-type: none"> <li>• Monitoring of habitat loss and poaching of the wildlife species through close consultation with local people is to be carried out</li> </ul>	
2	<ul style="list-style-type: none"> <li>• Awareness programs targeted to staff and workers to be continued on the significance of no hunting, poaching – who to alert, dos and don'ts in the licence area. Locals living around Keresia Plantations should be discouraged from hunting and possessing any of the listed species. Locals having a direct stake in Keresia Plantations Sdn Bhd can be informed of the business risks associated with damage to protected species. Conduct awareness program for the villagers and staff members on the importance of conserving forests, species and key habitats.</li> </ul>	HCV1.2, HCV 1.3, HCV 1.4
3	<ul style="list-style-type: none"> <li>• Regular patrolling of the area to ensure no encroachment of the forests is carried out. Security patrols along wildlife hotspots should be carried out to deter hunters and poachers from entering Keresia.</li> <li>• Records of patrolling and reports of peculiar activities (e.g. removal of timber, poaching, etc) must be followed by strict actions by the management. Security patrols along wildlife hotspots should be carried out to deter hunters and poachers from entering Keresia Plantations Sdn Bhd.</li> <li>• A detailed record of species sightings, its exact location and time/date of sighting should be maintained to document species presence. This should aid in future conservation management efforts.</li> </ul>	HCV1.2, HCV 1.3, HCV 1.4
4	<ul style="list-style-type: none"> <li>• Carry out a detail soil investigation of the entire project area to determine the extent of fragile soils, such as peat and its type and depth.</li> </ul>	HCV 3
5	<p>Riparian reserves</p> <ul style="list-style-type: none"> <li>• Map out all riparian reserves with a width of at least 50 m on both sides</li> </ul>	HCV1.4, HCV 4.2

	<p>of the river and mark it permanently on the ground with visible pegs (at 20 m intervals) along the river/stream banks. The total hectarage of the riparian reserve for the entire project area is to be maintained and enhanced through systematic enrichment planting</p> <ul style="list-style-type: none"> <li>• Riparian reserves along rivers that are close to the plantation boundaries needs to be better managed. These riparian reserve areas have to be rehabilitated to its original stand of vegetation.</li> <li>• Management for these riparian reserves is to be carried out through a precautionary approach. No herbicide or pesticide spraying. Only manual circle weeding and slashing of weeds is allowed. Signage erected to indicate protection of water courses. Natural growth along the palm rows is to be encouraged.</li> <li>• The planted oil palm stand in the riparian reserves be removed and replaced with suitable tree species originally found along the rivers. Rehabilitation of the area with mixed species is strongly recommended (see list of species in text in HCV 4.2).</li> <li>• No further planting of oil palm in the forest and wildlife corridors along riparian areas and those bordering to forested land areas</li> <li>• Maintenance of adequate (at least 50m) of riparian buffers along permanent flowing streams</li> <li>• All riparian zones to be re-vegetated with suitable native species, with existing trees left intact. The width of the riparian zone will adhere to the recommended standard of 50-100m for wildlife purposes. Signage should also be erected to promote awareness of protecting these areas.</li> <li>• In the process of conserving the riparian buffers, management options should include no slashing of existing vegetation, taking a precautionary approach to application of agrochemicals (fertilizers, herbicides, pesticides) in the riparian buffer zones and no alteration/damming of the river channel.</li> <li>• A wildlife corridor at least 50-100m wide on both side of the river should be maintained along the Sg Mapo area where frequent wildlife movements have been sighted. The exact location of this corridor needs to be determined, but is likely to be along Sg Mapo. Signage to urge vehicle slowdown and caution should be erected.</li> </ul>	
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	<ul style="list-style-type: none"> <li>Establishment of permanent vegetation sample plots (50m x 50m) at strategic locations in the various conservation areas is needed to monitor the existing vegetation stand and the growth of newly planted seedlings.</li> <li>Greater attention is needed to have adequate buffer areas along rivers/drains inside the plantation, which at present is devoid of riparian vegetation along some blocks of the licence area.</li> </ul>	
6	Leave tall standing trees in vacant area due for new planting in 2014. Focus is to maintain beneficial trees such as fruiting trees, Ficus, flowering trees that encourage diversity of species.	HCV 1, HCV 4
7	Fires. During prolonged dry seasons, unauthorized parties within the plantation may also be a threat to the start of fires. A fire management plan together with tight security control of access and sharing of resources (e.g. roads) must be developed.	HCV 4.3
8	Restoration: Suitable habitat for the listed species to be set aside and/or restored, if previously removed.	HCV 1, HCV 4
9	Suitable wildlife corridors for the listed species to be set aside and/or restored, if previously removed. These corridors should aim to connect existing habitats to ensure continued access to life-supporting resources. Recommended width for wildlife corridors: 50-100m.	HCV1.2, HCV1.3, HCV 1.4
10	<p>Compensation Procedure:</p> <ul style="list-style-type: none"> <li>Keresa Plantations Sdn Bhd is now required to undertake compensation for the loss of peat swamp forest and the heath (kerangas) ecosystems if these area fall under the compensation procedure. Keresa is urged to seek immediate consultations with RSPO to initiate necessary actions and procedures.</li> <li>Map out the area of peat and heath ecosystems that needs to be compensated, based on the RSPO Compensation Procedure.</li> </ul>	HCV 3
11	<p>Standard Operating Procedures</p> <ul style="list-style-type: none"> <li>Keresa Plantations Sdn Bhd must first build up Sungai Kubud Estate and develop the in house capacity of the staff members in developing and implementing specific Standard Operating Procedures (SOP) for</li> </ul>	HCV 3

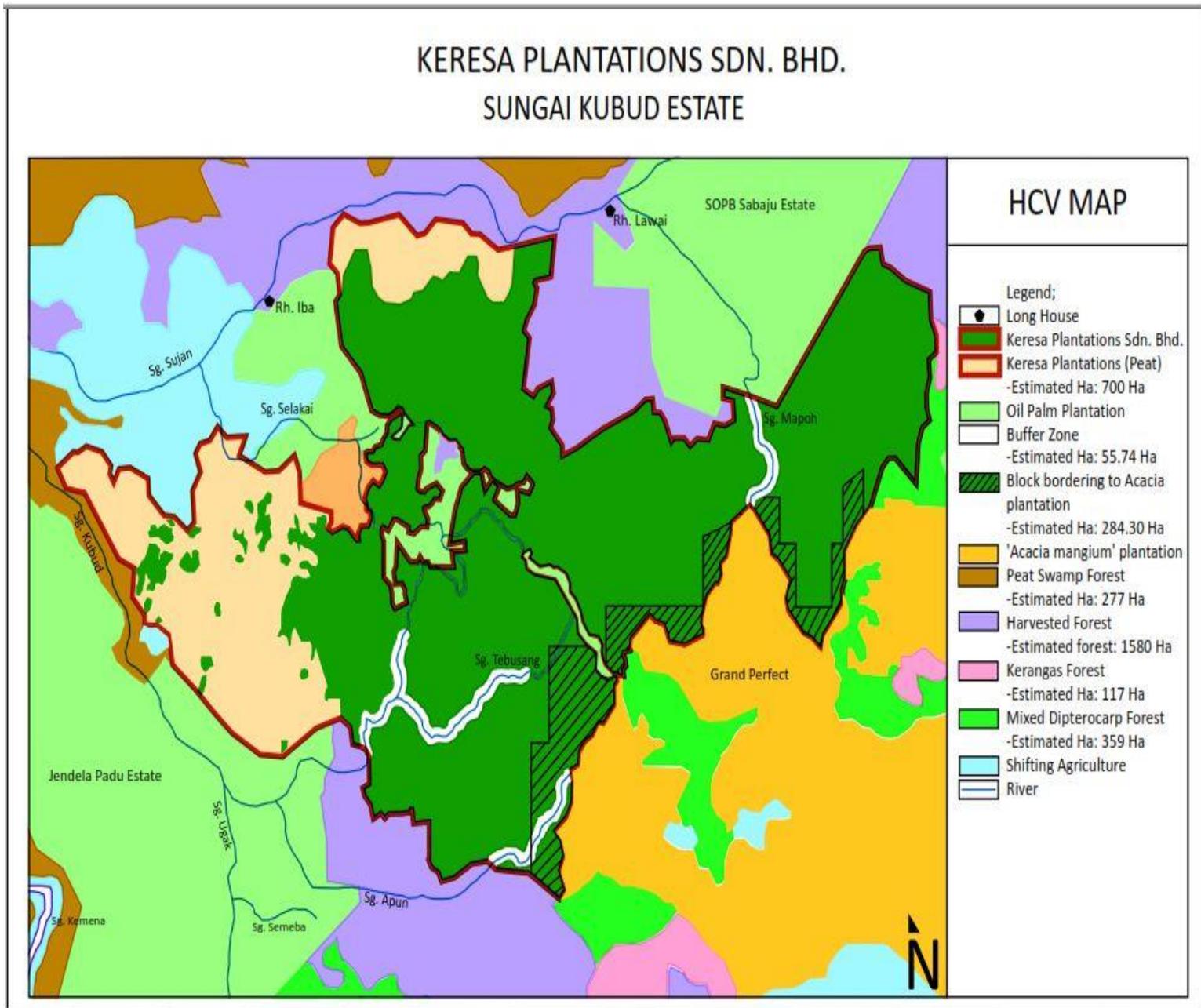
	<p>peat management, fire hazards and water management.</p> <ul style="list-style-type: none"> <li>• Develop a fire hazard response plan, including erecting a fire watch tower</li> <li>• Develop a Water Management Plan for the peat and low lying areas to ensure that the water tables are maintained throughout the year.</li> <li>• Develop specific SOP for conservation efforts such as maintenance and enhancement of riparian reserves, wildlife monitoring, tackling of potential threats such as illegal hunting, poaching.</li> </ul>	
12	<p>Hydrology of peat lands and low lying areas</p> <ul style="list-style-type: none"> <li>• The drained peat swamp areas at the Sg Kubud area will now need to be managed against fire by implementing a suitable water table management plan. This should avoid draining the water table to excessively low levels that promote complete drying out of the peat soils.</li> <li>• A detailed hydrological study is to be conducted to ascertain the nature and extent of the water table management intervention required. General RSPO guidelines for 4.3.4 for minimization of subsidence of peat soils recommends maintaining an average water table depth of 60cm below ground surface as measured in water collection drains, through a network of appropriate water control structures e.g. weirs, sandbags, etc, in fields, and water-gates at the discharge points of main drains (Criteria 4.4 and 7.4).</li> <li>• The remnant forest in the “Lawai Division” bordering the <i>Acacia mangium</i> plantation of Grand Perfect should be left to act as a natural fire barrier. The recommended width is 50-100m to also serve as a wildlife corridor</li> </ul>	HCV 3

## Summary of HCV category and hectarage

<b>High Conservation Value</b>	<b>Sub-HCV</b>	<b>Brief description</b>	<b>Category</b>	<b>Hectarage</b>
<b>HCV 1 is Biodiversity Values</b>	HCV 1.2	Any species categorised as either Critically Endangered (CR), Endangered (EN) or Vulnerable (VU), on the IUCN Red List, Appendix I of CITES or listed as protected under Malaysian legislation (federal or state).	Harvested forest(Secondary forest) Presence of the following species were noted: Sun bear Sambar deer Asian Brown Tortoise <i>Anisoptera marginata</i> <i>Hopea pentanervia</i> <i>Parashorea lucida</i> <i>Shorea albida</i> <i>Shorea macrophylla</i> <i>Shorea pubistyla</i> <i>Shorea seminis</i>	1,580 hectares
	HCV 1.3	Any forest containing endemic species as identified by FRIM, MNS, SFC, Forestry Departments and published literature, particularly in high concentrations or highly restricted distribution.	Mixed Dipterocarp Forest Presence of the following species were noted: Bornean Yellow Muntjac	359 hectares
	HCV 1.4	Any forest area which is important to wildlife for feeding, nesting, roosting, migration or contains saltlicks	Riparian Zone	55.74 hectares
<b>HCV 3 is Ecosystem</b>		Any forest area that contains an ecosystem/habitat type identified as a priority for protection by the National Conservation Strategy (NCS), PERHILITAN Ecosystem Assessment report, Forestry Departments, FRIM, or SFC, and/or is confirmed as such by current expert opinion,	Peat Area	700 hectares
			Kerangas Forest	117 hectares
<b>HCV 4 is Services of Nature</b>	HCV 4.2	Forest areas that have been legally gazetted for soil protection or conservation under federal and state laws e.g. the National Forestry Act 1984 (Peninsular Malaysia).	All buffer zones along rivers. Vegetation riparian buffer reserves along rivers are intact with varying width and quality along the oil palm blocks.	55.74 hectares
	HCV 4.3	Any specific areas that can act as barriers to provide protection of forests, especially forests with high conservation values, from fire, in areas that are generally fire-prone and where the consequences are potentially severe.	Peat Swamp Forest  All buffer zones along rivers. Vegetation riparian buffer reserves along rivers are intact with varying width and quality along the oil palm blocks.	277 hectares  284.30(Oil palm area bordering with <i>Acacia mangium</i> plantation)

Information in this table is extracted from High Conservation Value Forest (HCVF) Toolkit for Malaysia, October 2009

Figure 6: HCV Map



6. Formal Signing off by Assessor and Company

This document is summary of the EIA and retrospective HCV assessment. The above may be amended and clarified for improvement during the development and management of the plantation but it will remain in accordance with RSPO Standards and Principles.

Envirologic Consulting



.....  
Dr. Sanath Kumaran

Team Leader HCV Assessment

Date: 16/04/2014

Chemsain Konsultant Sdn Bhd



.....  
Tan Shwu Mei

NREB / 1/ 00341

EIA Consultant

Date: 17/04/2014

Management Representative of Sungai Kubud Estate



.....  
Assistant General Manager

Date: 17/04/2014

## 7. Appendix

### Appendix 12.2: Highlights from public consultations

[+] Positive [-] Negative [R] Request

No	Points proposed and comments	Source
1.	[+] Have sighted Hornbills in forest areas nearby	Rh Lawai – Head of Longhouse
2.	[+] That the villager's roads are always maintained	Rh Iba – Head of Longhouse
3.	[-] There are still many promised activities by Keresia Plantations that has not been fulfilled	Rh Lawai – Head of Longhouse
4.	[-] Cultural activities are given less priority	Daniel Juk Wan – Land and Survey Department, Bintulu, Sarawak
5.	[R] Wanted to understand the changes in rainfall pattern	Rh Lawai – Head of Village
6.	[R] For medical checkup and eye care program for elderly in the longhouses	Rh Majang - Head of Village

**Appendix 12.3: List of attendees of focus group discussions (FGD) with regards to consultation process with communities and company staff/labours**

No	Name	Village / Longhouse	Responsibility
1	Selvanathan G.	Envirologic Consulting	Social Assessor
2	Dr. Sanath Kumaran	Envirologic Consulting	Team Leader
3	Yeong Kien Bong	Envirologic Consulting	Restoration Expert
4	Rantai ak Jawa	Envirologic Consulting	Field Botanist
5	Ernest Chai Oi Chun	Envirologic Consulting	Forestry Expert
6	Eddie Pui Hock Jun	Yun Ho contractor	Assistant Manager
7	Lawai ak Chukai	Rh Lawai	Head of Longhouse
8	Mutu ak Enkuat	Rh Lawai	Committee Member
9	Puding bin Elang	Rh Lawai	Committee Member
10	Baung ak Uma	Rh Iba	Committee Member
11	Durai ak Edward Ya	Rh Iba	Committee Member
12	Iba ak Abas	Rh Iba	Head of Longhouse
13	Majang	Rh Majang	Head of Longhouse
14	Desmond	Rh Desmond	Head of Longhouse
15	Chiang Chung Kiang	Unify Services	Contractor
16	Daniel Juk Wan	Land & Survey, Bintulu	Staff
17	Anthony Gauwin	YST Estate	Supervisor

**Appendix 12.4: Transects for flora survey**

LOCATION AREA	Start	End
Transect A - Limar	NO 7 N030741.6 E113 29 32.0	NO 8 N030801.6 E113 29 15.9
Transect B - Sg. Tebusang	NO 1 N030621.7 E113 26 34.8	NO 2 N030619.6 E113 26 27.8
Transect C - Sg. Tebusang	NO 3 N030639.7 E113 27 00.7	NO 4 N030639.7 E113 27 05.9
Transect D - Cincin Sg. Sujan	NO 7119 N030853.2 E113 25 14.2	NO 7120 N030912.7 E113 25 07.7
Transect E - Tanjong Aur	NO 7117 N030807.4 E113 23 36.8	NO 7118 N0308145 E113 23 34.7
Transect F - Batu Garam	NO 7121 N030654.7 E113 24 14.5	NO 7122 N030652.9 E113 24 13.3
Transect G - Sg. Selakai Sujan	NO 7123 N030749.7 E113 24 46.2	NO 7124 N030810.9 E113 25 05.8
Transect J - Sg. Marikan	NO 5 N030852.9 E113 26 54.7	NO 6 N030850.9 E113 27 02.8